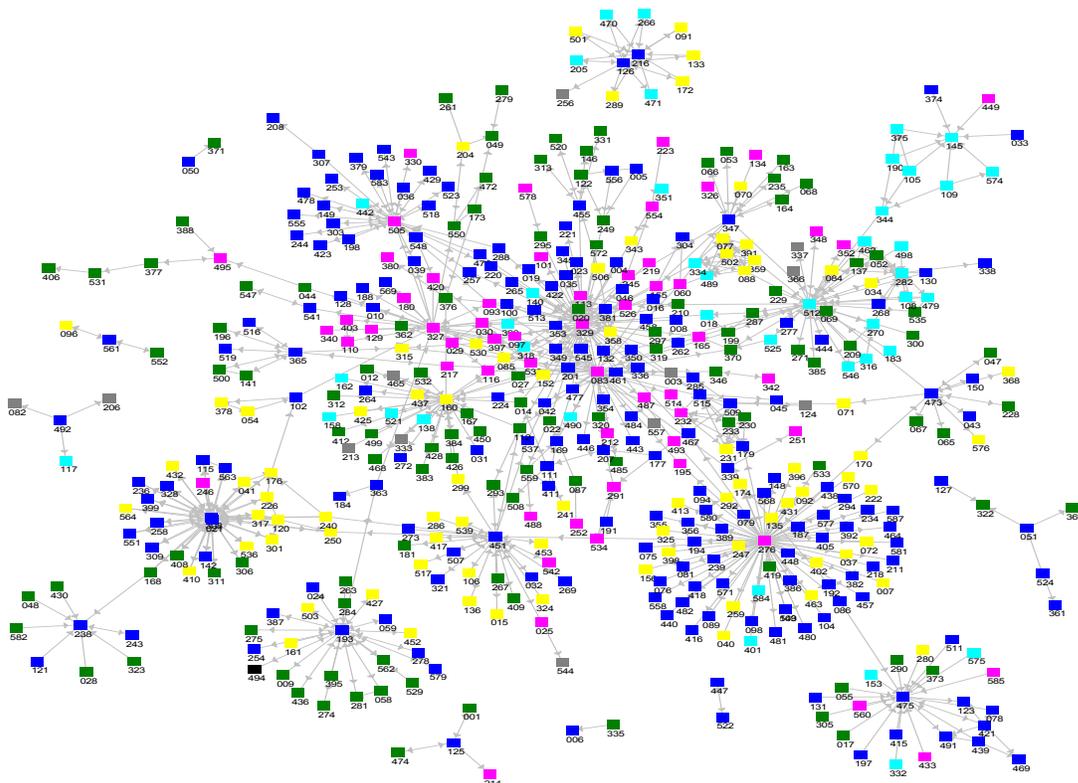


NET GAINS: A Handbook for Network Builders Seeking Social Change

By Peter Plastrik and Madeleine Taylor

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**Networks are present everywhere.
All we need is an eye for them.**
Albert-Laszlo Barabasi¹

**Networks are the language of our times,
but our institutions are not programmed
to understand them.**
Helen McCarthy, Paul Miller and Paul Skidmore²

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Cover art: Network map of the after-school sports program network in Boston, provided by the Barr Foundation, using Inflow software. Inflow also used for maps appearing with text.

INTRODUCTION

This handbook provides the growing number of people who are developing networks for social change with practical advice based on the experiences of network builders, case studies of networks small and large, local and international, and emerging scientific knowledge about “connectivity.”

It is intended to join, complement, and spur other efforts to capture and make widely available what is being learned in the business, government, and civil sectors about why and how to use networks, rather than solitary organizations, to generate large-scale impact.

We start with the point of view that networks provide social-change agents with a fundamentally distinct and remarkably promising “organizing principle” to use to achieve ambitious goals. Given the complexity and enormity of social problems, the unrelenting pressure to reduce the cost of creating and implementing solutions, and the recent proliferation of small nonprofit organizations, networks offer a way to weave together or create capacities that get better leverage, performance, and results.

Relying on networks to generate social change is not new to philanthropy and nonprofits. Many foundations have funded the civil rights, feminist, and consumer movements for decades and more recently have assembled “learning networks” of grantees that work together to innovate and improve their practices. As Jon Pratt, executive director of the Minnesota Council of Nonprofits, points out, “community organizers and grass roots organizations have applied network concepts for years.”³

But something new and important is afoot. The nonprofit and philanthropic sectors are under growing demand to do more and better. The number of nonprofit organizations is expanding substantially, as are the tasks they undertake in light of government downsizing.⁴ “We’re seeing growth of nonprofit organizations, but not much change in the systems they are trying to impact,” says Pat Brandes, a foundation executive in Boston. Nonprofit capacity is a “chronic problem,” writes Jonathan Peizer of the Open Society Institute. “The sector must embrace new paradigms.”⁵ Gideon Rosenblatt, executive director of a Seattle nonprofit and a former Microsoft senior manager, notes that “many environmental leaders are questioning whether the environmental movement has the right strategies and organizational structures in place.” The movement, he contends, has “over-invested in institutional overhead” and “is replicating board development, fundraising and many other functions across thousands of very small organizations.” It is essential, Rosenblatt concludes, to “un-bundle” and rebuild the environmental organizational structure using network approaches.⁶

Foundations, a crucial capital market for nonprofits, and governments that contract with nonprofits increasingly seek improved impact, leverage, and “return on investment.” Nonprofits are routinely expected to be more strategic, entrepreneurial, and “high performing,” and to focus on producing outcomes.⁷ Some efforts to increase the impact of nonprofits, such as “venture philanthropy,” have focused on strengthening *individual* organizations to be more effective and efficient. But, as the Maine Community Foundation notes, this approach can be inefficient, since its capacity-building resources are invested across many organizations without regard for redundancy and overlap among the organizations.⁸ Meanwhile, foundations typically fund programs rather than

methods of delivery, but more of them are forming their own networks, rather than going it alone, to develop their strategies and pool their resources.

In this shifting context for the civil sector, networks represent a fundamentally different response for achieving efficiency and effectiveness. They should not be dismissed as merely the latest fad promoted by business leaders, consultants, and foundations who don't understand the uniqueness of the nonprofit world. "Network strategies offer a powerful set of tools to manage the key tasks and challenges faced by nonprofits," argues Jon Pratt. "Network thinking offers powerful analytic and strategic tools for nonprofit boards and managers to increase the stability, influence and autonomy of their organizations."⁹

Most of us have networking in our blood. We build personal networks and connect with other individuals or organizations to get things done that we can't do by ourselves. But there's much more to network building than this instinct to link. Building a network is a *practice* about which much has been learned from the experiences of network builders themselves and the experiments and insights of researchers in mathematics, physics, anthropology, and other disciplines.

This is news to most of the social entrepreneur-network builders we meet. Networks in the nonprofit sector are rarely organized to take full advantage of what networks can do. "We in the nonprofit sector always say, 'We connect,' but we don't really know much about connecting," observes Marion Kane, executive director of the Barr Foundation.

For many decades, the overriding organizing principle of the social-change sector, as with business and government, has been the stand-alone organization. This focus has driven the understanding of management and leadership; the CEO or Executive Director at the helm of the lone organization is an icon of the age. But hierarchical, organization-centric is losing its sway. Many people, even in the largest, most venerable organizations, recognize now that to gain greater impact they have to let go of organization-centric ideas about how the world works, and they are adopting network-centric thinking.

The power of networks is drawing increasing attention in mass media headlines as well as in specialized scientific literatures. From the explosive growth of Howard Dean's Internet-based presidential campaign in 2004, the frustrating resilience of Al Qaeda, and the far-flung mobilizations of the World Social Forum and Moveon.org to the connectivity evident in the spread of the Internet and HIV/AIDS, the structure of electricity grids across the U.S., and the extensive influence of a small number of linked members of corporate boards of directors—networks have stirred the interest of people seeking innovation and large-scale change.¹⁰ In July 2006, a professor of military science announced that "we are now in the first great war between nations and networks," referring to the battles in south Lebanon between Israel and Hezbollah, which operated through many small units that were dispersed, improvisational, and without a central control.¹¹

"Today we increasingly recognize that nothing happens in isolation," writes physicist Albert-Laszlo Barabasi in *Linked*:

Most events and phenomena are connected, caused by, and interacting with a huge number of other pieces of a complex universal puzzle. We have come to see that we

*live in a small world, where everything is linked to everything else... We have come to grasp the importance of networks.*¹²

What is new about this? Societies have long had transportation and communications networks. Social scientists have analyzed social networks for decades. Networks have been represented in mathematical thinking for hundreds of years. And the existence of networks is readily evident in the personal networks that most people build and maintain.

Clay Shirky, a partner in the Global Business Network consulting firm, puts his finger on what is changing: “We understand networks better—a lot better—than we used to, and we have much better tools for manipulating them.”¹³ Now, he says, people can “rely” on networks because “we can finally begin to predict how networks will behave over time.” This crucial development has happened especially because of the emergence of the “science of complexity,” which is bringing together scientific disciplines to understand the behavior of the many interacting parts of complex systems, whether they are epidemics of disease, new ideas that become crazes, failures of large infrastructure networks such as electricity grids, changes in social norms, or successful business innovations.¹⁴ We are coming to understand the “basic organizing principles” of complex connected systems, explains Columbia University sociologist Duncan Watts in *Six Degrees*, and this allows us to anticipate how networks may behave.¹⁵

Networks have unique properties and effects and tend to follow a typical developmental path. This is why it is possible to foresee the challenges that network builders will face and the options they will have when they seek to steer a network’s start-up, growth, connection to other networks, and evolution. Network builders don’t have to just fly by the seat of their pants. They can recognize that there are three different types of networks and that each requires its own unique planning and management. They can understand the simple, underlying rules of how networks work—violate them and you lose some of the power of and investment in networking. They can learn the best ways to undertake the major developmental tasks of network builders—from setting a network’s purpose and coordinating its activities to assessing its health.

“As the networked approach to governance proliferates,” write Steve Goldsmith, a former mayor of Indianapolis, and William Eggers in *Governing by Network*, what becomes important is “learning how to *manage* a government composed more and more of networks instead of people and programs.”¹⁶ They are right, and not just about government. We have crossed the threshold to what Watts calls “the connected age.” What more and more social entrepreneurs want to know now is what to do next—how to expand, fund, sustain, and assess the health of networks.

There is a growing realization in the nonprofit sector—within organizations and foundations, and among social entrepreneurs—that the case for building networks is quite compelling. And those who have built networks are finding that while they may not be sure how to handle all the challenges of network building or may want to “tweak” the network a bit to improve its performance, they have become believers in the “network-centric” way of getting things done.

In this Handbook we offer practical information and advice for people who are building or connecting networks for social change. We lay out a handful of key concepts that are essential to understanding how networks work and what they can do for you. We discuss how to build networks of all types and how to manage them as they evolve.

We have written this handbook for nonprofits, so they can become more deliberate and successful in building networks for greater social impact. We believe they will find, as we have, that network approaches are as valuable to the civic sector as in business and government.

We have also written for those who, like us, are working to put know-how about networks into the service of practitioners. We have drawn from their work (with full acknowledgment) and have tried to make an additional contribution: developing explanatory frameworks, raising new questions, providing new answers, and adding a directory of resources we found useful.

Finally, we have written this handbook for those who are curious about networks, but are not convinced that networks will make a difference for them. We provide concrete examples of practice and easy-to-understand “translations” of the emerging theories about networks.

Advice to the Reader

There is no one formula for how to build a network. There are many different kinds of networks and the network-building process is neither neat nor linear. So our Handbook is not a step-by-step “cook book.” Inevitably, you must discover some of how to build your network, not just apply a proven methodology. But there is a body of know-how, about how to think and how to do, that can help you.

We have organized the Handbook so you can read it from beginning to end or by dipping into the Parts and Chapters—chunks of know-how—most relevant to you.

We are also quite interested in receiving your feedback—criticisms, new frameworks and stories, specific questions and advice for others—from your own experiences as a network builder. Contact us at netgains@in4c.net. Thank you.

THE AUTHORS

Peter Plastrik and Madeleine Taylor are coauthors of two previous articles, sponsored by the Barr Foundation, about network strategies in the civil sector: “Network Power for Philanthropy and Nonprofits” and “Lawrence CommunityWorks: Using the Power of Networks to Restore a City.”

Peter Plastrik is president of the nonprofit Innovation Network for Communities (www.in4c.net) and a consultant to foundations, nonprofits, and social enterprises. He is co-author with David Osborne of two books about reinventing government, *Banishing Bureaucracy* and *The Reinventors Fieldbook*, as well as numerous articles about innovations in government, and economic and community development. He is a co-founder of a public charter school in Detroit, former executive director of the Wendling Foundation, and former chief deputy director of the Michigan Department of Commerce. He lives on Beaver Island in Lake Michigan.

Madeleine Taylor is a social anthropologist who advises public and nonprofit organizations and national foundations on strategy, research, program development, and evaluation. She has consulted to governments, philanthropic organizations, and local nonprofit organizations, both in the United States and overseas, on issues that include culture and the environment, creative industries development, and the building of nonprofit networks. She is a co-founder and Principal of Arbor Consulting Partners, a research and consulting firm located in Boston, Massachusetts.

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This handbook was made possible by the generosity of the Wendling Foundation and the contributions of Warren Cook, one of the foundation's directors. Warren has become a tireless promoter of and investor in the use of networks by the non-profit sector, whose capacity he has worked to build for more than a decade. It was Warren who introduced us to Bruce Hazard, developer of the Maine Mountain Heritage Network, and other networks in Maine, whose members inspired our efforts and also critiqued early versions of material for this Handbook.

An earlier contribution to our efforts was made by the Barr Foundation's Marion Kane. In 2003 Marion started wondering if the power of networks could be harnessed by nonprofits the foundation was supporting as individual grantees. In one of those surprises that effective "connectors" like Marion deliver for the people in their networks, she brought the two of us together to do the research and writing that became a foundation report, "Network Power for Philanthropy and Nonprofits." Some parts of this handbook build on that article.

The Networks We Learn From

Over the past few years we have come to know and work with many networks for social change. Their experiences, questions, answers, and learning helped to form much of the content of this Handbook (although we take full responsibility for this material). We want to acknowledge them here while also providing readers with a sense of the "practice field" in which much of this Handbook is grounded.

Boston Parents Organizing Network
Council of Michigan Foundations
Franklin County Community College Network
Green Production Design Network
Instituto de Cidadania Empresaria (Brazil)
Lawrence CommunityWorks
Maine Community Heritage Network
Massachusetts Smart Growth Alliance
NetKAL (Korean-American Leaders)
New York City Investment Fund
Northern Forest Canoe Trail
Northern Forest Center
Partners in Health and Housing
Pine Street Inn
Redwood Coast Rural Action
Rural People, Rural Policy
Somerset County Association of Resource Providers
Sports Net
Vermont Smart Growth Collaborative
West Michigan WIRED Innovations Network

**PART I:
IS A NETWORK APPROACH RIGHT FOR YOU?**

All the buzz about networks—is it hype or real? Is it just about using the Internet and just for businesses seeking competitive advantage, or is it about more than technology and winning in the marketplace? Is it something that social-change agents, people who work to make the world a better place, should be using? Is it a new strategy, or a model, or a tool, or a way of thinking? What exactly is new about it? What can networks do for you?

Part I helps you sort through what you may have been hearing about networks—and decide if a network approach can help you to achieve your goals for social change.

I. STARTING POINTS

The executive director of a nonprofit serving Boston's homeless people, the Pine Street Inn, needed to reduce costs, but hoped somehow to keep up service levels and quality. All the usual methods for cutting the budget had been tried. What to do next?

The head of a large urban philanthropy, the Barr Foundation, wanted to make sure that minority kids had more access to sports programs after school. Research found that hundreds of nonprofits provided these types of services, but most of them were quite small and few worked with or even knew each other. What funding strategy could lead to large-scale impact?

A longtime community activist, Bill Traynor, was looking for a way to rebuild the grassroots leadership in his fading industrial hometown. "Without extraordinary leadership and without extraordinary numbers of people in the game, making decisions every day to get involved in positive ways," he says, "Lawrence [Massachusetts] did not have a shot at becoming a functional, thriving community." The many local, community-based organizations didn't seem to be able to connect with and mobilize the thousands of people he felt had had to be energized. Was there another approach that would work?

In each case, and with remarkable results, the answer was to build networks. The Pine Street Inn for the homeless stopped trying to provide all services itself and started linking with other organizations to get the job done. It cut costs and *increased* service levels.

The Barr Foundation invested in a network weaver, Chris Lynch, to work full-time at connecting after-school sports organizations with each other. Out of these new linkages came many collaborations that helped the organizations increase and improve their services to kids.

Bill Traynor helped to organize a network, Lawrence CommunityWorks, with more than 1,600 members, many from the ranks of the city's poor and immigrant families. As these people obtained services from the network, they also bonded with other members, and many started to become more active in community affairs.

In these three stories we can find some of the reasons that social-change agents are turning to network approaches:

- Networks can increase efficiency, as Pine Street Inn learned, because they allow deep specializations to be linked rather than created under one roof.
- Networks can increase impact, as the Barr Foundation demonstrated, because they can leverage the assets that already exist in a system by connecting them to each other.
- Networks can build remarkable capacities, as Traynor found, because they mobilize diverse and flexible individuals or organizations.

But, nonprofit leaders and foundation program officers often ask us, "How can I know if a network approach is right for *me*?"

When you consider whether to commit time and energy to network approaches, where you are starting from matters. In our experience, people in the social-change sector occupy one of four starting points when they weigh the benefits and costs of building networks.

- **You are inside an organization.** You are in the leadership of a nonprofit organization—the executive director, perhaps, or program director, or board chair. You are worried that the organization doesn't seem to have the resources and capacities to achieve its ambitious mission and that new energy is not on the horizon.

Your question: *Might building a network help mobilize more capacity that you can't get as an organization?*

- **You are inside a foundation.** You are a program officer or the executive director of a foundation, or a donor to various causes. You are concerned about the proliferation of little nonprofit organizations, all building infrastructure with overhead costs, many overlapping in their missions, few of them talking and collaborating with each other.

Your question: *Might building a network help organize the chaos so that nonprofits are more efficient and effective?*

- **You are acting as an individual, outside of any organization.** You are an activist with a passion about a particular cause. You are considering starting a new nonprofit organization, like so many others have done. But you have noticed that many nonprofits don't achieve that much impact.

Your question: *Might building a network be a better way of attracting and organizing energy for what you care about?*

- **You are already in a network, but...** You are participating in a network of individuals or organizations that is loosely organized around collaboration. It's going alright, but it hasn't really delivered a great deal of value to you.

Your question: *Might there be ways to boost the network's performance?*

Where you are starting from determines a lot about what you want to know about networks. It also affects whether a network approach is likely to help you. Networks are not a panacea for what ails the nonprofit sector, but networks do provide unique capacities and advantages to those who build them. Your initial positioning also says much about the barriers you will have to overcome in seeking these network benefits.

If you are starting from an organization, for instance, you will have to know, or more likely learn about, how to collaborate as an equal partner with other organizations

on activities. You will have to forge common cause and share resources with other organizations. This is not easy to do, as many organizations have discovered.

If you are starting from a foundation, investing in network development, you will have to know how to help to weave connections among the organizations or individuals in the networks you are trying to build or strengthen. You will also need to know, at some point, how to shift control of the network's evolution to its members and away from yourself.

We will discuss these and other challenges in network building through out this Handbook, using stories from the field—organizations, foundations, and individuals building networks, and networks improving themselves—when applicable.

Whatever your starting point, however, there is also some basic knowledge about networks that you should have—what they can do, how they work, what it takes to build them. That is our starting point.

2.

WHAT WE MEAN BY NETWORK

A network of community residents in Lawrence, Massachusetts has 1,600 members. Many social-change networks are much smaller than this, but an Internet-based network such as Moveon.com may have millions of active members. Some networks, like the Vermont Smart Growth Collaborative, have organizations, not individual people, as members. There are even networks of networks of organizations.

Most social activists participate in networks like these and know of many others. They have experienced being *members* of networks, but have little practice in being *builders* of—actually organizing and managing—networks. When they think about how to build a network, they usually start with two basic questions: What exactly is a network? How is a network different from an organization?

The simplest definition of a network is that it is a set of “nodes and links,” of things that are connected to each other. Picture, for instance, networks of roads between cities, or computers emailing to each other, or living cells joined as tissue in the body. This is a very broad explanation, however, and, as sociologist Duncan Watts observes in *Six Degrees*, one of a small set of recent, remarkable books about the science of networks, it is not especially helpful in understanding particular networks.

This Handbook is about what social scientists call “social networks”—systems of social ties that link people to one another. Social networks result when individuals connect within specific social contexts, such as within a community of place like Lawrence, or a community of practice like doctors, lawyers, or environmentalists. One kind of social network with which we are all familiar is the personal network of our colleagues, friends, and acquaintances. Most individuals build these personal networks to achieve personal goals. But people who develop social networks in the civil sector, such as Bill Traynor and the Barr Foundation are doing, are after more than gains for an individual. They develop a network in which many individuals link to achieve *collective* goals, to produce “net gains.” We call this network a “social network for social ends.”

What a Network Is Not

A network is a distinct form of social organization. It is not an organization, which relies on top-down authority to get things done. Think of the typical organization’s “chain of delegation”—the board of directors delegates some of its authority to the CEO, executive director, or president, who further delegates authority to the next management level down, and so on until you reach the level at the bottom.

Nor is a network a market, which depends on many individuals making buy-sell transactions; these consumers may have no connection at all with each other. Curiously, though, a network may contain some elements of both of these other forms of organization—and these forms contain network structures.¹⁷

Distributed Authority

A network is not as orderly or stable as an organization, which typically has a single point of decision-making at the “top.” While organizations have bosses that

decide what should be done, networks tend to have *coordinators* who help network members decide what to do and implement it. If you were drawing an “org chart” for almost any organization you know, it would start with a box that contains the power of the organization: the “top,” which has a commanding authority and view. If, on the other hand, you were drawing a network’s structure, more than likely there would be no “top” or “bottom” and no central command box. That’s because a network’s authority is widely distributed, not concentrated or centralized.

This characteristic of networks—“distributed authority”—was what attracted Bill Traynor, a veteran community organizer, to networks when he looked for a way to mobilize residents of Lawrence, Massachusetts, one of the poorest cities in the U.S. Traynor concluded that Lawrence’s best hope lay in engaging “extraordinary numbers of people”—thousands of city residents—in leading change.

*We wanted people thinking about how to connect with and help each other. We wanted people building leadership skills, working together to build community assets, engaging in collective action to make qualitative change. Who’s demanding change? Whose voices are being heard? How are they being heard and how do those voices get translated into change? We didn’t have nearly as many voices as we needed. And they were saying things that were not being heard.*¹⁸

But Traynor suspected that a typical community-development organization could not pull this off. An organization might become dominated by its leaders and inaccessible to community members, he says. It might end up getting in the way of change and then be hard to fix, and it probably couldn’t rally the large numbers of people that were needed. Besides, in Lawrence there already was a thick layer of nonprofit organizations, and they weren’t making enough of a difference. “We needed an environment that was going to invest in people-to-people connections, not people-to-agency connections,” Traynor says. “We were looking for something that would help us produce those kinds of outcomes, and network-centric thinking gave us clues about how to do that.”

Traynor helped to start Lawrence CommunityWorks, a network of local residents that offers members—1,600 of them by 2006—a range of programs, from neighborhood development and financial asset building to youth development and English-as-a-second-language. All this happens with few of the trappings and requirements of an organization. “We’ve created an environment that is different from the usual community organization,” says Traynor.

It’s informal; people can come in and out of the network. It’s easy and fun to be a part of and there is a lot to do. You make your own way through the maze.

In being less hierarchical than an organization, a network like Lawrence CommunityWorks is more like a market in which individuals are free to make decisions without reference to a superior’s commands. But the individuals in a market are not usually connected with each other the way they are in a network. When someone buys a laptop from Dell, for instance, they are behaving like many other consumers, but they are not necessarily linked to any of them. The “nodes” are not bound by “links” that

have been intentionally devised. Likewise, the 9 million people who have filled out the 436-question personality survey for eHarmony, the online dating service, may be forging links with other people in their search for a compatible match, but they are not trying to build networks out of these connections.

It's true, and somewhat confusing, that a market or an organization may contain a network. For instance, you may buy a laptop because your friends have them and you may buy it from Dell because they did; your consumer decisions are influenced by the decisions of people in your personal network. Another example: in the domestic services—house cleaning—market in the Boston suburbs, an unusual network of suppliers has emerged. Brazilian immigrants, many of them well-educated English speakers, buy and sell to each other specific “routes” of individual houses that receive cleaning services. One newcomer from Brazil paid \$7,500 to another Brazilian for cleaning rights to 14 houses. Another advertised a 31-home route, received 65 inquiries from fellow Brazilians, and sold the route for \$18,000.¹⁹ The presence of network structures in markets is the subject of Bhaskar Chakravorti's *The Slow Pace of Fast Change*, in which he explains how market-based networks may resist or latch onto new products.²⁰ Organizations also contain networks—for example, people within a unit of the organization or with similar specialized functions, such as sales and marketing, will have relationships with each other.

A network, like a market, is characterized by decentralized, non-hierarchical decision-making and, like an organization, by intentional, activity-based linkages between individuals. What makes networks unique is this: the individual people who are linked in a network relationship have both a high degree of freedom and agreement when it comes to deciding what to do.

Q. Are networks of organizations different from networks of individuals?

No and yes. No, because an organization is usually represented in a network by one or more individuals who are part of the organization; the “node” that makes the connection is still an individual. Yes, because the individual representing the organization usually needs permission from superiors—the board of directors or the executive director, for instance—before committing to taking specific actions within the network. Moreover, the commitments the organization makes are not dependent on who from the organization is acting as its node.

Organizations tend to negotiate their participation in networks and want agreements with the other nodes that spell out expectations, commitments, and behaviors of the network's members. When 10 organizations in southern Maine—six of them nonprofits—formed a network in 2002 to conserve the 48,000-acre Mt. Agamenticus to the Sea region, they hammered out a set of “organizational protocols” and “land protection priorities” to frame their relationships, as well as a memorandum of understanding about how they would and would not share information with each other about potential donors.²¹ As a practical matter, attending to these needs of organizations means that it will take a great deal of discussion—and probably the tackling of some difficult,

contentious issues—by the organizations before a functioning network can be formed.

Q. Is a coalition, alliance, or partnership a network?

Yes. A coalition of organizations, for instance, meets the rudimentary definition of nodes linked to each other. But that doesn't mean that all networks are coalitions—or that if you have developed and managed a coalition you know all about building networks. A coalition may be dominated by a single “umbrella” organization that dominates the network. It may be a network of “equal” nodes, all of which determine what the network does. The Vermont Smart Growth Collaborative, linking 10 organizations, was structured that way.

More broadly, we have found that not all partnerships, coalitions, or alliances are organized to take full advantage of what networks have to offer.

Understanding Networks: The State of Network Theory

Much of the most recent information about networks is about *general propositions* about networks. Kevin Kelly, former executive editor of *Wired* magazine, expresses the potent mix of broad theory and hope: “The symbol for the next century is the net... The net is the archetype displayed to represent all circuits, all intelligence, all interdependence, all things economic, social, or ecological, all communications, all democracy, all families, all large systems.”²²

Yet someone interested in learning about networks will quickly find that there are *many theoretical approaches* to the topic: network science and complexity theory, sociology, anthropology and Social Movement Theory, diffusion theory, business management, and innovation management, to mention some. And thoughtful theorists are clear that both general propositions and different theoretical approaches are most useful when they are applied to *specific* cases. “Claiming that everything is a small-world network or a scale-free network... oversimplifies the truth... in a way that can mislead one to think that the same set of characteristics is relevant to every problem,” says Duncan Watts. “We need to recognize that different classes of networked systems require us to explore different sorts of network properties.”²³

Eventually, it is hoped, case-based insights can be combined with theoretical insights in ways that will allow an integration of theories about networks, and create powerful new knowledge for application. As Watts puts it: “Any deep understanding of the structure of real networks can come only through a genuine marriage of ideas and data that have lain dispersed across the intellectual spectrum.”²⁴

3.

THE DIFFERENCE A NETWORK MAKES

Networks are worth knowing about, not because they are different from organizations, but because of the difference they make. Networks can have startling effects, “bewildering behavior,” Watts calls it.²⁵ These effects are important to describe in some detail, because most network practitioners are not familiar with all of them and, therefore, may not realize the full range of what networks can do.

Network Effects

Rapid Growth	Network can expand rapidly and widely, because its members benefit from adding new links and, therefore, they seek to make new linkages.
Rapid Diffusion	As more nodes are added, the network diffuses information and resources more and more widely through its links. This diffusion effect allows networks to spread ideas and generate feedback rapidly.
“Small World” Reach	Network can bring people together efficiently and in novel combinations, because it provides remarkably short “pathways” between individuals separated by geographic or social distance. When two people in a network create a “bridge” across distance or social category, the connection is available to other nodes in the network.
Resilience	Network can withstand stresses, such as the dissolution of one or more links, because its nodes quickly reorganize around disruptions or bottlenecks without a significant decline in their functionality.
Adaptive Capacity	Network can assemble capacities and disassemble them with relative ease; it can adapt nimbly. Links among people or organizations can be added or severed, or they can become “latent,” meaning they are maintained at a very low level of connectivity, or more active.

Rapid Growth

A network can expand rapidly and widely, because its members benefit from adding new links and, therefore, they seek to make new linkages. This phenomenon is known as “Increasing Returns to Scale.” An often-cited example of this effect is the fax machine. One fax machine has no value because it is not linked to others. Two fax machines have value because they can “talk” to each other. After that, the more connected machines there are, the greater the value of the whole fax network. “The value of a network explodes as its membership increases,” explains Kevin Kelly in *New Rules for the New Economy*, “and then the value explosion sucks in yet more members, compounding the result.”²⁶

The growth of MoveOn.org is an example: On September 18, 1998, two Silicon Valley entrepreneurs launched an online petition to “Censure President Clinton and Move On to Pressing Issues Facing the Nation.” Within days, hundreds of thousands of individuals had signed up. Today, more than 2 million people are members of the MoveOn.org network, some of them in the MoveOn Peace campaign, others contributing to the MoveOn.org Political Action Committee.²⁷

Rapid Diffusion

The ability of networks to grow rapidly creates a two-way flow: attraction and diffusion. On the one hand, people are attracted to the network, they link together, which increases the value of the network. At the same time, as more nodes are added, the network diffuses information and resources more and more widely through its links. This diffusion effect allows networks to spread ideas rapidly.

An example of this comes out of the marketing industry, which increasingly is using “word of mouth” campaigns that take advantage of linkages among consumers. “Today people are overloaded with information and the tools of traditional marketing—print ads, catalogs and other direct mail, and television commercials—aren’t working,” says George Silverman, president of Market Navigation Inc. and author of *The Secrets of Word-of-Mouth Marketing*. “People are saying, ‘Don’t bother me with advertising. I’ll go talk to my friends.’”²⁸ Tapping these personal consumer networks was part of the strategy for marketing the Xbox 360 video game console. A marketing firm identified “hard core gamers” and created an online game that they could play only by teaming up—connecting—with other gamers. As gamers linked with each other, word of the game (and the console) diffused rapidly through their personal networks. “The first week we had 12 people,” says Rick Murray, president of the marketing firm. “Six weeks later we had 115,000.”²⁹

“Small World” Reach

A network can bring people together in novel combinations, because it provides remarkably short “pathways” between individuals separated by geographic or social distance. When two people in a network create a “bridge” across distance or social category, the connection is available to other nodes in the network. “Distant links offer us short paths to people in very remote areas of the world,” explains Albert-Laszlo Barabasi. People increasingly experience this network effect, he adds: “Our ability to reach people has less and less to do with the physical distance between us. Discovering common acquaintances with perfect strangers on worldwide trips repeatedly reminds us that some people on the other side of the planet are often closer along the social network than people living next door.”³⁰

In 1999, a social entrepreneur in Michigan, Doug Ross, mobilized his networks to create a charter school in Detroit. A former director of the Michigan commerce department, state senator, and Clinton Administration official, Ross had run for governor as a Democrat in 1998, and had access to both political activists statewide and to wealthy people in the Detroit area. The school’s supporters included the dean of education at the University of Michigan, a former member of President Clinton’s

Council of Economic Advisors, and the president of Wayne State University, along with Ross's family, friends, acquaintances, and former colleagues in Michigan state government. Three years later, though, the network delivered incredible help from a completely unexpected source, someone Ross did not know—the main campaign contributor to the Republican governor that Ross had tried to unseat. The “small-world connector” was a civil servant, Mark Murray, who had worked with Ross a decade earlier and more recently had become the budget director for the Republican governor. Murray introduced Ross to Bob Thompson, a retired businessman and GOP funder who, with his wife, Ellen, had dedicated their personal fortune to reinventing Detroit public education. The Thompsons donated some \$15 million to build a five-acre high school and campus for Ross's school. Thanks to the diverse network, a path to funds for a new facility had emerged.

A network's reach can help people separated by geography and other factors to bring together the information, analyses, and ideas they each have, and allow them to reach shared conclusions that might not otherwise be developed. Such connectivity makes each “node” more productive and supports the creation of innovations, which arise from combinations of ideas. This is precisely what happened when the SARS illness emerged in 2003, as James Surowiecki reports in *The Wisdom of Crowds*. The World Health Organization (WHO) asked 11 research laboratories around the world to work together to find and analyze the SARS virus. In just a month the collaborating researchers announced that the coronavirus caused SARS. “The intriguing thing about the success of the laboratories' collaboration,” says Surowiecki, “is that no one, strictly speaking, was in charge of it...

There was no one at the top dictating what different labs would do, what viruses or samples they would work on, or how information would be exchanged... The collaborative nature of the project gave each lab the freedom to focus on what it believed to be the most promising lines of investigation, and to play to its particular analytical strengths, while also allowing the labs to reap the benefits—in real time—of each other's data and analyses. And the result was that this cobbled-together multinational alliance found an answer to its problem as quickly and efficiently as any top-down organization could have.³¹

The SARS collaboration linked similar organizations into a collective intelligence. In 2003, seven organizations with important differences came together to pursue the same network effect. They formed the Massachusetts Smart Growth Alliance to encourage public policy reforms. The organizations had quite different core competencies: one in architecture, one in housing advocacy, several in environmental protection, several in affordable housing development, one a metropolitan planning council. But they believed that this diversity was a strength and that working together would make each of them smarter. “An alliance could identify *better policy solutions* by combining deep expertise from different areas and developing solutions in a non-political, deliberative setting.”³² This is how in 2006 a self-assessment of the Alliance described what the collaboration sought to create.

To forge this collective intelligence, Alliance members had to educate each other.

Our housing groups were not familiar with watershed issues and water quality law, and in order for the Alliance to craft policy positions, we needed to educate ourselves first and then resolve any tensions between differing policy perspectives. Some of the most important work that was done in our start-up years was to internally hammer out the holistic policy solutions we wanted to promote. These in-depth discussions helped us to... [reinforce] the group's appreciation of solutions that consider environmental preservation, housing access and affordability, economic development, and social equity.³³

Like the SARS collaboration, the Alliance cobbled together a network approach to developing solutions.

Resilience

The network withstands stresses, such as the dissolution of one or more links, because it quickly reorganizes around disruptions or bottlenecks without a significant decline in its functionality.

Duncan Watts tells a remarkable story of network resilience in the Toyota Production System, some 200 independent companies that cooperate with each other—sharing personnel and intellectual property, and helping each other without requiring formal contracts—to supply the Toyota automotive company with all it needs. When Toyota's production of cars was stopped overnight by the destruction of one company's key factory, the sole source of P-valves for automobiles, Watts reports, the network acted immediately: "In an astonishing coordinated response by over two hundred firms, and with very little direct oversight" by Toyota, production was reestablished in three days.

"Because many of the firms involved in the recovery effort had previously exchanged personnel and technical information... they could make use of lines of communication, information resources, and social ties that were already established," Watts says. "They understood and trusted each other." Some firms rearranged their production priorities, while others commandeered equipment from all over the world. "They redistributed the stress of a major failure from one firm to hundreds of firms, thus minimizing the damage to any one member of the group." And "they recombined resources of those same firms in multiple distinct and original configurations" to produce the valve made in the burned down factory. The Toyota system survived a massive shock; it proved to be a "self-healing" system.³⁴ What makes it possible to reorganize is the existence of many links—clusters of connections—that can take up the load.

An example of lack of resilience that made the news recently is the reliance of the U.S. Treasury on one company, Crane & Co. in Massachusetts, to produce all the paper for U.S. currency. In 2006, *TIME* reported, some congressmen warned that having one firm control the currency supply was a security risk. If the production was disrupted by a labor strike, natural disaster, bankruptcy, or terrorist attack, the interruption in supply could cause economic problems.³⁵ In short, unlike Toyota, there was no ability to reorganize production across a set of connected producers.

The U.S. military now uses a networked battlefield communications system to eliminate the potential catastrophe of having a command center knocked out. Engineers at the Defense Advanced Research Projects Agency (DARPA), which invented the Internet, created a “mesh network” that requires no infrastructure, but exists via user-devices, such as handheld computers and mobile phones, which act as transmitters. Users can relay signals for any transmitter without routing them through a central device. Even if a transmitter is destroyed, the entire communications system’s capacity remains intact.

When Hurricane Katrina swept through New Orleans, the city’s centralized, top-down warning and communications systems failed. “Public officials from top to bottom found themselves... unable to receive, analyze, or redistribute news from the outside,” says Gary Wolf, in an article in *WIRED* that describes how some cities are turning their emergency warning systems into distributed networks, rather than centralized systems, to handle huge information flows during disasters. In Portland, Oregon, for instance, a system called “Connect & Protect” was developed to bring together the police, fire departments, schools, public libraries, shopping centers, security businesses, apartment buildings, and others in a 911 public safety network from which all receive and to which all provide emergency information.

Network effects began to take hold, and by late 2005 recipients of the 911 alerts were sending warnings directly to one another every day. Messages about auto break-ins at the mall went to high-rises across the street... Parole officers sent alerts to the schools. On the Oregon coast, hotel managers used Connect & Protect to pass along news of storm threats. During a recent tsunami warning for the West Coast, Connect & Protect beat the beach siren in one coastal town by 24 minutes.

Wolf reports that this “ubiquitous but previously hidden tangle of private and public groups” is not a pyramid run from the top, but a “net that grows thicker in some places, thinner in others... the origin and route of any message is unpredictable and constantly changing.”³⁶ This is a sign of resilience.

Adaptive Capacity

A network can assemble capacities and disassemble them with relative ease; it can adapt nimbly. Links among people or organizations can be added or severed, or they can become “latent,” meaning they are maintained at a very low level of connectivity, or more active.

An example of creating flexible networked capacity is the Pine Street Inn, a nonprofit that serves more than a thousand homeless people in Boston. For years, the organization provided food, job training, emergency shelter, clothing, and health services, but when it faced overwhelming financial problems due to state funding cuts and rising costs, it looked for a way to organize its capacities that would cost less without cutting services or quality. The alternative it found was to stop trying to do everything itself. Instead of internalizing all capacities within the organization, it assembled a set of specialized capacities in several other organizations that added up to the overall capacity needed to serve the homeless. Now Goodwill Industries, which

processed 20 times more clothing than the Pine Street Inn, handles the clothing, at a saving of \$350,000 a year. Another specialized organization provides the healthcare, reducing costs more than \$1 million a year.

As the capacity to serve the homeless was distributed to these other organizations, Pine Street became more of a coordinator and less of a direct provider, eliminating 41 staffing positions and saving \$2 million a year. But it kept doing one of the functions at which it was especially good. “Pine Street Inn is a master of food service,” says Marion Kane, executive director of the Barr Foundation, which supported Pine Street’s transition to a network approach. “They provide three meals a day to all of these people.” It pays its clients to work in its food service function. The organization got other organizations to contract with it to provide them with food service. “It’s been a profit center for Pine Street Inn, generating \$600,000 this year in new job training revenue.”³⁷

Pine Street revised a single organization to form a network of organizations, which we call an “extended enterprise” net. In northeastern Ohio, a different dynamic led to the formation of an unlikely network of organizations that, like Pine Street, also created a new and flexible capacity. We say “unlikely” because the network links 81 foundations, a type of organization long characterized by a go-it-alone attitude. The Fund for Our Economic Future was formed in 2004 as a collaboration to provide philanthropic capital—grants, loans, and equity—for economic development projects. Its network has pledged more than \$33 million for this purpose. “There is strength in our numbers,” says Brad Whitehead, program director at the Cleveland Foundation.

Participating in the Fund network, says Brian Frederick, president of the Community Foundation of Greater Lorain County, “gave us access to people and resources we don’t have. We do funding for arts and education. This allows us to participate in economic development.”

Working as a pool of the network’s resources, adds Whitehead, the Fund is often able to move more quickly to make an investment than any of its members could.³⁸

The network effects we have described—adaptive capacity, resilience, reach, rapid growth and diffusion—can generate remarkable outcomes for social change agents and their organizations. You can see how they helped people and organizations in a variety of ways. Doug Ross connected across a political chasm to attract vast resources for his charter school. The Pine Street Inn tapped into special capacities that it did not have and which would have been difficult and expensive to develop within its organization. In practical terms, networks can boost efficiency and effectiveness, attract supporters and resources, and help increase focus, sustainability, and capabilities. They transform one’s capacity to act. That’s the basis of the “business case” for investing in network development.

4.

THE BUSINESS CASE FOR SOCIAL-CHANGE NETWORKS

The Massachusetts Smart Growth Alliance was financially blessed at its formation in 2003. The financial needs of its seven-organization network were taken care of by a sizeable, three-year grant from a foundation in Boston. This is unusual in the world of social-change networks; typically, networks are built on shoestring budgets or less. Having real money, Alliance members recall, meant they could hire an executive director to coordinate the network and dedicate significant amounts of their staff time to the network's efforts—and this was easily justified to their penny-wise boards of directors. It also meant that the collaborators felt accountable for their performance, since it was not all just volunteer work.

Three years later, though, the funding was running out. The organizations in the collaboration started to explore how to ensure adequate funding for the network in the future. They dismissed the possibility that fee-based revenues could be a significant source of funds, since they were largely undertaking public policy development and advocacy functions, which do not usually generate fees. An option they considered was to have each member contribute funding to the network. The logic behind this, reported in a 2006 assessment, was that “the mission of each member organization is advanced through the Alliance, so each organization should be willing to raise funds to support Alliance activities.”³⁹ But the group concluded that the foundation funding the Alliance could raise as a whole should continue to be its primary source of capital.⁴⁰ A reason for the decision was that the organizations felt their ability to raise money *as a group* was much greater than it was as individual organizations; the network provided a compelling “story” for funders. Another reason was that most of the funding the organizations received on their own was restricted to specific projects and could not be easily redirected to the Alliance's work.

In other words, the “business model” of the Alliance network—how it generates revenues—looks like that of its individual members and many a nonprofit organization: it asks philanthropy for money. This is because even though a network, rather than an organization, has been created to do the work, it's the specific purpose of the network—policy advocacy, in this case—that dictates which sources will provide funding. A network conducting advocacy will end up looking for money in the same “capital market” as an organization that does advocacy work. The same would be true of a network delivering rural health care services or a network that brings together funders of after-school programs: being a network does not mean it can raise money from outside of the usual sources. But, as the Alliance concluded, that is not the end of the story.

The potential advantage to the Alliance of being a network in pursuit of funds, rather than single organizations, is that the network has more fundraising power in the nonprofit financial marketplace. It's worth exploring what the source of this power really is:

- The Alliance is able to present itself as a unique capacity, the assemblage of its organizations' capacities. This differentiates it from others in the capital market and makes it a more attractive option for philanthropic investment.

- The Alliance can say that by coordinating the work of the members, it eliminates overlap and duplication of effort; it has gained some efficiency. This creates value for foundations and other donors that are increasingly concerned about the proliferation of nonprofits and about getting the biggest bang for their bucks.
- The combined capacity of the network allows the Alliance to present itself as having a realistic shot at achieving an ambitious set of goals. This may appeal to a funder's ambitions, while also improving the chance of passing a funder's "due diligence" examination.

Networking creates a capacity that can deliver greater results with bigger and better outcomes; this is the network's business case for funding. It is built on network effects. The Massachusetts Smart Growth Alliance has an adaptive capacity that allows it to accomplish more than any of its members could alone. We have seen much the same in other examples of networks. The Pine Street Inn, for instance, also built an adaptive capacity that allowed it to cut costs and deliver higher quality services to more homeless people. In 2006, when the western Michigan WIRED network of a score of public and private sector organizations won a \$15 million grant from the US Department of Labor to create innovative workforce development programs in the region, its comparative advantage was the unique capacity for innovation that its linked participants offered.

Non-Government Organization (NGO) Advocacy networks in Latin America identified numerous benefits to networking in a 1999 study:⁴¹

- Increased visibility and success of political initiatives and campaigns.
- Increased legitimacy results when policymakers and other important social actors perceive NGO members as part of a larger representative group.
- Active cooperation with regional, national, and international advocacy campaigns provides important sources of solidarity and legitimacy for national-level efforts and lessens the isolation experienced by many organizations and activists.
- Access to information and educational materials on topics pertinent to the network is traditionally provided by most networks, and its importance should not be underestimated.
- Powerful learning occurs as a result of the interchange with organizations working on similar issues.
- Connections between organizations strengthen access to information and resources.
- Access to training is provided by all of the networks.
- Access to financial assistance for individual study and for NGO programs and campaigns can be increased.
- Access to financial assistance for attendance at national, regional, and international conferences can provide a linkage to regional and international movements for formerly isolated NGOs.

Q. Are networks more financially efficient than organizations? Do they generate a better return on investment than organizations?

There isn't much research yet that answers these questions in quantifiable terms, especially for nonprofits. Rudy Ruggles, a network consultant in Boston, suggests that networks may produce a variety of economic efficiencies, cutting costs because of the scale, speed, scope, or span that they achieve. *Scale* uses a network's assets to produce more of single output. *Speed* uses its assets to produce outputs at higher rate of throughput. *Scope* uses assets to produce different types of outputs. *Span* efficiently coordinates/sequences use of assets.⁴²

A 2004 report by Global Partnerships, a business consulting firm interested in the question of nonprofit benefits from networking, looked at five cases of collaboration among significant for-profit companies and concluded that there were measurable reasons to believe that network models do a better job of using the firms' assets to generate financial returns.⁴³

In one of the few analyses we've seen, the Barr Foundation, which has made investing in the capacities of nonprofit networks one of its core strategies, assessed its network approach for increasing access to after-school sports programs in Boston. It invested \$340,000 in the effort, which focused mainly on helping the many sports program organizations to connect with each other and find ways to work with and help each other. A number of these connections produced short-term results: for instance, community learning centers adopted a physical activity curriculum developed by a national organization that also provided training for staff; other organizations got reduced costs for athletic equipment. Marion Kane, the foundation executive director, concluded that such value could not have been created by investing instead in 20 organizations at \$17,000 each to increase the number of slots in their programs. And what a network approach achieved was sustainable over the years, because, unlike investing in organizations' programs, it did not depend on direct funding from the foundation.⁴⁴

Q. What if the philanthropic funders you approach don't understand or believe in the network model?

Although the logic of the network business case may seem quite powerful, emerging networks often find that potential funders—foundations, individual donors, corporations, and others—are used to funding single organizations and have great difficulty understanding why and how to fund a network. What's a network to do when its potential source of capital is behind the learning curve? The simplest answer is this: sell the prospective results, not the network model. A funder that is skeptical or uninformed about networks nonetheless cares about achieving certain outcomes. Pitch what the network can *uniquely* achieve, not how it will be done.

If the “what” is compelling enough, then funders will have many questions about the “how.” They may wonder, for instance: Who will be accountable for the use of the money, when so many organizations are involved? Or, why should funds be used to cover the overhead costs of building and operating a network, such as communications and coordination? But these are more technical questions about network design. You can show funders living examples in the field, as well as tap the literature about networks (including this Handbook) to explain how the network will function and what its financial needs are.

5. GUT CHECK: WHAT IT TAKES TO BUILD NETWORKS

In the fall of 2005, the American Red Cross was tapped out. It had mounted relief responses to back-to-back Hurricanes Katrina and Rita—operating hundreds of emergency shelters, housing 200,000 families in motels and hotels, serving 20 million meals in 27 states, and providing cash grants to some 1 million families. It had received \$1.3 billion in contributions, more than even after the 9/11 attacks, but that was not enough. For the first time in its 124-year history, the organization had to borrow money, \$340 million, to complete the job.⁴⁵

Lack of funding was just part of the Red Cross's fatigue. The nation's premier disaster response organization, one of the world's largest nonprofits, had little capacity left to handle another disaster of significant size: an earthquake, another hurricane, a terrorist attack, a large-scale quarantine due to, say, avian flu. Red Cross officials asked a member of its board of directors, Michael Kleeman, to develop strategies for effective responses in the future. And the organization, formed more than a century ago, before corporate giants and federal government bureaucracies roamed the earth, began to consider a new way of organizing massive relief. It recognized that large-scale disasters are likely to overwhelm any locale's response capacity and that no single entity—not the Red Cross, not the Federal Emergency Management Agency, not even the U.S. military—could save the day. "It's a broken model," says Kleeman, a telecommunications consultant and fellow at the University of California San Diego. "You have to have a way to distribute the load."

The Red Cross had long had corporate suppliers such as Federal Express and since 9/11 it had maintained informal relationships with many businesses. But, Kleeman says, the idea of using a formal, on-going network of private companies—operating nationally and locally, coordinated but not centrally controlled—was new.

Using Networks

That a network of organizations might be able to do what no single organization, even a large one, could do would not surprise the many corporate leaders who have spent the last decade knitting together production systems that encompass scores of companies and span the globe. *New York Times* columnist Thomas Friedman, in his best-selling *The World is Flat*, depicts the rapid acceleration in the spread of corporate global networks at the end of the 20th century: "We are now connecting all the knowledge centers on the planet together into a single global network," he declares.⁴⁶ Leading the charge, he explains, are the many businesses that take advantage of a "global, Web-enabled playing field that allows for multiple forms of collaboration—the sharing of knowledge and work—in real time, without regard to geography, distance, or, in the near future, even language."⁴⁷

In an eye-opening chapter, Friedman describes the chain of business collaborations that produced the Dell laptop he used to write his book, linking suppliers in the Philippines, Costa Rica, Malaysia, China, Korea, Taiwan, Germany, Japan, Thailand, Indonesia, India, and Israel. "This supply chain symphony—from my order over the

phone to production to delivery to my house—is one of the wonders of the flat world,” he concludes.⁴⁸

Businesses are not alone in discovering and exploiting the benefits of creating networks. Government functions rely increasingly on network approaches. The public sector’s problems “have become both more global and more local as power disperses and boundaries... become more fluid,” observe Goldsmith and Eggers in *Governing by Network*.⁴⁹ More government agencies are abandoning the model of hierarchical bureaucracy, they say, and are engaging networks of private and nonprofit providers to deliver public services and goods, and networking among themselves—linking their long-standing “silos”—to provide more integrated services.

In civil society, other motivations are driving the development of networks. Rick Warren, author of *The Purpose-Driven Life*, which has sold 23 million copies, started Saddleback Church in 1979 in California’s Orange County. Now it has 20,000 members and is organized, as Malcolm Gladwell reports in *The New Yorker*, around small cells of six or seven people that are linked to each other. The development of religious “cellular networks” is widespread, according to Gladwell:

*When churches—in particular, the megachurches that became the engine of the evangelical movement, in the nineteen-seventies and eighties—began to adopt the cellular model, they found out the same thing. The small group was an extraordinary vehicle of commitment. It was personal and flexible. It cost nothing. It was convenient, and every worshipper was able to find a small group that precisely matched his or her interests. Today, at least forty million Americans are in a religiously based small group.*⁵⁰

Lessons Learned: Why Not to Build a Network

Everybody’s building networks: churches, government agencies, and global businesses, even the Red Cross. But are networks right for you? Are there any reasons *not* to build a network? Yes, there are three.

1. Some goals simply don’t require network effects. Your goals may not be very complicated. Or they may need a high degree of accountability and hierarchical authority. John Cleveland, an organizer of the west Michigan WIRED innovation network, says that developing innovations for workforce development requires a network, but making sure everyone in the network gets paid when they are supposed to be paid does not. “If I want to be sure I get my paycheck every other Thursday, the last thing I want is to have a network taking care of that. It’s a linear process and if it gets messed up I want someone who is definitely in charge so I know who has to fix it.”

Use a network if you need certain network effects—rapid growth, resilience, adaptive capacity, and so on—to achieve your goals.

Before going for a network approach, ask yourself this: “What is it about the outcome I am seeking that requires a network to do the work?”

2. Some organizations can’t handle the demands of collaborating with other organizations in a network. Organizations have egos. Out of necessity, they

are self-absorbed. Some have a sense of manifest destiny, too; they seek to expand themselves. All of this is normal, and may even be heightened in the nonprofit sector, where organizations tend to have a strong sense of the importance of their mission and values. And since money for nonprofits is usually scarce, they have a habit of scrappiness, of getting what they can to keep going. But all of this may work against an organization that is interested in building a network. To adapt a phrase used by the teachers of young children, you have to “play well with others.” And not every organization is ready to do that.

The nonprofit, “ego-centric” organization “becomes the hero of its own story, the central character in a drama where peer organizations inevitably are bit players,” lament Jed Miller and Rob Stuart in their on-line article, “Network-Centric Thinking.”

Funding proposals and appeal letters portray the group’s work as indispensable to real progress and social change. Its programs are heralded for their superiority to the programs of other groups with similar strategies (and success rates). The organization’s work is described as a model for the field, while the contributions of others go unmentioned.⁵¹

In a network, you have to share decision-making, resources, and credit. This requires “a different mindset,” say John Hagel III and John Seeley Brown, authors of “Creation Nets,” “one that recognizes that flows of knowledge across institutional boundaries are the key to generating the new knowledge and new practices required to succeed in a rapidly changing world.”⁵²

You have to let go of control over things that may matter to you and work with other organizations to take care of their needs as well as yours. “The introduction of external partners, with their own viewpoints and management processes, inevitably clashes with existing corporate cultures,” observes Heather Creech of the International Institute for Sustainable Development.⁵³

You have to be realistic and candid about what your organization can and cannot do, since its true competencies—not its inflated ones—will be part of the network’s broader adaptive capacity.

Another challenge for organizations is to really make networking a sustained priority. Nonprofits tend to have “short attention spans for activities like networks,” cautions Creech, “unless the work is well integrated into the organizational priorities... Institutional priorities may well clash with network priorities unless they are proactively aligned.”⁵⁴

One temptation above all may lead organizations into ill-advised networking with other organizations. It is the prospect of raising more money. They see the financial boost they might get, but don’t recognize the hard work it will take to make good on a network’s potential. Creech issues an explicit warning about the lure of money:

A lead organization may seek preliminary consent from potential partners to create a network. Expectations for the network are then driven by the immediate objective to raise funds rather than by a careful deliberation of whether the organizations are a good “fit” with each other and whether in reality there is support for a common agenda

*above and beyond the sharing of financial resources raised for the network's first projects.*⁵⁵

Before going for a network approach, ask yourself this: “Is my organization ready to be an effective collaborator in a network?”

3. Some funders can't handle the demands of investing in collaboration. Funders carry an extra burden when it comes to network building. Like anyone else, they should be clear about what their goals are and why a network is the best way to achieve them. Funders are likely to be as organization-centric in their thinking as most nonprofit organizations, since they almost exclusively fund single organizations to get things done. Thus, they may not have any more sense than most nonprofits about how to invest in helping organizations to collaborate. But unlike the organizations and individuals who might want to build networks, funders have money—and money is a force for control.

Remember that earlier we described “distributed control” as an essential characteristic of networks. When a single source of money invests in a network of distributed control there is a tendency, of course, for network members to defer to the source of funds. So the funder may have the power to organize the network initially in whatever way the funder thinks best. It can operate as a “dominant hub,” setting most of the rules by which the network operates.

Here is a challenge for a funder: sooner or later, control has to become more distributed across the network. Will the funder be able to let go of control?

A second challenge lies in the uncertainty of a network's evolution. It is hard to put a network's development on a production schedule. It is hard to be sure just how a network will evolve; surprises emerge. Will the funder be patient enough with the network to allow it to forge its own direction, rather than trying to impose a plan from the outside?

Before investing in a network approach, ask yourself this question: “Am I, as a funder, willing to let go of the control I have and to give the network its head?”

PART II ORGANIZING NETWORKS: SEVEN DECISIONS

Network building is a practice. Organizing, weaving, facilitating, coordinating, governing, and evaluating networks: these are some of the basic tasks that network builders have to perform. In this part we focus on organizing, most of which involves designing and setting up a network.

To organize a network you have to make seven decisions that get things going. Each decision presents choices, and to make the choice that is right for you, it helps to understand more about how networks actually work. Your decisions are crucial, but they are also provisional or temporary; as networks evolve, their fundamentals may change. The seven questions are:

1. **What kind of network do you want to build?** Yes, there are different kinds of networks—three of them, based on our field research. We discuss them in Chapter 6.
2. **What is the “collective value proposition” of the network?** A value proposition is the potential benefit that attracts people or organizations to participate in the network. A *collective value proposition* is a benefit that is broadly desired by members of the network. This is the topic of chapter 7.
3. **What is the initial membership of the network?** Who is in and who is out? Networks have boundaries and horizons, but their borders may be “soft”—easy to penetrate—or “hard”—impossible to penetrate. See Chapter 8.
4. **How should the network be governed?** Networks are self-governing; the members rule. But how shall they rule? What is decided by governance? Who governs? Various options are explored in Chapter 9.
5. **What structure should the network have?** Networks have structures or shapes—patterns of connections among their members. Different structures have different impacts on a network’s capabilities and operations. Which structure is right for your network? Chapter 10 addresses this.
6. **What are the initial operating principles of the network?** Networks have their own ways of functioning—“natural rules” that you violate at your own risk. What are these rules? Chapter 11 describes a handful of them.
7. **Who will build the network?** At the beginning of a network’s development, a network organizer tends to play all of the roles involved in network building—weaver, facilitator, coordinator, etc. But each of these roles requires different skills and, eventually, may be played by different people. We describe these different roles and competencies in chapter 12.

6.
THREE NETWORKS IN ONE:
CONNECTION, ALIGNMENT, AND PRODUCTION NETS

All networks start with *connectivity*, obviously. They link people and organizations to each other. Some networks end there; their “mission” is simply to connect. Others, however, develop *alignment* among their linked nodes. Alignment occurs when network members strongly share a sense of identity and/or a value proposition. Alignment can be an end in itself for some networks. But it is also an essential element, along with connectivity, in the development of a *production* network. Production is what networks do when their members want to accomplish something specific, not just connect with each other or align around an identity.

These three general types of social-change networks have different attributes. The differences are important, because they present network builders with different challenges. At the same time, these three types of networks form a *progression* that a network’s evolution is likely to follow. Most network builders for social change build production networks—so they must pay a great deal of attention to building connectivity and alignment.

Differing Characteristics of the Three Networks

	Connectivity Network	Alignment Network	Production Network
<i>Definition</i>	Connects people to allow easy flow of and access to information and transactions	Aligns people to develop and spread an identity and collective value proposition	Fosters joint action for specialized outcomes by aligned people
<i>Desired Network Effects</i>	Rapid growth and diffusion, small-world reach, resilience	Adaptive capacity, small-world reach, rapid growth and diffusion	Rapid growth and diffusion, small-world reach, resilience, adaptive capacity
<i>Key Task of Network Builder</i>	Weaving—help people meet each other, increase ease of sharing and searching for information	Facilitating—helping people to explore potential shared identity and value propositions.	Coordinating—helping people plan and implement collaborative actions.

Connection: The Base Platform

A connectivity network embodies the essential “platform” of all networks—a foundation of linkages that allows information to flow and transactions among the nodes. It connects people to each other and to information in ways that allow them to

act as they choose. It makes communication easier and easier, and provides participants with more coherent access to information.

Communication is a basic function of any network, but it is also a function for which networks may have particular advantages over other organizing structures. The information that people get through networks tends to be “thicker,” richer, than what they get through market structures, and more “free,” less shaped, than what they get through hierarchical organizations.⁵⁶

Craigslist.com is an example of a nonprofit connectivity network. Based entirely on the Internet, it allows individuals to connect with—“find”—each other, letting them communicate and transact with ease. Many people use their connectivity with other people to get jobs: they find someone, a college chum or family friend, for instance, who will use their personal network to connect them to someone with a job opening.

Connectivity networks can be important to social-change agents who are concerned about the isolation of particular individuals or groups from other people. Many schools in segregated urban or isolated rural areas, for instance, run programs that connect students with adults in workplaces who act as mentors and guide student projects—a way of exposing the kids to new information about how the world works. Some foundations provide resources so that leaders from scores of communities in a geographic region such as Chicago or the San Francisco Bay area can spend time with each other at retreats or summits and gain new information about what their neighbors are thinking and doing. In the age of the Internet and the World Wide Web it’s easy to overestimate how connected we all are. But distance and differences such as race, ethnicity, and economic class still pose barriers to connectivity. When the W.K. Kellogg Foundation started a network of rural organizations in 2006, many of the participants said that it was often hard for them to get good information about what others in their own geographic regions were working on.

Connecting is all that a connectivity network does. It is not designed to weave people together into an aligned “movement.” It does not seek to coordinate people so they can produce something collectively.

Because connectivity networks are about generating and moving more and better information that people can use, they are typically designed to unleash the network effects of rapid growth and small-world reach. Growth adds new connections to the network, while reach adds distant and diverse connections. Both effects enhance the content and the spreading of the network’s information.

An essential part of designing a connectivity network is to enhance a member’s search for information—a strong “navigational” function makes it easier for members to find the information they need. The various browsers that we use to steer through the vast universe of information on the Internet perform this function. One tool that builds connectivity is a directory of network members.

Connectivity networks tend to form around “hubs”—people who connect to many other people. And the relationships between the nodes tend to be those of what social network analysts call “weak ties”—strong enough to open lines of communication, but not to build cooperation or collaboration among people. Connectivity networks require only low levels of trust in order to establish these ties between people.

Because people connect with each other as a matter of course, they are always in the process of building connectivity networks. Some people—“connectors”—may be naturally good at this process and they build a great many connections with others, as Malcolm Gladwell explains in *The Tipping Point*. But network builders can be more deliberate about connecting together people and organizations and the information they have. They actively weave connections among nodes to help make it easier for network members to search for information and exchange information. They might focus, for instance, on building bridges between people who are not connected with each other. Tools they use to do this include directories of network members, information clearinghouses, and email listserves that make it easy to distribute information.

Chris Lynch has spent three years weaving together the hundreds of organizations that provide after-school sports programs for youth in Greater Boston. His work was supported by the Barr Foundation, which was concerned that thousands of youth were not being served, especially urban youth and girls. Lynch’s assignment was to start connecting the scattered after-school sports organizations to each other and to resources they could use. One of the tools he uses to promote connections is an e-newsletter. In early 2006 he published the 25th e-newsletter of Sportsnet, part of a website (www.bostonyouthsports.org) that provides information to network members and facilitates communication between members.

Alignment: Linking Individuals for Affinity

An *alignment* network builds on connectivity. It links people, aligns them, in ways that help them to create and spread what is called a “collective value proposition” a shared reason to care about each other. The individual people in the network come to share a set of ideas, language, standards, or identity. This allows them to more efficiently exchange information and coordinate with each other *as a group*. They are more than just connected to each other, but less than focused on a narrow production goal.

College alumni networks are an example, as their members efficiently use connectivity with each other to find good jobs, for instance. They align around their shared feelings about their college experiences. “School ties are immensely powerful in the business world,” notes *Wall Street Journal* columnist Jared Sandberg. They provide “preexisting networks of relationships and low search costs.”⁵⁷

In 2006, the Pacific-American Leadership Center at the University of Southern California brought together 24 Korean-Americans from the Los Angeles area to form a network called NetKAL. USC deliberately selected young, successful Korean-American professionals in business, government, and the nonprofit sectors to start the network. Most of these people did not know each other before they came together at the first meeting of the network. Within several sessions, though, they were not only getting better connected to each other, they were finding that they shared an affinity or identity. “People like us” became the way they routinely described the fledgling network, meaning 2nd generation Korean-Americans, aged 25-40, with successful careers and a personal concern about the future of the large Korean-American community in Los Angeles. The value proposition around which they were organizing was plain: people like us—young Korean-Americans—should provide more leadership for the

city's Korean-American community. The members of NetKAL were beginning to go beyond the information sharing of a connectivity network; they were forming a shared identity and a reason for being.

The difference between connecting and aligning is illustrated by one of the original “social-networking” websites like Friendster and MySpace. On February 4, 2004 a student at Harvard launched Thefacebook.com, a website where students could create a profile of themselves with a photo and personal information, search for other profiles, let other people know their profiles had been viewed, and link to friends' profiles. Within 24 hours, some 1,500 people had registered and by the end of the month about 75 percent of Harvard's undergraduates had signed up.

The rapid growth of connectivity was explosive, but something else was happening too. The website was not open to everyone the way MySpace and Friendster were; only Harvard students could join. “Facebook's members had a physical location, professors, and classes in common,” notes John Cassidy in a *New Yorker* article about social-networking websites. He quotes a woman who was the 51st person to register with Facebook: “I remember the buzz of excitement around the fact that the kid whose profile you had checked out the night before might be sitting at the table next to you in the dining hall the next morning at breakfast.” That was the buzz of alignment.⁵⁸

Alignment is a step toward developing a specific production purpose for a network. Unlike a connectivity network, it requires that individuals in the network give up a measure of their autonomy in favor of a group. Alignment requires that more trust be developed between individuals than mere connectivity needs. So an essential task in developing an alignment network is to strengthen relationships among members; alignment depends on stronger ties than connectivity. In addition to weaving for connectivity, the builders of alignment networks must allow individuals to come together regularly. Face to face is the most effective way to do this in the early stages of the network, so people get to know each other, exploring their potential shared identity and value propositions.

Structurally, alignment tends to evolve clusters of nodes—tighter, closer connectivity and stronger ties, among members of the network—rather than dependence on a single hub.

A trade association may be an alignment network of similar organizations that seek to help each other; their shared value proposition is the general betterment of the members. In 2000, this is precisely what the people who created Dine Originals, a national network of independent restaurants (as opposed to franchises or chains) had in mind. Dine Originals now has more than 700 restaurants in 19 chapters. In 2006 its chapter in Madison, Wisconsin showed that its members could provide flexible capacity to a member in need. Lisa Lathrop and her husband couldn't find a place to move their bakery and had only two days left on their expiring lease; their new location had fallen through. The Lathrops' plight was communicated by e-mail to other restaurants in the local chapter of Dine Originals. The owners of a nearby steak house, who barely knew the Lathrops, offered to share their kitchen. “They did it out of the goodness of their hearts and wouldn't let me pay for the space,” says Lisa Lathrop. In other words, the network that had aligned around the interests of local restaurants found a way to redeploy some of its overall capacity—kitchen space—to provide value to one of its members.⁵⁹

An alignment network like Dine Originals may expose opportunities for cooperation and collaboration on specific production goals. That network, for instance, now coordinates purchasing and marketing for members, which reduces their costs. As NetKAL members aligned around their identity, they also decided to implement two special projects to contribute to the Korean-American community.

Production: The Many Specific Purposes of Networks

A *production network* builds on the connectivity and alignment of people, but goes a step further by also fostering joint action by people or organizations. It does not exist solely to connect or align people around a general value proposition; it pursues a specialized outcome.

To be specialized a network must have high definition and consistent focus—and that requires network members to plan together and have clear agreements about who will do what. This is a significantly more difficult organizing task than developing connectivity and alignment. It involves coordinating the network.

Most social-change agents who build networks seek to build production networks, but they make seek to produce a wide range of outcomes. They want to create networks that, for instance, will:

- **generate certain goods and services**, such as food and shelter for the homeless;
- **advocate for particular public policies**, such as reproductive rights for women or environmental justice for poor neighborhoods;
- **innovate to solve social problems**, such as immigrant poverty, the loss of family farms, and creation of affordable housing in “hot” real estate markets,
- **learn about and spread specific “best practices,”** such as ways to design mass transit systems to reduce traffic congestion and air pollution;
- **mobilize citizens** to participate in public and community affairs; or
- **build capacity** of selected local leaders or organizations in declining communities.

All of these production networks will not look the same. They may seek different network effects and have different structures. They are not built in the same way. The differences between the functions of various production networks—learning, advocacy, innovation, or any other—dictate this.

Here’s an example. Building an advocacy network to influence public policymakers often involves growing the network’s membership rapidly so that many people are pressuring elected officials. But rapid growth is not a network effect that would be important to someone building a production network that provides health care services to people in remote rural areas. Instead, what might matter is creating adaptive capacity by linking various health care providers so that “gaps” in services are filled. Structurally, the rapid-growth advocacy network might use a structure of multiple hubs that communicate with and loosely coordinate many people efficiently, while the capacity-creating production network might be a tightly-connected cluster of a few organizations with detailed agreements about collaboration.

Moreover, advocacy and production functions are different from an innovation function. To build an innovation network that, say, will develop new ways to help communities improve their environmental quality is likely to involve assembling a capacity or “collective intelligence” that is quite diverse: scientists, local officials, federal and state regulators, real estate developers, community organizations, and others. The diversity of views and positions contributes to the innovation process. In contrast, an advocacy network might depend much more on the like-mindedness, rather than the diversity, of its members. Thus, coordinating an innovation network will be quite different from coordinating an advocacy network and will work best with a different structure of linkages.

Decision: Which Network is for You?

As we’ve said, social-change agents tend to create production networks, because they are seeking a particular impact—sheltering the homeless, changing public policies, etc. But it may be that what attracts you to network approaches can be realized by simply connecting people to each other, or aligning them around a value proposition, rather than going all the way to organizing a production network. In any case, remember that a production network is built on a base of connectivity and alignment.

Some network organizers start with a connectivity network in mind, and then find that as connections are made, the potential for members to align around a value proposition emerges, and then members desire to undertake collective projects. In short, they stumble onto the path to a production network. Other organizers find that although they want to build a production network, their efforts get stuck at connectivity or alignment—and collaborative projects don’t emerge. They can’t get to the “next level” of network development.

Part III of the Handbook addresses some of the challenges of building production networks.

7. REASONS THAT BIND: COLLECTIVE VALUE PROPOSITIONS

In 2003, the representatives of some 40 foundations met together to see if they could collaborate around their programs to help youth who were transitioning out of foster care and juvenile justice, or leaving school without a diploma. “We wanted to reduce duplication of effort and, more importantly, strategically build on each other’s investments,” recalls Chris Sturgis, who helped to lead the process. The group resisted the impulse to start a new nonprofit organization, committing instead to operate as a network. But, Sturgis says, it also decided that “40 people was too many to sit around the table,” so it created a structure for collaboration around a few of the separate public sector systems—foster care, schools, juvenile justice—on which each foundation focused.

Within each of these work groups, people started to build strong relationships and joint activities. But, Sturgis continues, “now that they are identified with their work group, they don’t feel bonded to the larger network of 40 organizations. You can see huge momentum in the work, but a weakening of the network due to its own success.”

What had changed was the experience the 40 organizations had in working together, which changed the *collective value proposition*, the reason, for the network. In the beginning, the binding reason was a general one: they could do more together on behalf of youth and to reach their organizational goals than they could do alone. Over time, though, the network showed signs of splintering due to the relative ease of working together on one of the public systems compared to the difficulties of working across the complexity of multiple systems. As members of the network gravitated to the single-system sub-networks that interested them, some members began to feel the network was falling apart, losing its overarching “glue.”

But even as the sub-groups of the Youth Transition Funders Group network were showing signs of separating, Sturgis reports, they also realized that they wanted to stay connected to members who were not in their sub-group. They wanted to know what those members were doing and they wanted to learn with them more about youth in transition. This was especially true for regional foundations that worked in several public systems, as compared to the national organizations that focused on specific interventions or approaches. In other words, the network was discovering that it had several versions of collective value. The sub-networks were interested in taking collaborative action on particular types of problems that youth encounter. And the network as a whole was interested in learning together, across the groups, as well as strengthening its members’ general influence through common communication efforts. The network had reinvented its collective value proposition and reorganized accordingly.

As goes the collective value proposition, so goes the network. The collective value proposition is what makes a network greater than the sum of its parts. As Heather Creech points out, “If the network serves only as an umbrella for a collection of individual projects, it is not realizing its added value potential.”⁶⁰ A collective value proposition is a commitment to joint value creation by network members.

In a connectivity network, the collective value proposition may be quite general and weak: “By connecting with each other, we will find out things we want to know.” In an affinity network, it must be more specific and stronger: “By connecting with each other, we enhance the identity of people like us.” (Think of the network of young Korean-Americans in Los Angeles). But in a production network, the collective value proposition is usually quite specific and strong: “By connecting we can produce this specific result—goods or services, public policies, programs—that changes the world.” Specificity matters. Network researchers Teobaldo Pinzás and Claudia Ranaboldo note that while many networks claim to cover an expansive list of topics or themes, they don’t set or stick to priorities very well. The more focused and well-defined the network, they say, the more commitment they obtain from their members and the more they accomplish.⁶¹

A Two-Way Street

A collective value proposition is a two-way street. It’s not just about what others can do for you, it’s also about what you can do for others. It may be natural to start off by thinking about what resources you can garner for your own projects, but that’s *organization-centric* thinking. In a network, the nodes create value for each other. A collective value proposition is about what all nodes can do for each other.

But this does not mean that you must sacrifice your interest at the altar of collective interest. Not at all! If you don’t think being in a network will create value for yourself, you’re not likely to stay in the network for very long. “If there’s no value,” says Bill Traynor, a designer of the Lawrence CommunityWorks net, “people will start to exit. It’s a self-regulating system.” If a network’s focus is not well aligned with what an organization cares a lot about, says researcher Bonnie Shepard, “the NGO is more likely to drop out of the network altogether or sharply reduce its commitment.”⁶²

The trick is to forge a collective interest, a value proposition, which satisfies your interest and those of others. To do this, you have to understand just how networks can create value for you and others.

Exchanging Value in a Network

In a network, members can exchange four kinds of tangible value: their connections, knowledge, competencies, and resources.

Finding Ways to Create Value for Network Members

Connections	Can you connect others in the network to people that may be able and willing to help them?
Knowledge	Do you know something that may be valuable to others in the net?
Competencies	Are you able to do something that may be value to others in the net?
Resources	Do you have access to funds or other resources that may be useful to others in the net?

Sharing connections. We all know many other people, but none of us knows everyone. The others we know can connect us to the people they know and sometimes these people can be quite helpful to us. This happens all the time as we develop our personal networks: the friend of a friend who becomes a friend. Connecting this way may yield delightful and valuable “small-world” surprises, because we usually don’t know who is know by the people we know.

In fact, connecting is *highly likely* to yield valuable connections, because it is a fact established by network science that each of us is just a few connections—a few “degrees” in the language of Social Network Analysis—away from everyone else on the planet.

Imagine a meeting in which people who work in the same sector or field as you make lists of the hundreds of people they each know very well. There will probably be people on that list that you would want to connect to and you probably know people that others in the room want to know. And if you made a list of people you want to get to know to help you with your purpose (affordable housing, etc.), it’s quite likely that someone in the room can connect you to them.

When each of the 24 members of the Korean-American leadership network in Los Angeles identified up to three Korean-Americans they wanted to meet, it turned out that about 80 percent of the 47 “strangers” they named in total were already known to at least one member of the network. And when we asked the network if any of them could connect us to Hines Ward, a football player who had been the most valuable player in the recent Super Bowl and who just happens to be a Korean-American, two members of the network said they could.

For many networks, the connections that are valuable are those that bring members into contact with people who are not like those they already know. In Latin America, for instance, local-level advocacy networks for women’s rights were able to advance their efforts by using their networks to connect to political elites in their own countries and to international networks of advocates.⁶³

Of course, just because someone in your network knows someone you want to know does not guarantee that they will be willing to introduce you to them. That depends on many other factors, such as your motives for wanting to meet the other person, your “readiness” to meet the other person, or the other person’s willingness to meet with new people. We don’t usually introduce someone we don’t trust to other people we know.

Sharing knowledge. What you know is not the same as who you know. You may have deep knowledge about a particular subject, such as the history of efforts to build affordable housing in your community—what worked and didn’t work, or information about the percentage of small businesses that fail every year and why they fail. You may have expertise about a technical matter, such as state regulations covering homeless shelters or the mechanics of the legislative process for making a new law. Often, we don’t remember all of what we know or consider it to be valuable, until we realize that it might help someone else.

Sometimes, when what you know is added to what someone else knows, a new picture emerges and that is valuable. When Bruce Hazard was organizing a network in rural western Maine to help with economic development of the region, he brought

together about 20 people who worked separately on various economic development projects. It turned out each of them had a piece of an information puzzle they didn't know existed. "After a year's worth of conversation," says Hazard, "we were finally able to talk about how much money was coming into the region and who the funders were.

We found that in this region over about a two-year period there had been an investment of about \$4 million. Now this was a big surprise to everybody, including the funders, who were not necessarily talking to each other. If then-Governor Angus had come to the region and held up one of those cardboard checks for \$4 million, a lot of attention would have been paid. But because the funding was fragmented, it was hard to get a handle on what that scale was."

Sharing competencies. What do you have the capacity to do that others in the network also need done? Could you do it for them instead of them building the capacity to do it?

The members of a start-up network of five rural organizations in Mississippi and Arkansas—one of five such networks supported by the Kellogg Foundation—met in October 2006 to figure out what they might do together to influence public policies affecting their region. Each of them described their organization's experience and competencies in public policy development, such as mobilizing grassroots advocates, analyzing policy issues, and influencing state legislators. None of the organizations claimed it could do every one of the many aspects of policy development and advocacy, but between them they had all aspects well covered. Although it was too early to tell if they would agree to share these competencies with each other, this potential was apparent.

Sharing resources. Money and staff, the two great tangible resources of organizations, are hard to come by and not readily shared by nonprofits. But it's not unheard of for one organization to lend another, with whom it has a close or strategic relationship, a staff person to work on a short-term project. And some organizations band together to each share a portion of a staff position so that together they will have enough money to hire someone fulltime. At the Funders' Network for Smart Growth, member foundations pay dues and get what they want out of the network, but a few of them provide additional funding to the network to support its overall work for all members.

(In addition to tangible value, network members can create intangible value for each other. They may make others feel valued, gaining a sense of belonging to something important, or just glad to have someone with whom to learn things. Intangible value is real, but it is not sufficient for building a production network.)

Creating Value Together

Value creation in a network is not limited to having individual members share connections, knowledge, competencies, and resources with each other.

When seven organizations joined together to form the Vermont Smart Growth Collaborative, it was the existence of the *network* that allowed them to raise substantial new funding from a donor. In this case, the network aligned around a collective value proposition—greater effectiveness in advocating smart growth public policies—that was important to the funder.

“Knowledge can be created without working in a network,” observe Heather Creech and Aly Ramji. But in knowledge networks that are designed to inform policy, they argue, the network advantage is *joint value creation*: “the creation of new insights and knowledge through the collaboration of members on research, on field projects and other activities.”⁶⁴

Multiple Collective VPs

A network may organize around more than one value proposition. After all, different members will care about different things and some members will care about more than one thing. When we mapped the value propositions that motivated some 50 members of a regional network in northern New England, we identified seven different motivations for participating in the network. When the 24 members of NetKAL were asked what motivated them to join the network, a total of eight reasons were cited by almost everyone in the group.

Reasons to participate in NetKAL

- Develop projects that help the community
- Fuel my passion to lead, build my skills to lead
- Learn from Korean-American leaders
- Develop capacity to be leader in K-A community
- Connect with interesting people, make friends
- Exchange ideas with people
- Make good contacts for professional/business work
- Develop Asian-American perspective on leadership

As a result, a network may seek to provide members with a “menu” of value propositions. A good example of this is the New York City Investment Fund, a network of some 200 corporate and financial institution executives that finances businesses to help diversify the city’s economy. Some members may get value from working on the network’s business deals; this entrepreneurial excitement was initially a powerful attractor of members. But some members also find value in engaging in civic responsibility—giving their time and expertise—to help their community. Others like rubbing elbows with other Wall Street players, and still others find that the network generates private business opportunities for them.

Lawrence Communityworks, a network of more than 1,600 residents of that city, offers multiple value propositions through its many different programs for members. “They are designed to draw people into the network,” explains Bill Traynor. “They are doors into the network. Having many different doors is critical” because it increases the chances that someone will find a reason to join the network.

Researchers Pinzás and Ranaboldo studied networks in Latin America and found that members of a network interpret its “pertinence” to them in different ways. They concluded that a network need not seek a “single shared meaning,” but has to pay ongoing attention to what is pertinent to the members.

8.
**WHO'S IN, WHO'S OUT:
 THE PRIVILEGE OF MEMBERSHIP**

You can't start a network without making decisions about membership.

In an *open* network, most anyone can become a member. Connectivity networks tend to stay open because they depend on having many members who connect and transact with each other; the more the merrier.

In a *closed* network, on the other hand, membership is tightly controlled and limited. Affinity networks are, by definition, more closed than connectivity networks; they seek members with a shared sense of identity. A network of the nearly 500,000 alumni of the University of Michigan, for instance, is closed to people who did not attend that fine institution. Production networks are likely to be even more limited in their membership, because they seek to link people or organizations that want to accomplish something quite specific and to assemble the specific competencies they need. Their membership is right-sized to the particular goal.

But this open-to-closed continuum is just the beginning of defining a network's membership.

Criteria for Membership

The more closed the network, the more attention is usually paid to criteria for membership. We draw on Heather Creech's experience with several policy and knowledge creation networks of organizations to identify some of the main criteria you may want to use:⁶⁵

Shared commitment to network's goals	All network members should be on the same page when it comes to the network's purpose. "Fundamental conflict between missions works against the efficiency and effectiveness of the network," Creech explains. "Partners need to understand the motivations of their colleagues for participating in the network." A summary of research on networks concludes that members "must consider the priorities of the network their own. They must be motivated by self-interest because networking is a potential added-value to their daily work." ⁶⁶
Acknowledged expertise or competence in work of the network	Networks often exist to assemble the capacities of members in new ways. Each member, says Creech, "has to have more than just an interest in the focus area of the network; it has to have real strength to do quality" work.
Connections that matter	Members should have linkages to other organizations or individuals that may be important for the network to influence or otherwise connect to. This means more than knowing others. The links, Creech says, should amount to "a proven capacity to influence" others.
Capacity to	Members should have evident willingness and, preferably, capacity

collaborate	and experience in working in networks. As part of the network they will have to be good communicators with other nodes. They will also have to be able to participate effectively in the network's processes for "cross-fertilization" of ideas. Look for organizations, Creech suggests, that already have "an ease of working across internal boundaries and high concern for people," because they will be able to adapt to others in the network. Other researchers say that network participants should be "open, willing and able to learn from each other." Therefore, they "must have confidence in their work and 'dare to share' it with others." ⁶⁷
Being a good network citizen	Members will have to give enough of their time and attention to the network's activities; being in the network should be a priority for them. Otherwise, they are likely to do less and less of the network's time-consuming tasks. The risk, says Creech, is that you will end up with "sporadic information sharing rather than real collaboration with partners." Another risk is that a member will spend network funds on their own work, rather than the work of the network. Therefore, a member has to be willing and able to comply with the network's financial management arrangements.

Membership Models

All network members are not necessarily created equal. When the Sustainable Development Communications Network decided to expand its membership to additional regions of the world, it created three categories of members:

- Founding members—the seven organizations who started the network. They oversee the vision and objectives of the network.
- Members—organizations active in two or more of the network's projects in the last two years.
- Affiliate members—organizations asked by the network to participate in one project or that develop a project of interest to at least one founding member. These organizations are members only for the duration of the project.

Of course, this is just one way to slice up membership. Other networks we know have established a class of "learning members," individuals or organizations who participate in the network's learning activities, but not in other network activities. The Climate Change Knowledge Network established an observer category to accommodate other organizations working on climate change. "Observer members may attend [network] meetings," Creech and Willard, of the International Institute for Sustainable Development, report, "offer suggestions for projects, and will have access to the network members... As observers, they are not asked to participate directly in projects but are encouraged to share relevant work. Observers are asked to cover their own costs of participation."⁶⁸ The Funders' Network for Smart Growth required members to pay a fee to participate, but when it found that its growth had peaked at

about 50 foundations, it established a lower entry-level membership fee to encourage more organizations to join.

When researcher Bonnie Shepard looked at 13 regional and national networks of nonprofit organizations in Latin America that advocate for women's rights, she found a diversity of membership arrangements, including some networks that "tend to suffer from ambiguity about membership." Two of the networks institutionalized different levels of membership to recognize different levels of commitment to the network's activities. Some of the networks made room for individuals, not just organizations, to join the network.⁶⁹

Funders as Network Members

Occasionally a funder wants to be part of the network, an "insider," not just an "outside" investor. The motivation is to "learn by doing." As Heather Creech notes, the network may find this to be desirable, since it can "interact more closely with donors as part of engaging their interest in and contribution to the projects." She describes the way the Sustainable Development Communications Network handled this. "Donors are considered members of the network and are encouraged to actively learn from the SDCN's experiences by participating in network meetings and on the network extranet. Donors are invited to review and advise on network projects but not asked to take the lead on a network project."⁷⁰

The risk, of course, is that the donor will become a "first among equals" network member, a node with undue influence over the network. As we discuss in Chapter 13, there is nothing wrong with a funder exerting strong influence over the design of a network that it is funding. But it makes less sense for a funder to take an active hand in day-to-day management or governance of the network. Instead, a funder can monitor and evaluate a network's performance while also participating in the network in a limited way as a learner/observer. Funders that want hands-on network experience can organize networks of funders in which they can be full-fledged members and even serve as coordinators.

9. **WHO DECIDES WHAT AND HOW: NETWORK GOVERNANCE**

Networks are self-governed; the members rule. But there's no standard formula for the design of network governance; there are choices to make.

The seven organizations of the Massachusetts Smart Growth Alliance⁷¹ tailored governance to the specifics of their network. They decided that all network members would have equal power to make network decisions. The most important decisions facing the network involved taking positions on public policies the network would work for. Because network members had different interests and competencies in policies, the Alliance required the unanimous consent of the member for taking any policy position. If unanimity was not reached on a particular policy proposal, the Alliance did not take a position, but individual members were free to promote the policy on their own. On other Alliance decisions, such as the work plan and budget, if there was no consensus, a majority vote ruled.

The Alliance's scheme illuminates the three basic elements of governance: who decides, what is decided, and how it is decided.

Who Decides

Which network members have governing authority? Which don't?

The Massachusetts Smart Growth Alliance decided that all members would have equal authority. This is probably typical of a network with a small number of tightly connected nodes that depend on each other to achieve results.

But it seems impractical in a large, sprawling, more loosely connected network. In contrast, the 1,600 members of the Lawrence CommunityWorks network elect representatives to a steering group that governs the network. Of course, representatives may vary in how well they do their jobs. And in some cases representatives may be hindered in doing their jobs. For instance, researcher Bonnie Shepard found that in networks of organizations, "Serious obstacles to effective decisionmaking result when representatives who attend the meetings cannot make decisions on behalf of their organizations."⁷²

Some networks make a distinction between members who are at the "core" and those at the "periphery." Core members are strongly involved in the network and have some say in governance, whether directly or through representatives. Peripheral members have a much weaker, though still important, relationship with the network; they may have standing as observers or co-learners, but they are not directly involved in producing network results. And they have no say in governing the network.

What Is Decided

What does a network really have to decide? It depends—the answers range from "everything" to "as little as possible." Some networks assign a big list of decisions to governance that resembles the elements of a strategic plan for an organization. These could include:

- Purpose of the network—mission, vision, operating principles
- Objectives/goals
- Values and beliefs of the network
- Membership arrangements of the network
- Responsibilities of members
- Plans of the network
- Distribution of network resources (budgeting)

Other networks are less inclined to make long-term plans and arrangements; they try to minimize formal governance in favor of maximizing the freedom of network members to decide on their own.

Not all decisions have to be subject to the same governance arrangements. As we've seen, the Massachusetts Smart Growth Alliance made an important distinction between decisions about policy positions it would take and all other decisions. It created a higher standard—unanimity—for taking policy positions, because these were more important decisions for the network. As it turned out, the Alliance has never taken a vote on any matter; consensus has prevailed even though it was not required for all decisions.

How Decisions Are Made

We have seen network decisions made in four different ways:

- **By imposition—conditions set by others.** The network organizer or a big funder of the network simply makes certain decisions. A funder might, for instance, decide who will be members of the network at the outset. The funder's decisions are embedded in the funding agreement for the network. An organizer might decide what the collective value proposition of the network is or what the rules of communication among members might be.
- **By community—consensus of the members or representatives.** All of the members with governing authority discuss, deliberate, and decide. As the Massachusetts Smart Growth Alliance does, only when 100 percent agree, is a decision made. The Alliance found that requiring unanimous consent “has proven critical to maintaining trust and encouraging the development of solutions that serve all interests,” concluded a self-assessment by the network.⁷³ However, many users of consensus arrangements find that this method can get bogged down when there are enduring disagreements among members. Some networks start with consensus governance, but when they run into trouble they add rules for deciding by majority vote when consensus cannot be reached.
- **By democracy—majority vote of members or representatives.** A time-honored governance mechanism, this has potential risks in small networks since it may mean that members whose positions lose in the voting may become

alienated from the winning members; it threatens to lead to network fragmentation. The Massachusetts Smart Growth Alliance concluded that this risk was a serious one for its network: “It is likely that if the Alliance made regular use of these voting policies [rather than consensus-building] the Alliance would cease to operate as effectively because trust, a key determinant of effective, long-term collaboration, would begin to erode.”⁷⁴

- **By “emergence”—actions of members.** Sometimes networks “decide” not by making a formal decision through consensus or majority, but by simply letting members do what they want to do. Let’s say that a small production network is offered funding to take on a new task. Several of the members want to do it, but they are in the minority. The network could seek a consensus on what to do or it could vote. But it can also decide to let each member do what it wants, as long as it doesn’t take negatively affect the existing work of the network. In other words, it lets “decisions” emerge as the aggregated *actions* taken by members, what might be called “coalitions of the willing.”

From Network Organizer to Network Governance

In the early days of a network’s life, the network organizer is, in effect, its “government.” Sooner or later, though, such authority will shift to the network members; the number of “deciders” expands and, inevitably, decision-making becomes more complicated. We agree with Heather Creech, who argues that this does not have to happen on day one.

A governance structure is rarely put in place at the beginning of a network. Form follows function: in networks, it may take some time for network members to work through how a network will operate, what its goals and objectives should be, and how to achieve those most effectively. In the process of operationalizing the network, the governance arrangements will become more clear, and can be codified in a governance agreement.”⁷⁵

In designing network governance, network organizers should:

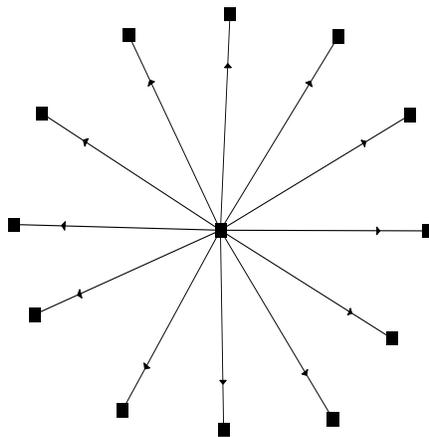
* **Clearly distinguish between governance and management functions.** Management and governance are not the same thing. Governance involves *steering* the network, management involves *rowing*. Network management is about the day-to-day activities of the network, such as handling of staff and financial resources and monitoring work plans.

* **Be careful when entering into funding agreements.** A funder may intentionally or inadvertently try to influence the governance model of the network. But, given the range of choices in governance design, is what the funder wants the best model for the network?

10. THE SHAPE OF THINGS TO COME: STRUCTURES OF NETWORKS

As the members of a network connect and work with each other over and over, patterns of linkage appear; the network takes on a shape or structure. Perhaps the most familiar network structure is the Hub-and-Spoke, in which one node in the network connects to many other nodes that are not connected to each other. That hub node becomes the network's "connectivity center" through which information and value flows to the other nodes.

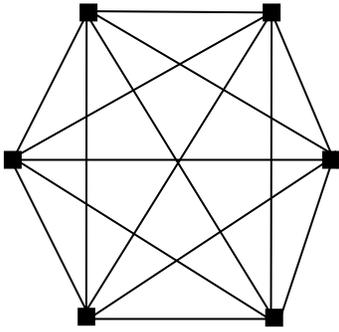
Hub-and-Spoke Structure



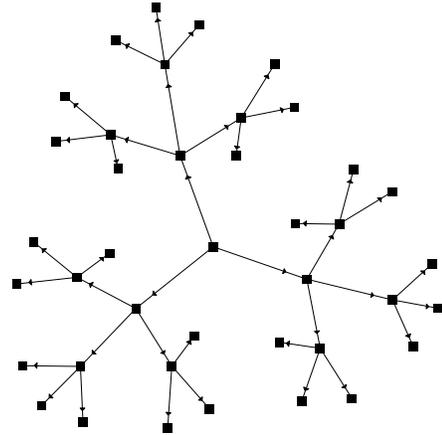
But other, quite different structures are commonly found in networks, such as the Dense Cluster and the Multiple-Hub. Each of these structures enables connectivity among nodes in different ways and greatly affects how a network operates. Some structures are better suited than others for certain types of production networks. Just as important for network organizers, a network's structure evolves over time. A Hub-and-Spoke structure may be a great starting structure for your network, but many network organizers find that a central hub can eventually become a "bottleneck" that slows down information flows and gets in the way of relationship building among the other network members. Other structures include:

- A **Dense Cluster** network in which a number of members (nodes) are connected to each other. Everyone is linked to everyone else; all are equally connected. There is no hub.
- A **Multi-Tiered Hub** network in which hubs (with their many spokes) are connected to each other, thus creating efficient pathways for rapid growth and diffusion of information.

Dense Cluster Structure



Multi-Tiered Hub Structure



Along with their shapes, network structures have three other important characteristics:

* **They have boundaries and horizons.** A boundary is the outer border where membership in a network ends and non-membership begins. In formal networks, boundaries reflect deliberate decisions about who can or cannot become a member (see Chapter 8.) A horizon is the distance that any network member can see across the network. In a Dense Cluster structure of, say, seven organizations, all the members are readily within the horizon of other members. But in a far-flung network with, for instance, 1,000 members, most of the nodes and much of the activity that goes on is “over the horizon” of most members. You can see that this would raise challenges around communications and management of the network.

* **Networks have a core and periphery with strong and weak ties.** A network core is a set of strongly linked nodes. “Strong ties” typically reflect a history of contact among nodes that has given rise to higher levels of trust and understanding. The social capital embodied in these connections makes for efficient relationships, including more efficient communication and aligned action. A network core also has “weak ties” to other nodes at the periphery of the network. Weak ties typically arise as a result of contact that is less frequent or prolonged. Nonetheless, weak ties are valuable to a network because they may provide connections to resources the network doesn’t have. The core of a network organizes the purpose of the network and performs much of its work. It connects to those on the periphery to find resources it cannot find at the core.

“Both kinds of ties are important,” say researchers Ashman, Brown, and Zwick in a study of social capital in civil society organizations. “Strong ties provide social cohesion and weak ties provide new resources organizations need.”⁷⁶ Network organizers tend to focus their attention on building the core, the strong ties among the initial members, but they should recognize that connections to the periphery exist and can create value for the network.

* **Networks exist in an ecology of other networks.** Probably no one belongs to just one network; most of us participate in the core of several or many networks. Therefore, the network you are building is not an island; it is attached, through pre-existing connections, to other networks. For network builders this raises a question: What should be done with these other connections? Which can create value for the network? Some could become strong ties and part of the new core; others could become weak ties and part of the new periphery.

Before we get into a deeper discussion of network structure, we will take a look at one network whose structural evolution has been nicely documented by the network organizer, June Holley, and a leading network management consultant, Valdis Krebs. The story will give you a better feel for why it's helpful to pay attention to your network's structure.

ACEnet

In 1985 June Holley started to build ACEnet, the Appalachian Center for Economic Networks, a network of food, wood, and technology entrepreneurs in 29 counties in southeastern Ohio. She had noticed that the region “was home to many small, uncoordinated food clusters,” sets of related small businesses. “There was the Farmer’s Market crowd, the natural bakery, a worker-owned Mexican restaurant and a few other entrepreneurs creating unique food products,” she recalls. To help these clusters link to each other, Holley continues, ACEnet designed a kitchen incubator—a state-of-the-art facility for preparing and packaging foods.

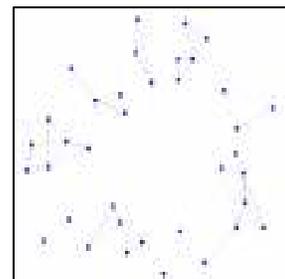
For one design session they brought people from the town’s restaurants together with small farmers who wanted to turn their produce into value-added products. Farmers were able to learn about food-production safety from the restaurateurs who explained how these procedures could be incorporated into the incubator. Some of the farmers also used the opportunity to sell their produce to the restaurants.⁷⁷

Gradually, the unconnected business clusters become linked to each other; a new structure of relationships emerged.

The development of a network like ACEnet involves this sort of structural evolution, explain Holley and Krebs. They identify four phases in a network’s development: scattered emergence, single hub-and-spoke, multi-hub small world, and core/periphery.⁷⁸ This idealized version of structural change is worth studying, as it reveals important tasks of network builders. In the following description we have included network maps developed by Holley and Krebs to depict the evolving structures. (For more on network mapping, see Chapter 19.)

Phase I: Scattered Emergence

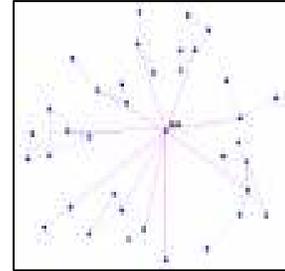
The network starts, like in the ACEnet story, as small unconnected clusters of several people or organizations



organized out of necessity around common interests or goals. Connections between the clusters may naturally emerge, but this will happen slowly and it may not happen at all—unless someone, a “weaver,” takes responsibility for creating interactions between the clusters.

Phase 2: Single Hub-and-Spoke

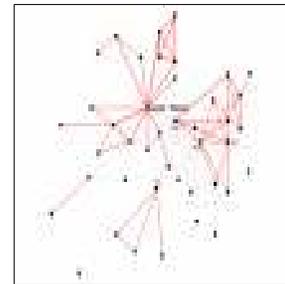
The weaver of unconnected clusters becomes the *hub* of the next phase—the node whose vision, energy, and skills attract others and connect them to each other. The hub builds relationships with each of the clusters. “Everything depends on the weaver who is the lone hub in the network,” Holley and Krebs explain. “However, the hub-and-spoke model... should not be utilized for long because it concentrates both power and vulnerability in one node—the hub. If the leader fails or leaves, then we are back to the disconnected clusters.” In the evolution of ACEnet, Holley and the Kitchen Incubator played the role of hub.



Phase 3: Multiple-Hub Small World

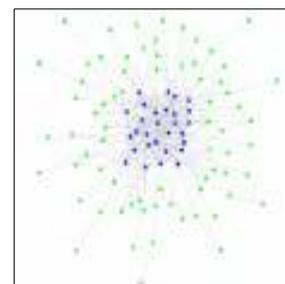
The small clusters of businesses begin to build relationships with each other, introduced and facilitated by the weaver. In ACEnet, several of the businesses and nonprofits in clusters began to build their own networks. “As the overall network grows,” say Holley and Krebs, “the role of the weaver changes from being the central weaver, to being a facilitator of network building” by others. As clusters connect with each other, they form “weak ties,” less intense, frequent, and resilient linkages that allow information to flow among nodes and can become stronger relationships over time. Eventually multiple hubs emerge and much more information is flowing than in the previous single-hub phase. “Information percolates most quickly through a network where the best connected hubs are all connected to each other.”

In ACEnet, the Mexican restaurant, Casa Neuva, became the hub of other restaurants, while the Big Chimney Bakery became a hub that helps food entrepreneurs develop new recipes. A few years later, a farmers market brought together some 90 farmers and local food vendors—another hub adding more nodes to the network.



Phase 4: Core/Periphery

Over time, as weak ties among multiple hubs become stronger, a set of well-linked networks becomes a stable core to which other groups of nodes at the periphery can connect. “The periphery is the open, porous boundary” of the network “where new members come and go. The periphery allows us to reach ideas and information not currently prevalent in the network, while the



core allows us to act on those ideas and information.” The task of the weaver is to maintain the core network and build bridges between the core and periphery.

Lessons Learned: Designing Network Structures

The evolution of network structure that Holley and Krebs describe is not the path that every network will or should follow, but it illustrates several important lessons about network structures.

1. Different structures serve different evolutionary purposes. A Hub-and-Spoke structure may be perfect for getting a network going, since the hub can be a source of energy and coherent direction at a time when none may come from elsewhere. But some network structures may be better suited to some types of production network functions than others. For example, the tasks of both mobilizing many people and diffusing information to many people are typically best served by a multi-hub structure in which widespread information flows are more easily achieved. In contrast, the task of combining organizational competencies into a single process is better achieved in a small dense cluster (which can be highly organized) than in a larger multi-channel network.

2. From the beginning, it's a network-to-network (N2N) world. Stage I in the Holley-Krebs model, “scattered emergence,” is an environment of small, unconnected clusters. Networks—the clusters—are already out there. They may be small networks, but they are still sets of linked nodes. It is rare to find unconnected individuals or organizations anywhere. When consultants for the Barr Foundation mapped the connections of hundreds of after-school program organizations in Boston, they found scores of small clusters of linked organizations were the norm.

The reality of this “networked world” has implications for network builders. It means that the main task at the earliest stage may be to figure out how to connect the existing *networks*—not individuals or organizations—with each other. If you can weave the clusters together, the network you are building will grow faster and have more immediate connectivity and capacity than if you build it one node at a time. But this also means that you have to see the cluster-nets that exist and understand them as networks: What is their connectivity? How are they aligned? What capacities do they have? What is their “culture” as a network? What network effects do they want? And so on.

Think of each small cluster as a little “community of practice” that you want to get to know, so it will trust you to connect it to resources outside of itself and to allow itself to become a resource for other clusters. How would you do that? June Holley, for instance, created an incubator kitchen—a new resource—to attract many small clusters of food businesses into relationships with each other.

3. The “dominant hub” is your friend—and enemy. Whoever tries to organize a network becomes, for a little while at least, the hub of the network. Hubs—nodes that are more connected, have more links, than other nodes—can become very influential in a network. And they tend to get more powerful over time, because new

nodes in a network tend to prefer to link to more connected nodes. Network researchers say that as a network expands, the “rich” (more connected) nodes tend to get “richer.”

As the ACEnet story shows, there’s a point in a network’s early life when the Hub-and-Spoke structure is extremely useful, perhaps essential. But the same structure can become a problem if all information and connections continue to have to flow through it. A dominant hub can impede the movement of information and resources, and get in the way of the other network members developing strong relationships with each other. Moreover, the hub may make a network vulnerable if it “fails” for some reason. The organizers of the Lawrence CommunityWorks (LCW) network of city residents believed it would be unhealthy for their network to become the community’s single dominant hub. “If all the good stuff was only happening through LCW,” say Bill Traynor and Jess Andors, “what would happen to the city if something happened to us? At times we make the conscious decision to funnel resources to other organizations or projects, again, to invest in network building.”⁷⁹

Two networks started by the International Institute for Sustainable Development (IISD)—a Sustainable Development Communications Network and Trade Knowledge Network—started as Hub-and-Spokes structures, with IISD serving as the hub for the network. IISD connected to all the network members, but the members did not connect much with each other, except through the IISD hub. Members had no real opportunities to exchange experiences and work with each other, and they were not accountable to each other for their work on projects the network undertook. The structure did not promote collaboration. “We realized,” write IISD’s Heather Creech and Terri Willard, “that more collaborative models support sharing and creation of new knowledge, better linkages to policy processes and extended relationships, and improved capacity development across the network.”⁸⁰

4. Pay attention to building both weak ties at the periphery and strong ties at the core. One tension in building a network is around how to focus on the members at the core of the network, who set direction and do the work, while also engaging people and organizations at the periphery, who may be able to create value for the network and who may have relationships with core members. Network builders should recognize that the periphery can be useful—as a source of connections that core members don’t have, for instance, or as a partner in learning that may matter to the core. “The network should not work in a vacuum from other groups interested and involved in similar work,” says one network researcher.⁸¹

But—and this can’t be dismissed—it takes energy to engage nodes at the periphery and these “transaction costs” can’t be allowed to become too high or a distraction to the core.

5. As networks evolve, their shifting structures require different kinds of “care and feeding.” Early in ACEnet’s development, the main task was to weave the scattered clusters together—to develop initial connectivity among them. Later, as the clusters congregated around the hub of the incubator kitchen, the main network-building task was to help members build new connections with each other that didn’t have to go through the hub. And still later, the task became to help the core of

connected clusters to build bridges to networks at their periphery. Each of these tasks is fundamentally about developing connectivity, alignment, and production—but within very different structural contexts.

II. RULES TO LIVE BY: OPERATING PRINCIPLES FOR NETWORK BUILDING

Organizing a network doesn't end with deciding what kind of network it will be, what the collective value proposition will be, who the members will be, and what sort of structure to use. You also have to decide how the network will operate *as a network*. A network doesn't work like an organization. It's not always obvious who should do what, or where in the network to allocate resources, or which processes of the network to standardize.

From our experience working with networks, we have developed several operating principles to help network organizers to get things going and, in particular, to keep them from defaulting to the "organization-centric" habits so deeply embedded in all of us.

Make the Network Do the Work

The steering group of an economic development network in western rural Maine wanted to get several projects going as soon as possible. Some members thought the best way to do this would be to hire a staff person to do the work. Others, including Bruce Hazard, argued that that was the way an organization would do things. The network way, they said, would be to get the network members—not a staff person—to do the work using their connections, knowledge, competencies, and resources. When we discussed this with Hazard, we coined this operating principle: "Make the network do the work."

The point of a network is for the *members* of the network to collaborate to produce value. Of course a network may hire staff—a weaver or coordinator, for instance. But those people work to build and manage the network, not to perform the network's work, not to produce what the network is supposed to produce.

Let Connections Flow to Value

The developers of Lawrence CommunityWorks, a place-based, grassroots network that has grown to more than 1,600 members, use a variety of services, such as English-language classes, a household financial asset-building program, a family-to-family connection program to attract people to the network. Think of each of these programs as a node, provided by the network, with which any member can connect. In 2005, there were about a dozen of them. But, network developers noticed that one of the nodes—a program for youth interested in architecture—was not attracting many of the network's members. What should they do about that?

Some network organizers argue that a network should keep supporting weaker nodes, while others say these nodes should be allowed to die. The latter view, which we share, is based on a network operating principle: "Let connections flow to value."

This rule reflects the fact that in a network nodes link to other nodes because they perceive they might derive value. As a result, some nodes may have a great many connections, while others only have few. This uneven distribution poses challenges for

network developers. “Popular” nodes attract more resources and can come to dominate a network, while “unpopular” nodes struggle along at the margin. Should a network builder try to override these signals—continuing to invest, for instance, in the capacity of a node with few links? If so, how will this change the nature of the network and affect its development?

We said earlier, in the discussion of collective value propositions, that value drives networks. Network organizers should not insist on having the network do things that members don’t find valuable.

Use Variation to Strengthen a Network

It is not unusual for the members of a new network to assume that everyone in the network has to do everything and agree on everything, that “marching in lockstep” is what network members do. But this is simply not the case.

If, for instance, the network decides that it’s important to map the network, one member could decide to become competent in mapping; everyone doesn’t have to. The same is true of any special capacity the network may need. A network’s ability to create adaptive capacity depends crucially on assembling specialized competencies among its members, not on everyone being able to do the same thing. Network builders can help a network identify which competencies it needs to get going—and figure out who in the network can provide them.

Similarly, it is not necessary for everyone to agree on everything the network should do, at least not at the beginning. When we have met with start-up networks that are having trouble agreeing on a collective value proposition for all of the members, we’ve urged them to look for any value that at least some of the members want to create with each other. If there are six organizations in the network, for instance, perhaps there is something that two of them want to do and something that three others want to learn about. If so, they should undertake those joint activities—as a step toward eventually developing a collective value proposition—rather than keep struggling to find something that all want.

Keep Plans Flexible

Most of the networks we know make plans that are inherently short-term and temporary. Bill Traynor and Jessica Andors of Lawrence CommunityWorks put this quite plainly: “All our programs and committees have to be seen as provisional—useful only in that they get us where we need to go.”⁸² Production networks have work plans, of course, because the plans help keep members focused on their commitments to the network. But networks are unlikely to create the sort of three- to five-year strategic plans that organizations do. Because networks don’t start with the sense of permanence that organizations do and expect to adapt their plans as they go along, their planning horizons are relatively short.

Networks tend to plan two things: projects they will undertake, one after another, and the development of the network as a whole. The plan for the network may include milestones of progress to monitor the network’s health and development. But

neither projects nor network development usually requires or lends itself to long-term planning.

Network structures also should be thought of as provisional, says Traynor. “Building permanent or semi-permanent structures in an environment that needs to be very fluid is a dangerous, counterproductive thing to do.” Lawrence CommunityWorks develops “open architecture” structures that “deemphasize permanent leadership positions” and “are very easy to dismantle.”

12. THE DIFFERENT ROLES OF NETWORK BUILDERS

Several years ago, Bruce Hazard started a network in rural western Maine that grew and grew until it had more than 200 members working on “heritage-based” economic development for their region. “This was a very exciting development: after you feel like you’ve been alone in the woods for long enough, to look out and see you’ve got some friends, some fellow travelers,” Hazard recalls.

The excitement came from thinking we had the opportunity to operate at a scale in this region that actually could start to address some of the very significant challenges. You’re working in this very tiny nonprofit operation with these great big ideas, this enormous region, and it’s awfully easy to get discouraged, thinking that you’re never going to get there. Then you see that there are a lot of other people who are starting to work in the same way. There is at least the possibility that if you all work together, something might actually happen here in the woods.

Hazard was clearly the organizer of the network. He was its central hub; people trusted him and practically all information and decisions flowed to and through him. He had a powerful vision for the four-county region’s development. He insisted that what the region needed was a network, not just another organization. Early on in the network’s life, he knew practically everyone in the network; after all, he had recruited them to the network and gotten them together so they could connect with each other.

“We started to bring people together, have conversations that addressed very basic questions,” Hazard says.

What are you trying to do? What’s your purpose? What are the heritage assets that you’re working with? What are you finding in our communities or history, culture and natural surrounding that are assets that could be used in this new way of doing community development? And then finally, where are you getting the funding? Who’s supporting this work?

Enough was happening in the network at that point, that it made sense to develop alignment around a plan for the network, Hazard says. “We were able to talk to each other, but where were we going? We knew there were some opportunities to work together, but how should we be prioritizing and funneling, channeling the resources that we had so that we could be working together in a more productive way?” Hazard facilitated a planning process that involved some 200 people in the region.

Then came a moment of truth. “There we were, with this sort of loosely networked group of 200,” Hazard recalls. “We had a plan, which we all agreed with. But how were we going to get this plan done?” Some in the network argued for starting a nonprofit corporation to undertake the plan. Hazard and others disagreed: “If you look at the plan, you quickly see that the corporation that we would need to get a plan like this done would be the General Motors of heritage-based development, and you probably still couldn’t get it done.” Another proposal was to rely on a government

agency, perhaps a regional development authority. But the group realized that creating such an entity would require far more political clout than it had.

The winning proposal was to stick with the network model—but to restructure it around the plan’s goals and a set of short-term projects. As a result, Hazard says, “we found we had to learn about the network approach even as we were trying to do the network approach.”

As the network grew, Hazard started convening a “steering committee” of members to help set the network’s direction. He asked certain network members to help to coordinate the half-dozen projects the network was taking on and he brought the coordinators together to share information with each other. Hazard was weaving links among network members and coordinating the work of the network. “Our effort has been to always push the decision-making out into the network, to try to include as many entities as possible in the getting done of the project.”

It wasn’t long before Hazard was asked by other fledgling networks in Maine to give them some advice about how to get started. In 2006 he was coaching two networks in addition to continuing to help to guide the network he had started.

Organizer, weaver, facilitator, coordinator, and coach—Bruce Hazard has worn all of the hats of a network builder except that of a funder. (He’d probably be willing to do that too, if he had the money.) He’d be the first to tell you that each role is different.

Through all of these role changes, Hazard was also a member of the network he helped to build. Some members of networks take on a role that is not that of organizer, coordinator, weaver, or coach; they become a network steward. These are members who, because they are interested in network building and learn about it, end up *informally* helping to build or take care of the network. They may, for instance, actively recruit new people to the network or spend time communicating with other people in the network or go out of their way to meet people in the network. They are assets in a network that network builders may be able to use and rely on, but they do not have or want an explicit role in building the network.

Roles of Network Builders

<i>Organizer</i>	Establishes purpose and value propositions of the network. Establishes first links to nodes for the network. Attracts initial resources for the network.
<i>Funder</i>	Provides initial resources for organizing the network, supporting development of connections, alignment, and production, and coordination for the network. May play role of initial organizer of network.
<i>Weaver</i>	Works to increase connections among nodes, both the number of links and the bandwidth quality of links. Also may focus on growing the network by connecting to new nodes.
<i>Facilitator</i>	Helps network members to establish collective value proposition and negotiate collective action plans for production.
<i>Coordinator</i>	Helps nodes to undertake collective action for production, by ensuring

	flow of necessary information and other resources, development and implementation of agreements among nodes.
Coach	Advises organizers, weavers, facilitators, and coordinators about how best to perform their roles in building networks.
Steward	Informally helps to build the network, but as a member of the network, not as a formal position-role within the network

Early in a network's life, the organizer is likely to play most of the other roles too. It's part of getting started. But as the network evolves and becomes more active and complex, the tasks of coordinating or weaving, for instance, expand and require much more of someone's attention, as well as the application of particular skills. Gradually a network may differentiate between these roles and then assign them to be handled by specific people with specific skills. The skills are different for each role, as will be evident in the chapters in Part III dedicated to weaving, facilitating, and coordinating networks.

13. WHEN FUNDERS ORGANIZE NETWORKS

When Warren Cook of the Wendling Foundation was providing resources—funding and technical assistance—to emerging networks in rural Maine, he worried that if *too much money* became available it would hurt, not help, the networks. Cook wasn't suffering from a case of funder stinginess; he just believed that networks grow better, especially early on, when they rely on their own resources as much as possible, rather than money from “outside” the network. We agree with Cook's insight, but it's quite noticeable that most nonprofit network builders are in ceaseless pursuit of foundation funding.

Although there are more networks looking for funding than funders looking for networks, it is not that unusual anymore for a foundation or other organization, a university or government agency, for instance, to decide to fund the development of a network. The funder's resources are great to have, of course, but when the organizer of a network is also the funder, a number of things can go awry. Claudia Lieber and Marisa Ferri studied nonprofit networks for the U.S. Agency for International Development and concluded that “Networks that are formed as the result of external, especially donor-driven, impetuses”—such as funding—“are less sustainable in the long term than networks that evolve organically out of existing partnerships.”⁸³

A funder can, of course, help a network get going without having to organize the network. The best way to do this is for the funder to offer funding for “solutions” rather than organizations. “If you put some money on the table to solve a problem,” says Marion Kane, executive director of the Barr Foundation, “a group might form to address that problem and access the money in a joint or collaborative way.” A few years ago, the foundation found it was being approached by several nonprofit organizations concerned with affordable housing in Boston. Each organization was seeking funding for its own work, but the foundation suggested that instead they consider forming a network of their capacities—and propose specific housing projects for funding support. A funder using this approach should be prepared to provide the group that assembles with technical assistance to help it develop the understanding and skills for effectively forming a network.

Like any other network organizer, a funder may not understand much about how to determine the purpose of the network, what network effects to pursue, or how to address other key design issues. But some of the problems that funders run into occur because the funder has inordinate power to organize the network. A funder has initial control over a set of “network assets”: articulating the network's collective value proposition, dictating the use of funds, and defining who is or isn't a member of the network. Each asset can be managed in ways that enable or disable the network's development.

*** *The funder may overestimate the power of its value proposition to attract others to a network.*** Because the nonprofit sector is chronically hungry for money and its “capital market” is so loosely organized and idiosyncratic, funders run the risk that accessing their money, rather than joining their network, will be the real value proposition to which nonprofits flock. This dynamic is a familiar one: a foundation

selects potential participants in a network; they all agree to “play,” but they may bring different (and often unspoken) value propositions to the network, including but not limited to the one the foundation has in mind. The foundation may think its value proposition is strongly shared by the network’s members. It may well be shared—but the members are likely to also have other concerns that may be just as or more important to them in determining how they do or don’t participate in the network.

Overestimating the power of the funder may go hand-in-hand with another concern caused by unrealistic expectations. When sociologist Francie Ostrower looked at partnering among nonprofits that was promoted by foundations, she uncovered problems that face networks.⁸⁴ She urged foundations to relinquish “the hope that partnering—or any other method—will magically produce cost-effective solutions to complex problems.”⁸⁵ In other words, make sure that the potential network effects that can be achieved (rapid growth, adaptive capacity, resilience, etc.) really make sense for the organizations and individuals that are being brought into the network.

One way a funder may avoid the “value proposition trap” is to use a small planning grant to help a network get going. This allows the funder and participants to “right size” their expectations of the network and to test whether the funder’s value proposition has real resonance with the others.

In general, funders should design their grants to early-stage networks to be flexible, not rigidly focused on specific outcomes, because the networks will typically need to work on their connectivity and alignment, and it is not entirely predictable what special-purpose they will organize and what outcomes they will try to produce. Most important: design grants for the network, not for individual organizations. Giving a single grant to the *network* is much more powerful in stimulating collaboration than giving grants to *individual organizations* to participate in the network.

*** *The funder may skip necessary steps in network building.*** Funders may rush the network’s development, pushing the network too quickly to focus on the special purpose for which it is being organized, and investing too little time and resources in building the essential foundation of connectivity and alignment. They are too anxious about “doing the work,” and not savvy enough about building a network that can do the work. They may consider strengthening connections to be “touchy-feely,” instead of recognizing that the quality of relationships between members is the underpinning of a network. A network has to crawl—connect and align—before it can walk.

In addition to lacking the patience to build a strong network, funders may not recognize or cover the full costs of network development. Collaboration is time consuming, may carry hidden costs, and often requires the collaborators to redirect their resources in unanticipated ways. This is especially hard on small networks with very limited resources.

*** *The funder may hold on to the network’s reins too tightly.*** Funders may hog too much of the network’s decision-making, becoming a controlling hub rather than empowering the network to take charge of and organize itself. In short, the network becomes little more than an extension of the funder’s will.

When Jehoon Lee, a professor at the USC Center for Pacific-Asian Leadership, organized NetKAL, he and his colleagues selected the first round of 24 members to work with. But he told this group that USC wanted them to “own” the network, even though it would continue to play a strong role as funder, organizer, and coordinator. So when it came time to select a second round of 24, he invited members of the first round to recruit and recommend candidates, to participate in deciding which candidates to ask to join the network, and to orient the new members. In short, the USC-hub began to share some of the decisions about network growth.

When funders control the network too much or for too long, they risk having the network becoming so dependent upon them that when the funding ends, so will the collaboration. Even if a funder is completely prepared to let go of control of the network, it would be wise to invest in the network members’ understanding of how to build networks so they can take on that task. As we said earlier, most people network instinctively but do not know much about intentional design of networks.

“The challenge for donors in their support of networking and learning is to strike a balance between their role as funding agency and their own needs for collaboration, information and debate amongst their partners, and the need for ownership of the network, its agenda and learning processes on the part of the (local) network participants,” summarize the authors of a 2004 study of networks. They note that a donor can see itself as a *sponsor* of a network rather than as a donor, thereby “combining sustained financial support and identification with the network’s general objectives, with minimum influence on its decisionmaking about approach and operations.”⁸⁶

PART III MANAGING A NETWORK'S DEVELOPMENT: FIVE TASKS

Organizing a production network—making good design choices—is a big, complicated task, but it is only the first step in building an effective network. Your network may be crawling, but it still has to learn how to run. Much of what has to be decided and done is nothing like what you've already dealt with.

Managing a network's development involves at least five major tasks.

- **Weaving** connections within and with the network
- **Facilitating** affinity of members and collective value proposition
- **Coordinating** production and network development
- **Operating** the network and coping with management issues
- **Monitoring and evaluating** the network's development

14. WEAVING CONNECTIONS: TIES THAT BIND

In 2003, the Barr Foundation in Boston recognized that thousands of children in the area, especially girls, minorities, and those in certain neighborhoods, had far less access to after-school programs than other kids.⁸⁷ Barr decided to test the idea that increasing the connections among the individuals and organizations in the after-school “sector” would lead to stronger capacity to serve youth. The sector was huge and fragmented—hundreds of organizations working in many different program areas (e.g., sports, arts, and others), with new entities starting all the time; its size made it hard for anyone to know a lot about it, much less monitor it and affect it. Organizations were separated by program-area boundaries, lack of information about each other, and traditions of competing for funding and isolationism. This pattern of disconnection left the sector’s capacity weak and vulnerable to shocks, such as reductions in funding.

The foundation hired several people to “weave” links among the organizations in several segments of the sector and to help it learn more about what it takes to connect organizations into effective networks. The foundation “was purposefully focused on building connectivity networks,” reports Stephanie Lowell in “Building the Field of Dreams,” an assessment of the Barr project. “The belief was that new ideas, collaborations, resources, etc. will emerge if you can connect formerly unconnected players in new ways.”⁸⁸

The Nature of Connectivity

Weaving networks is about building relationships. Productive relationships in networks are built on trust. Trust is the glue that holds networks together. Just because you are connected with each other does not mean you trust each other. Trust, a sense of confidence and reliance on the intention, integrity, and ability of another person or organization, facilitates the efficiency and quality of the information and transactions that flow between network members.

Trust between people is built on information and experiences. Most people don’t trust strangers. And usually just getting information about a stranger, even a full dossier about them, is not enough to build trust. It takes more—a shared experience that allows you to see how the stranger acts in a situation, which allows you to “look them in the eye.”

The two ways to build trust in a network are to increase the *bandwidth* of information and the experience of *reciprocity* in the network.

Bandwidth refers to the types of information that can be shared among network members. Network members can exchange printed information about each of their organizations, missions, programs, and so on. They can do telephone conference calls to share personal information about themselves. They can make site visits to each other’s organizations. All sorts of different information delivered in different ways: this provides substantial bandwidth for members to make judgments about each other. The more types of information shared between members, the more they know about their network partners, the more confidence they will have in each other.

When it comes to building bandwidth, social science research emphasizes, you cannot overestimate the power of in-person information sharing. “There is no substitute for meeting face-to-face,” summarizes Bonnie Shepard. “Regular membership meetings serve the important function of building interpersonal trust. Such exchanges can begin or continue via email, but face-to-face conversations produce resolutions and decisions more efficiently when dealing with complex issues and diverse opinions.”⁸⁹ Sometimes it is useful to have an outsider facilitate meetings of members when sensitive subjects, such as racial differences or a history of conflict, are being explored. A facilitator can ensure that the conversation doesn’t break down and that members reflect carefully about what they are learning about each other.

Reciprocity refers to episodes of give-and-take and mutual support among members of the network. Karen Stevenson, an astute network analyst, describes the power of reciprocity as “the alchemy of mutual give and take over time turning to a golden trust.”⁹⁰ When members do something together, they inevitably have to work through differences and build on the commonalities they discover. They may develop more respect and understanding for each other. The same may happen when one member helps another member get something done. For instance, you can connect a member of the network to someone you know who can help them. Even just helping each other plan a meeting of the network can build more trust between members.

It takes time to build trust. Some of the smaller networks we know—with no more than a dozen organizations in the mix—have taken a year or more to launch themselves. What they’re doing during all that time is meeting and talking, sharing their stories and values, checking to see if there’s a good fit among them, deciding if they want to work together.

To build trust in your network, you must:

- * **Build bandwidth**—increasing the types of information and contact between network nodes.

- * **Engage in more give and take**—sharing values and passions of the members, and simply helping each other out, which creates reciprocity and cooperation.

- * **Strengthen existing bonds and build bridges**—connecting with each other personally and reaching out to others.

In May of 2006, 24 nonprofit organizations from around the nation assembled in Arizona to launch regional rural policy networks with funding from the Kellogg Foundation. Few of the organizations knew each other, and the foundation had deliberately selected a great diversity of types of organizations, so an important item on their agenda was to begin to build the trust they would need to link effectively and work together over the long run.

Naturally, they decided to share information with each other about their organization’s mission, priorities, and capacities, by providing website information, brochures, and other materials. They also began to share information about which other organizations each of them was connected to. To facilitate inter-node communication, they created listserves and explored the use of blogs and collaborative

websites, such as Sharepoint, that allow members to post documents, share calendars, alert each other, and build databases and archives. The emphasis on electronic communications was easier for some organizations than others, because they already had experience using the relevant software and the technology (computers, high-speed Internet access) needed to be effective. The organizations' representatives also decided they had to spend time with each other, on telephone and video conference calls, and especially in face-to-face meetings. Meeting "in person" creates the opportunity for the dialogue and shared experiences that allow people to understand each other and bond with each other, even if they only focus on planning their next steps together. But planning should not be the only purpose of a network's early meetings; members need time to talk and hear about their passions, interests, and concerns for the network.

Finding time to meet together can be difficult, but it is essential. The rural networks faced the additional challenge of having their members separated by large distances. Members looked for conferences they might "piggy back" on, and they scheduled sessions two or three months ahead of time to make sure they would be on everyone's calendar.

When you start to connect nodes, not all nodes are equal and not all connections will be the same.

* **Active nodes and latent nodes.** An active node is one that is already engaged, although its level of activity could increase. A latent node is one that once was engaged but whose activity has diminished to a very low level. Think of someone in your personal network with whom you've had no contact for a few years. They are still there, but latent. With one telephone call, you may be able to reactivate them. When it comes to weaving together nodes, an active node has more potential to be connected than a latent node, but a latent node has more potential than a completely unconnected node.

* **Hubs.** Some nodes may be hubs that are much more connected to other nodes in the network than most nodes. For weaving a network, a hub is an opportunity—an efficient connection to many other nodes. Finding and cultivating people or organizations that are hubs is an important strategy for network weavers. It allows them to "wholesale" connectivity by linking to clusters of nodes rather than one node at a time.

* **Strong and weak ties.** As we discussed in Chapter 10 on network structures, some links in a network are strong, while others are weak. For weaving, it is natural to focus first on building strong ties among nodes, to create a core for the network. But it can also be effective to build weak ties with organizations and people at the periphery of the network. Weaving typically involves doing both.

Weaving organizations together is different from linking individuals. It's true that organizations are made up of individuals (and that most individuals have organizational ties), but an organization will tend to be more conservative and less nimble in joining a network. For instance, the Vermont Smart Growth Collaborative has 10 organizations

as members. In each organization, one or two people are actually active in the network—but they act on behalf of and with the approval of their organizations. Their boards of directors, for example, have to decide whether to become members, how much organizational resource to allocate to the network, and so on. Organizations tend to need more certainty about the costs and benefits of their actions, such as joining a network, than individuals may require. They make up their “minds” and change them more slowly than individuals. They “require institutional commitment beyond the participation of individuals and experts,” say Creech and Willard.⁹¹

Strategies for Weaving

First, you have to know the net—get to know the players you want to connect. Find out what connections they do have. Find out what they think they need. Find out what they are good at doing. To find out, you have to ask them—by surveying or interviewing them, by searching documents. Stephanie Lowell reports that Chris Lynch, weaver of the Boston after-school sports network, met with key players in the sector, asking about their programs, the state of the network, challenges they faced, and what could be done to strengthen individual programs and the network. He subsequently used some of this information to develop network maps that displayed patterns of connectivity in the sector. (For more on mapping, see Chapter 19.)

The Barr Foundation weavers, as well as connectors elsewhere, pursue four distinct strategies to connect after-school program organizations with each other:

- ***Provide network members with information relevant to their needs and interests.*** You can develop and share information that is not moving through the network. Chris Lynch’s outreach to sports organizations showed him that they were not routinely getting information about grant opportunities, job openings, research, and facilities to use. He created a youth sports newsletter that reached 900 people in the sector. As a result, Lowell says, organizations applied for grants and job seekers were hired for jobs they read about. Another information tool that Lynch developed was a directory of the youth sports providers.
- ***Directly connect members to each other.*** You can bring people together in one-to-one meetings between organizations with similar or complementary needs, in meetings of a cluster or “hive” of similar organizations, or in broader convenings that encourage lots of people to meet each other. They can meet over lunch or in longer, more intensive sessions, Lowell points out.
- ***Strengthen “hubs” in the network that connect with many other members.*** Some members of a network are well connected to other members; they are structural hubs or connectors to lots of others. You can find them by mapping the network or by analyzing where likely hubs of the network might exist or be needed. For instance, Chris Lynch found that equipment costs were a major problem for many after-school sports programs. This led him to connect with

an organization that provided free equipment and help it to obtain funds to expand its work with more organizations.

- **Connect members to new ideas and resources within or outside of the network.** You can reach outside a network to bring to it useful expertise or knowledge that it cannot generate by itself. Or you can build bridges between “distant” network members so they can identify, develop, and share new ideas and resources. One of the Barr-funded weavers connected a national organization with a curriculum for after-school programs with Boston’s community learning centers that needed such material for their programs.

Whatever strategies you use, it’s likely that it will take time for the connections you help others make to form fully and for collaborations to grow out of the connectivity. Some links take quickly, others take more time.

The Weaver’s Work

A weaver’s role is to bring nodes into relationship. Weavers can simply introduce people to each other, which might produce some low-intensity engagement between them, or they can undertake a higher-intensity effort aimed at building deeper bandwidth/engagement among the nodes. Stephanie Lowell concluded that the after-school sector weavers had impact by doing several things within a network:

- They connect players with each other.
- They serve as the “on-the-ground eyes and ears” of the network, picking up information as they connect with people.
- They help network members to develop new knowledge and skills that will allow them to connect with others more easily.
- They sometimes fix problems in the network.⁹²

Weaving, says Lawrence CommunityWorks’ Bill Traynor, is a new form of leadership that is crucial in a network. “It requires curiosity, caring, the ability to get information and then share it, the ability to hook people up to opportunities that you know exist.”

The weaver must have or develop two essential and quite different competencies. One is an understanding of how to build networks—making connections that enhance trust and understanding among members. The other is an understanding of the specific context of the network that is being built. If, for instance, it is a network of organizations that provide after-school programs, the weaver must know something about after-school programming since that is the “currency” of the nodes. A weaver must be able to step into the world of those that are to be connected—and this means knowing something about that world. What relationships do the nodes already have? Which benefits of connectivity matter to the nodes? In Boston, Chris Lynch had run two after-school sports programs before he became a weaver of after-school organizations, under a Barr Foundation grant. He knew many of the ins and outs of the sector, but he had much to learn about networking.

Weavers who come from within the network/sector context are likely to know the language of the sector well, but may need to develop the competence in building connections (e.g., debriefing people about their needs, introducing people to each other, facilitating group meetings.) On the other hand, if the weaver has network-building savvy, but comes from outside of the network context, he/she will need to develop competence in the specific context. Either way, there's skill- and knowledge-development to be done.

Ideal Skills/Capabilities of Network Weavers

- Enjoys meeting, connecting people; naturally follows up (not a chore)
- Vision/passion for the sector—both in terms of product/outcomes and process (how players interact)
- Comfort with ambiguity
- Strong communication skills
- Ability to think at system level; abstract thinking—but balanced by ability to implement quickly and keep multiple balls in the air at once (multi-tasker)
- Networker by nature; able to draw on others for support in the role
- Facilitator as well as “doer”; enjoys acting as catalyst and having others do joint problem solving
- Self-motivated, uses time well
- Comfort with technology, excitement about potential of mapping tools (and commitment to using them)

Barr Foundation, “Building the Field of Dreams”⁹³

A network weaver is likely to face a number of other challenges. It may be difficult for network members to understand what the weaver is doing or why “more connectivity” will benefit them. In Boston, Lowell says, “Weavers found that program providers... were quick to look for concrete deliverables or support coming from the weavers, and [for weavers] figuring out how to... say with a straight face, ‘My job is to make connections, not to ‘do’ anything,’ was a bit of a struggle.”⁹⁴ In similar vein, it can be hard for a weaver to sell members who already have plenty on their plates on the notion that they should put more time and resources into connecting with others.

For a time, a network weaver may find that he/she becomes a dominant hub in the network; after all, the weaver is also building links to many nodes. But a weaver's role is to help others build connections to each other, not to become a control point in the network.

15. FACILITATING ALIGNMENT: PRODUCTION AGREEMENTS

In 2000, a philanthropist new to Vermont anticipated that her track record as a funder of environmental causes might attract appeals for donations from many nonprofits in the state. She worried that these organizations probably performed overlapping tasks, were not very economically efficient, and didn't work closely with each other. She wanted "a more strategic relationship" with them, rather than funding them one by one. So she hired two consultants, Peter Stein and Ann Wallace, veterans in the conservation field, to explore with the state's environmental organizations the possibility of collaborating.

When the heads of a dozen or so of these environmental organizations started meeting to discuss collaboration, they didn't know each other well and were used to having to compete with each other for funds. Through monthly sessions, says Stein, "quite a bit of trust developed among the members." But they had to do more than make connections. They had to organize around work, around production and outcomes.

This is not an unusual situation in the formation of networks. For instance, the small group of foundations that started the Funders' Network for Smart Growth spent a year exchanging information about each other, then gathered for a meeting. "The folks said, 'All this information sharing is good,'" recalls Ben Starrett, the network coordinator, "but they realized that they wanted to do more—to work together," and decided to put more energy into something they valued: the creation of innovative ideas about smart growth and the diffusion of those ideas to practitioners in the field.

The formation of networks of collaborating organizations passes through four stages, say Heather Creech and Terri Willard of the International Institute for Sustainable Development (IISD), based on their experiences with several global networks:⁹⁵

1. Forming relationships (choosing partners).
2. Organizing relationships (determining what the partners will do and how they will do it)
3. Formalizing relationships (codifying governance)
4. Institutionalizing relationships (managing the internal alignment between an individual organization and the network)

The environmental organizations in Vermont had arrived at step 2, which requires tight alignment around an agreement for production. Our work with networks suggests that this step has several components. You have to create a collective value proposition—a purpose and goals—that is the basis for joint action. You have to assess the core competencies of the network members so that it is clear which members can do what in the production process. And you have to establish production and management plans that can be coordinated. For a network of organizations or individuals to accomplish this, even if only a handful of members are involved, typically requires a process of learning and negotiation that goes beyond the trust-building of

making connections. Sometimes the process can be stimulated and eased along by having an outside facilitator convene and manage it.

Creating a Collective Value Proposition

Imagine you are in a meeting room with 10 strangers. A philanthropist has brought you together to build a production network. What the network is supposed to produce is something you happen to care about—say, improving your community’s economy, or sheltering homeless people, or increasing the availability of affordable housing.

After some long conversations with the other people you find they also care about that purpose. Like you, some of them have been working on this purpose, but in ways that are different from what you have been doing: advocating for new government policies, providing services, conducting research, organizing volunteers, and so on. You also find you like and even admire these other people. They seem to share your values and concerns and they seem to have some impressive organizational capacity and experience.

At this point, the philanthropist interrupts. “OK, it’s time to decide what you, the network, will be doing together.”

Everyone freezes. *Do something together?* What exactly could you and the others in the room do *together*? Each of you is already pretty busy just doing what you already do. Is there really someone else in the meeting that could help you—add value—to do what you are trying to do? Welcome to the challenge of devising a collective value proposition for a network. It is a crucial problem for building any production network. If you don’t solve it, the network will be still-born.

You could declare that everyone in the room shares the same purpose. For example, “Let’s work together on creating more affordable housing.” But that is way too general a proposition; it is not “actionable,” not specific enough to inform compelling action. It’s a start, but something more is needed.

Remember that a collective value proposition is a two-way street, as we said in Chapter 7. In our imaginary meeting, your natural starting point will be, “What can the others here do for me?” After all, you know what you do and how you do it, but you don’t know much yet about what others in the room do. As you get to know the other people a little more, you may see how some of them might be able to help you, but you are not sure why they would want to. So far you’ve only gone one direction down the two-way street.

An emerging network in Los Angeles that we worked with faced this problem early in its formation. Most of the 24 members of NetKAL, a network of young, successful Korean-Americans, had ready answers to the question, “What might each of you get out of participating in this network?” Responding to a survey we conducted, they identified value propositions they found attractive, including:

- Fuel my passion to lead, build my skills to lead
- Learn from Korean-American leaders
- Make good contacts for professional/business work
- Develop my capacity to be leader in K-A community

- Develop projects that help the community

It was obvious that network members had thought about what they wanted to get from the network. But most of them had not thought much about what they could build together or contribute to others in the network, or what the network might need from each of them to sustain itself as a network.

Back in our imaginary meeting, ask yourself what it is that you can do to help the others in the room achieve what they are trying to achieve—and get everyone else in the room to ask themselves the same thing. Of course, to answer this question you have to learn more about what the others do and what they think they need to do more of or better. But you also have to be thoughtful about what value you might be able to create for other members of a network. Can you connect them to others you know, or share knowledge, competencies, and resources that you have?

When this sort of thinking is done and the results are shared among network members, it is much more likely that members will discover value propositions that they may share, that can become collective.

In short, there are four steps to forging a collective value proposition:

1. **Establish a general purpose for the network.** E.g., to work on public policies for rural areas, to improve youth-in-transition programs.
2. **Learn about your potential partners.** Find out what goals others in the potential network seek to achieve and what they need to achieve them.
3. **Walk the “two-way street.”** Explore with others in the network the ways you could create value for them so they can achieve their goals, and ways they can create value for you.
4. **Find the “win-win” opportunities.** Explore mutual, actionable goals that the network could pursue—what specific results would be good for all members of the network?

Core Competencies for Production

Bonding around a specific collective value proposition doesn't mean a network can actually pull it off. Sometimes the aspiration exceeds the capacity that can be mobilized by the network. It is crucial to get very clear about the competencies of the network—and this is not always a simple matter. In some cases, network members may exaggerate or not be truthful about what their capacities are; they are anxious to claim certain capacities because it may mean they will get a portion of the network's resources. When Peter Stein was facilitating the formation of the Vermont Smart Growth Collaborative, part of his role was to assess the capacities of all members and to constrain wishful claims. “I would say ‘No, you can't do that, it's not your competence.’”

Sometimes network members don't know how their capacities match up with the needs of the network. John Cleveland was the consultant for a group of community

based organizations that wanted to organize large-scale production of affordable “green buildings,” environment- and energy-friendly facilities. But most of the network members had not done anything like this before, and found that what they knew how to do was insufficient for the new goal.

Not having competencies you need is not necessarily fatal to the network. It means they have to be developed, either by one of the network members or by linking with a new member that has the competence. You have to fill the gap.

Facilitating a network’s development of core competencies involves answering these questions:

- What competencies are required for the project?
- Which network members have these competencies?
- How will the network develop or access competencies it needs?
- What resources are required to obtain the competencies?

Plans for Production

A production network typically creates a work plan in which it clarifies how network members will collaborate to produce the desired results. The plan may require a great deal of detail, if the complexity of the processes and the degree of collaboration required are quite high. Such a plan may not look much different from what an organization would create, except that it involves having different organizations working with each other rather than different units of a single organization. But that’s the difference that raises a big question: How will the network coordinate all of its autonomous moving parts?

16. COORDINATING PRODUCTION: WHO DOES WHAT

Karen Wolf knew a bit about what she was getting into when she became coordinator of the brand-new WIRED network in west Michigan in 2006. An experienced hand in corporate management, and someone who had strong connections with many of the dozens of people in the network, Wolf knew she was stepping into a complex situation. WIRED was a network of individuals and organizations in the region assembled to develop innovative ways of developing a workforce for the global economy. The U.S. Department of Labor had given the initiative a \$15 million grant. The business leadership of the region had backed the initiative. Innovators from the area and around the country had been hired to work on about a dozen promising projects. No one else in the U.S. was trying anything so ambitious, creative, and risky.

“It was a startup that already had the complexities of a big corporation, but there was no organization,” says Wolf, “just a network.” She had to figure out quickly how to get people paid and keep track of what was going on. There were dozens of administrative tasks to do and systems to be set up, all in strict compliance with federal government rules. And then there was the problem of care and feeding of the innovators: people who, as Wolf says, “have great diversity of thought, who value creativity and freedom.”

In short, the WIRED network didn’t look like anything familiar. “If it isn’t a start up, a corporation, or a government entity, what is it?” Wolf decided it was “a platypus,” a mammal that lays eggs, has webbed feet and a snout like a duck’s, a creature that doesn’t fit any single model.

Wolf plunged into the administrative side of her job—building the infrastructure that would support the creativity of the network: creating a website that informed the public and allowed network members to share information with each other, circulating forms for invoices, expense reports, monthly reports on activities, convening a quarterly meeting of the network innovators to share progress, and starting up the network’s Policy Council that would make decisions about investing WIRED’s funds.

“I was part CEO and part COO for the network,” she recalls. But Wolf quickly realized that was the easy part of her role as coordinator. Much more challenging was something she hadn’t counted on: developing the network and holding it together.

If we were a corporation, then most everyday we’d bump into each other, we’d have a shared vocabulary, we’d have the same report formats. We’d all learn to work together. We’d have a shared mind. But people are in and out of WIRED. We only get a portion of everybody’s mind.

Wolf worried that as she built systems to help the individuals in the network exercise their creativity, little was being done to bring people together as a network. “I am the hub of this network for now—for some people, the only reality they have when it comes to connecting to WIRED.”

The Coordinator’s Role

Karen Wolf's experience reflects the two main roles of a network coordinator. A coordinator helps network members get things done—communication, fundraising, project management, and the like—and also watches over the network's well-being.

As a network develops, it needs a certain amount of coordination and infrastructure to support its members' activities and tend to network's business. A coordinator helps the network to do what it has decided to do. Where a weaver enables collective *connections*, a coordinator enables collective *actions*. A coordinator may take on the following tasks, adapted from a list developed by Heather Creech of the International Institute for Sustainable Development:

- Manage the flow of information across the network, by developing and managing an information management system for the network.
- Keep participants engaged in the network and orient new members.
- Balance consultation with network members with pushing forward on the delivery of network work plans.
- Support fundraising efforts.
- Hold members accountable for delivering on their commitments to the network.
- Monitor the financial health of the network.

In the Lawrence CommunityWorks network, which has 1,600 members, the coordinator also coordinates members' activities, like a "traffic cop" who helps with routing so that congestion doesn't occur. The coordinators of the Vermont Smart Growth Collaborative and the Funders' Network for Smart Growth administer their network's finances.

During the start-up stage of a network, a coordinator's role is likely to focus most heavily on supporting communications and information-sharing among members. For instance, rural organizations brought together by the Kellogg Foundation to form policy networks found they needed coordination help to set up meetings, events, and conference calls among the networks' members, to create information products (such as a member directory), and to develop an ongoing communications infrastructure for the network, such as a collaborative website.

A necessary competence of a coordinator is to know how to plan and manage complicated projects, since that's what networks are often formed to do. But a coordinator is not—repeat, not—a supervisor or director of activities. A coordinator is an enabler, who helps the collaborators in a network do what they are trying to do.

One challenge a coordinator faces is to stick to coordination and not start to do the work of network members. Kathy Moxon is the high-energy coordinator of the Redwood Coast Rural Action network of community leaders from across many sectors in northern California. A year or so into the coordination role she found she was spending most of her time working directly on the network's projects. "I had gotten sucked into doing the project work," she says, "but the work of the network, especially supporting communications among members, was not getting done."

Selecting a Coordinator

The ideal coordinator is ego-less, someone who shares and distributes credit easily, and doesn't need any. When the Massachusetts Smart Growth Alliance, a policy network of seven organizations, was looking for a coordinator it worried that any seasoned professional who filled the job "would seek to steer the Alliance in his or her own direction without engagement of the groups." But the person the Alliance found had the right stuff: she is, an assessment of the network concluded, "highly skilled at mediating between the organizations in the Alliance, and with outside stakeholders, without being overly directive."⁹⁶

When looking for a coordinator, a network has several options:

* ***It can turn to someone in the network who volunteers to handle the tasks.*** This has the advantage of providing the network with someone at no or low cost who will build "institutional memory" for the network and whose performance is likely not to vary much. Unfortunately, as the network expands its work, the solo volunteer is likely to burn out.

* ***It can rotate the assignment among network members.*** This has the benefit of spreading ownership of the coordination role among the members, and it seems to be a fair way to handle the burden of operating a network. But a rotation may also lead to great variation in the coordinator's performance. For instance, some network members may be very good at helping to facilitate a network's decision-making process, while others may not have that competence.

* ***It can hire someone outside of the network.*** This allows the network to search for someone who has the specific skills it needs in a coordinator rather than find someone from its own ranks, a much smaller pool of labor. However, as the Massachusetts Smart Growth Alliance worried, it may be difficult to find someone who knows how to work inside a network model.

* ***It can hire someone inside the network.*** A hired network member may be quite sensitive and responsive to needs of other network members—and really understand what the network is about. It's possible, though, that as the hired coordinator who is also a network member takes responsibility for more and more of the network's work, other members will feel that the coordinator is trying to run the network and has become "first among equals." This sort of tension arose in a collaboration of a network in Vermont and put real stress on the coordinator.

Susan Kidd, a staffer for Working for Equality and Economic Liberation, a nonprofit in Helena, Montana, was at an October 2006 meeting of a newly formed rural policy network working across three states' lines. The network realized it needed a coordinator, so members started writing a "scope of work" for that position. It wasn't long before she was being offered the part-time job. She accepted, but told us that she'd regularly check in with all the other members of the network to make sure they remained comfortable with her dual role—as member and coordinator—in the network.

17. OPERATING THE NETWORK: MANAGEMENT ISSUES TO ANTICIPATE

In one production network we know, some members became concerned about not getting enough credit for what the network was accomplishing—fearing that in the future their organization’s case for funding for its own work would be weakened. In another network, members faltered when they realized that one of the members was hard to get along with and didn’t share their assumptions about the purpose and value of the network; what should they do about it? In yet another network, the organizer worried that the rapidly growing number of members in the network might take it in a direction with which he strongly disagreed.

Networks, like organizations, have operating problems. But their problems are different from those of organizations. Network management issues are usually rooted in deep tensions inherent in the highly decentralized, highly flexible form of organizing that a network is.

Managing networks can be maddening; at the same moment, they may seem fragile and robust, ready to fall apart and to take off. This “iffy-ness” is the bane of network builders; the uncertainty keeps you on your toes, constantly makes you wonder if you are “doing the right thing.” It is what scientists of complexity call an “edge of chaos” phenomenon: networks, like other complex, self-organizing systems, continuously balance and rebalance themselves between order and chaos. “The balance point”—explains Mitchell Waldrop in *Complexity*—“is where the components of a system never quite lock into place, and yet never quite dissolve into turbulence either.”⁹⁷ Waldrop’s “balance point” is a point of creative tension. In networks, it takes a continuous balancing act to generate network effects. Network builders have to manage this tension. “Many real networks,” says Duncan Watts in *Six Degrees*, possess “essential counterpoints” that drive “the system through their endless conflict to an uneasy yet necessary truce.”⁹⁸

In our work with networks, three counterpoints or tensions in particular seem to rear up frequently. For network builders the trick is to recognize in their networks the existence of these underlying tensions and to periodically take actions that help the network to find its balancing points. The three tensions are over network identity, control, and change.

* ***Identity—the individual self interest of a member versus the collective interest of the network.*** Networks must balance the need to satisfy the interests of *each individual member* of the network and the interests of the *entire network*. This is a classic tension of “the part versus the whole.” In any network, both individual and collective value propositions are present. What matters is how they are balanced. If a network’s energies are too focused on just meeting the interests of each individual, it will not generate enough energy to maintain itself and grow as a network; the network will not *converge* sufficiently on shared interests. If, on the other hand, network energy is too focused on the interests of the whole network, some individuals may lose the feeling that the network is providing them with value; they will feel unconnected to the network; the network will not *diverge* sufficiently around individual interests.

This tension is particularly present in networks of organizations, since participating in the network is usually just a part of what the organizations do and they must continue to “feed” their non-network elements. They can be super-sensitive to how members share credit for achievements by the network or how financial resources the network attracts are divided up among the producing members.

* **Control--the distributed authority versus centralized authority of the network.** Networks must balance the need of individual network members to decide and act on their own with the need for them to decide and act collectively. This is a classic tension of “autonomy versus community.” When the balance between them is right, an individual member in a network can act locally, in his/her own context, but in a way that is in keeping with understandings that are shared with other network members. Decision-making in social networks is often described as informal, or based on consensus. Behind this are individuals with many possible choices of action who nevertheless share common purposes and common “rules” (such as being honest, sharing information, or paying dues on time). Too many rules will destroy the autonomy that is needed; too few will not allow for coherence among individuals to emerge.

The tendency of networks to decentralize authority and governance is countered by the desire to centralize control in the name of efficiency and standards. A management issue that may arise is how to discipline a network member who either fails to live up to agreements in the network or violates the network’s norms.

* **Change--the stability of the network versus adaptation by the network.** Networks must balance the need to maintain their existing purpose and processes with the need to innovate and change. Continuity is useful: it allows a certain amount of predictability while network members assess their experiences and compare and copy successful activities. On the other hand, nimble adaptation is a special advantage of networks as a form of organizing. Because networks do not have permanent charters or confining central controls, they have the potential to creatively transform new information into new practices, and to respond quickly to changes in their external environment.

Networks evolve; they change over time. Their purpose, functions, value propositions, and structures may change. Their membership may change; people and organizations come and go. And, along with the possibility of adaptive change, networks seem to have a maturation process. Creech and Willard observe that networks of organizations may take as long as five years to become established and produce concrete work.⁹⁹ Many networks of organizations don’t even get that far, they add. “The private sector literature on strategic alliances and networks reveals that over 60 percent of these relationships fail outright or underperform.”¹⁰⁰

When the balance between stability and adaptation is right, networks maintain coherence without generating inertia that stifles adaptation, while also seeking change without tipping into chaos. Valdis Krebs notes that adaptive networks tend to be outward looking, they have greater reach into the world and, therefore, greater awareness—information and assessment—of what is happening around them.¹⁰¹

The tension of change creates many management issues: what to do if a new collective value proposition gains strength and how to plan for a network's development.

In addition to tensions that grow into issues for the network, networks face predictable issues as they become more mature and complex. For instance, they must develop a communications infrastructure and figure out how to fund themselves. In the rest of this chapter we discuss the following management issues:

- Ensuring effective communication in the network
- “Policing” the network
- Handling financial risks
- Budgeting for networks
- Sharing the credit

Ensuring Effective Communication in the Network

A network's infrastructure for communicating among members is essential to the network's success because it will enable or impede collaboration. Networks must provide for effective, speedy, flexible, cheap, and diverse communication among members, as well as information databases for members to tap into with ease. A network must be able to move information quickly to the right places.

“All members should have equal access to network information and the tools to participate effectively,” recommends Heather Creech. “In the early stages of network development, technology assessments should be undertaken for all members and infrastructure development funded and implemented for those who may not have the same ready access to email and the Web.”¹⁰²

Marty Kearns, executive director of Green Media Toolshed, points out that a network communication system should enable “cheap, long-distance collaboration” and the use of hardware and software across the network.¹⁰³ Effective networks “usually have significant capability to use information and communications technology (ICT) to facilitate rapid and broad-based interaction among members and with key stakeholders,” report Suzanne Taschereau and Joe Bolger in a 2006 paper for the European Centre for Development Policy Management. In most cases, they add, this means using the Internet. “Examples from large decentralized networks in big countries such as Brazil suggest that an electronic communications infrastructure—and especially the internet—have been very important to network growth and development.”¹⁰⁴

Electronic communication is no substitute for face-to-face meeting, as we mentioned earlier, especially in the early days of building connections. But as relationships are built in a network and collaborations are launched, information technology serves to sustain effort and linkages.

Communication is not just about the *flow* of information; it's also about the *stock* of information that a network may build. A directory of members, for instance, is a useful database for a network. Information about how to do things in the network is another example. Lawrence CommunityWorks posts material on how to organize a neighborhood block party, something that many of its members might be interested in.

It also provides electronic space where members can document and share their experiences in the network.

Within large and evolving networks it may not be possible to monitor, coordinate, and help members' activities through a small number of communications specialists. These people will tend to be quickly saturated by the demands of processing multiple requests for information and guidance. The challenge is to keep important information flowing without overwhelming individual nodes. To do this you can either increase the efficiency of information exchange, by using software for collaboration, for instance. You can also try to more evenly distribute around the network the burden of information processing and problem-solving.

“Policing” the Network

The behavior of a network member can significantly disturb the rest of the network. What do you do if this happens?

Don't wait for problems to pop up. Network organizers should establish accountability for being a network member at the beginning of the network's life. When a person or organization becomes a part of the network—even at the birth of the network—it should be clear what the terms and conditions of membership are. If the network gets funding for a project, for instance, what happens if a network member takes some of the money but does not meet its obligations to the project? What are the rules if a member has to withdraw from the network?

There should also be clarity from the outset about how the network's rules will be enforced. What authority does the network coordinator or governing body, if there is one, have to enforce the rules? What is the process for dispute resolution if network members are in conflict?

Handling Financial Risks

Networks may be an efficient way of getting things done, but they are not free of cost. There seems to be little information available about the actual costs of running networks. Kevin Kelley argues that networks tend to have low fixed costs and insignificant marginal costs, and this seems intuitively correct. What is clear is that many nonprofit networks tend to be underfunded and depend heavily on the willingness of organizers and members to carry on despite chronic financial strain. And this, of course, affects the development of a network.

Our observation is that networks in the civil sector can generate their resources in five distinct ways, each with its own risks:

- **Obtaining in-kind services from their members.** Essentially, this is the fuel from volunteers. The New York City Investment Fund lives on this resource: scores of Wall Streeters provide the network with their business expertise at no charge. Volunteerism must be constantly refreshed. When Kathy Wylde was the Fund's executive director, she kept a close eye on what was attracting the interest of the network's members—and always watched for the “next thing”

that would keep them engaged. The risk with relying on volunteers, of course, is that they will burn out or drift away after a while.

- **Obtaining funding from outside sources, such as foundations.** This is an external subsidization of costs. The Vermont Smart Growth Collaborative formed to tap potential philanthropic capital. Donor funding is hard to sustain; after a few years most funders move on to something else and reduce or eliminate funding for the network. Moreover, network members will tend to be nervous about raising funds for the network from the same donors that the organization relies on for money; they don't want to hurt their own fundraising chances.
- **Selling services to members.** Whether in the form of membership dues or fees for services, this is a market mechanism for generating resources for the network. Member dues or fees for services pose several problems. There can be transactional costs in collecting dues or fees. More important, many nonprofits may not be able to afford to pay to participate in the network, whatever the potential benefits they may receive.
- **Selling services to external customers.** The network may produce something that a government agency, other nonprofits, private businesses, or individual consumers want to buy. This market mechanism runs the risk of failing on a commercial basis.
- **Obtaining extra funding from members.** This is internal subsidization of costs. Some members of the Funders' Network for Smart Growth provided grants to the network in addition to their membership dues, to support the development of the network's infrastructure. Of course, not many members may be able to afford to do this. In addition, there is a risk that a member that makes such a contribution will formally or informally leverage the contribution into more control over the network.

In light of these financial risks, it is important that network organizers not underestimate or low-ball the likely cost of operating the network when they are deciding how to capitalize the network. Low estimates will lead to inadequate strategies for revenue generation, whatever source of capital is being tapped. It is also important to get clear about the cost and benefits of coordination of the network, since that will be one of the major components of the network's finances, but it is an unfamiliar item for most foundations and other donors.

Budgeting for Networks

An additional financial issue that can present difficulties is the budgeting of funds within a network. Creech and Willard caution that "The allocation of funds, once raised, can be potentially contentious, if the relationships among the members have not

been well formed, and if agreements for the division of resources have not been reached in an open and transparent fashion.”¹⁰⁵

If the network is supported by a grant, but the grant goes to one of the members for subsequent distribution within the network, other members may feel at some point that they are not getting their fair share. They may also feel more accountable to the organization that got the grant and sends them funds than to each other as a network.

A different challenge is to decide on what basis a network’s resources should be allocated to members. Should funds be distributed equally to members or on the basis of the specific work each member does for the network? We have seen it done both ways. An equal distribution tends to support the spirit of collaboration, the sense that “we’re all in it together,” some network organizers have argued. It’s also much easier to do than to allocate different amounts to each member. A work-based distribution acknowledges that the contributions and needs of members vary, other network organizers say.

Sharing Credit

Bonnie Shepard puts it nicely: “Part of the ‘capital’ of an NGO is its record of achievements, which is essential for publicity and fund-raising pitches.” But in a network it is hard to claim credit for success, since “everyone” made it possible. “Even when an NGO has devoted considerable organizational resources to an achievement by a network of organizations, it cannot claim individual credit for it.”¹⁰⁶ This is of great concern to organizations that are wedded to donor funding. It may lead them to not join a network, preferring to go it alone. Or they may join a network, but act in ways that undercut the network in favor of promoting themselves. For example, Shepard reports that some members of an HIV/AIDS prevention network in Chile organized a major public meeting without including other network members. “This exclusion set off severe internal tensions, with two major founding members leaving the network.”¹⁰⁷

18. TAKING A NETWORK'S PULSE: MONITORING AND EVALUATION

In 2005, a network weaver in the Lawrence CommunityWorks (LCW) network realized that she was losing track of who was doing what in the network. With 1,600 members and more joining daily, new clusters of members emerging, and the interests and engagement of members ever shifting, it was difficult to follow member participation in the five-year old network. The systems that had been put in place to support network weaving and coordination were no longer working. “I used to know most of the active members in the network,” the weaver told us, “but now the network is just too big. When you make a connection for someone, it’s hard to know what has come of it.”

At the same time, a foundation that was interested in LCW’s network approach to community development decided to invest in an evaluation to find out how well it was working. And it wasn’t just a funder and network builders who wanted to know how LCW was doing. Many members did too. They were curious: Was all the connectivity among members making a difference? It seemed like more families were building assets and getting engaged in community affairs, but how many network members were doing this and at what rate?

Organizers, funders, members—each wanted a way to understand what was happening in the network and what the network was accomplishing. Call it monitoring, tracking, or feedback loops, an assessment, check up, or evaluation, all three of these groups wanted to get a handle on network performance. But how does a network go about doing this? Is it different from how an organization does it? What does a network actually measure?

Evaluating Networks

Thanks to the dramatic expansion of the use of evaluation in the nonprofit sector, many nonprofit leaders that join or start networks have had experiences with evaluation. Within their own organizations, they may have developed guidelines for internal reporting and assessment or, responding to funder requirements, set up separate evaluation processes. In a network, performance is evaluated for the same reasons than an organization’s performance is evaluated:

- **To ensure accountability**—measuring the results of programs and accounting to funders or other stakeholders for the use of resources.
- **To plan and improve programs**—providing feedback for program planning, program improvement, and overall operational effectiveness.
- **To generate knowledge**—creating new understanding about what works and doesn’t work.

But a network is not an organization, and this affects what is being evaluated. A network's success depends on the degree to which it organizes connectivity—links among nodes—to produce unique network effects such as rapid growth and diffusion, “small world” reach, resilience, and adaptive capacity. These effects are, in turn, supposed to produce results—increased income for low-income families or more opportunities for minority youth to participate in after-school programs, for instance—more efficiently or effectively or at greater scale than a single organization could.

When network builders come to the question of evaluation, whether for their own needs or those of a funder or their members, they are likely to want to know about things that an organization-centered evaluation might not consider important. At a minimum, they will want to assess the network's connectivity. From there they will look for particular network effects and outputs, and then for the impact, or results, produced by the network. Thus, a network of post-secondary educators in Franklin County, Maine, tracks student attendance to determine if the network's course offerings meet the needs of adult learners in remote areas. But it also wants to know if the multiple providers in the network are connected in ways that allow efficient flow of information among them and effective coordination of activities across multiple sites.

What Networks Typically Do

Few of the networks that we know start with formal evaluation plans. But many of them do engage in some informal monitoring and assessment activities. As a study of network evaluation, *Measuring the Unmeasurable*, reports: “Many networks continuously evaluate the changes they have managed to bring about, and the changing contexts within which they work. Yet most of this monitoring and evaluating is done live, and in interactive ways which do not get written down.”¹⁰⁸

Tracking a network's performance and reflecting on what it means is an essential part of the network building process. Here's why:

*** Network organizers need feedback to make sure the network stays adaptive.** Unlike single organizations or more conventional collaborations, networks are built to adapt, and to adapt they need information about changes in their external environment or within the network itself. For example:

- A network might need to know if some members' ties to the network have become latent, so it can notify them of opportunities for re-engaging with the network.
- A network might track members' links so it can detect emerging patterns of connectivity and direct network resources accordingly. When a handful of LCW members started a sewing group that quickly attracted more members, the network responded with support; the group evolved into a Sewing Club, a comprehensive program for network members who want to improve their sewing skills and possibly earn more income from the activity.
- A network might monitor changes in the structure of connections among members: Who's connecting to whom? Who is not

connected but should be? The organizers of ACEnet map connections among rural entrepreneurs to identify emerging hubs and bridges—people or businesses that could bring unconnected groups together to develop the food sector in Appalachian Ohio.

At a minimum, networks should monitor the basic connectivity of their members. After all, if people are not connected with each other, then no value can be created through the network.

*** Network organizers need to know what the network is achieving, so they can confirm or adjust strategies for producing results.** Most social-change networks are organized to produce specific outcomes, such as increasing the access of minority youth to after-school programs. Underlying this purpose are specific ideas about how the network will produce its results. You might, for instance, believe that increasing connectivity among organizations that provide after-school sports programs will result in more “slots” in programs for minority kids. So it is essential that networks measure their effectiveness in achieving the results they seek, even if they don’t use a formal evaluation plan to do so.

Let’s say that to increase the efficiency of linkages among organizations so they can communicate and collaborate more easily, you created a hub—a weaver—to organize more connections. The efficiency seems to be improving, but you now suspect that the hub is becoming overloaded by the large flows of information and large numbers of relationships in the network, or that the hub is acting as a “gate keeper,” rather than a connector, and is directing information and resources to selected parts of the network. To find out what’s really happening, you take the network’s pulse: Are members getting the information they seek in a timely way? Do they know about opportunities to contribute to or link into activities that other members engage in? Are they aware of resources that are available through the network? The feedback you get from members could lead you to disband the hub or to get it to modify its behaviors.

Why Networks Do Formal Monitoring and Evaluation

When network organizers decide to engage in a more systematic or comprehensive approach to monitoring and evaluation, it’s usually for these reasons:

*** To sustain support and contributions, the network needs to demonstrate its value to members or funders.** If the network requires a great deal of in-kind support from its members, organizers need to show members that the network is worth their investment. Funders may require an “evidence-based” evaluation of network activities as a condition for obtaining funds; since they have many possible strategies to support, they want to evaluate the impact of the network’s approach. For instance, three years after the Barr Foundation started investing in a network strategy for increasing the quality, scale, and sustainability of after-school opportunities for Boston’s youth, it hired an outside evaluator to answer key questions about the approach.

* ***The network wants to systematically track its development, so it can effectively manage its own evolution.*** As we mentioned earlier in the story about LCW, the network’s growth had outstripped its monitoring system, leaving organizers “blind” to some of what was happening in the network. This was not just a feedback problem. It meant that at a critical time in the network’s evolution, organizers might not have the sort of information they needed to make important decisions about managing the network.

Whatever a network’s reasons for monitoring and assessing itself, several factors are likely to limit its interest in more formal, more comprehensive evaluation processes. Most networks have limited time and resources to dedicate to evaluation. As researchers Suzanne Bolger and Joe Taschereau found in an examination of international nonprofit networks, “Most networks operate through volunteer contributions... They tend to focus their limited energy on keeping the network working and on the future, rather than on looking back.”¹⁰⁹ Another barrier to evaluation is the natural dynamism of social networks. Why invest time and energy in detailed evaluation plans that will measure indicators that are likely to change as the network evolves? Many network organizers worry that creating a network plan with an evaluation component will encourage network members to “stick to the plan” and that this will stifle energy and innovation.

Bill Traynor, a leader of Lawrence CommunityWorks, says LCW didn’t have a monitoring and evaluation in place from the start of network building because, like other network activities, assessment is “emergent.” As a network evolves, he explains, new demands are placed on it, new ideas emerge. If the ideas have “resonance,” meaning they seem to be popping up all over the network, then network organizers pay attention to them. By 2005, the idea of monitoring and evaluation was gaining resonance in the LCW network.

Key Questions for Network Evaluation

In the early stages of its development, Lawrence Community Works, like many networks, focused on monitoring basic connectivity—how many members are there and what are they doing? But five years into the network’s life, members had other, deeper questions. LCW hired a consultant (Madeleine Taylor) to design an overall tracking and evaluation approach that would respond to what members, organizers, and funders wanted to know.

Deciding what you want to know about the network is the first step of any monitoring and evaluation process. In our experience, there are three basic topics for network assessment:

- **Connectivity.** What is flowing through the network—information and other resources? What are the characteristics of links among nodes, especially their structural arrangements? How efficient are the connections the network makes?

- **Overall Health.** A network is more than its connections. What are the essential characteristics that a network must achieve so that its efforts will be successful and, if so desired, sustainable?
- **Results.** What outputs is the network producing—at what cost—and what outcomes, or impact, is the network having by producing these outputs?

Assessing Connectivity

As we've discussed in previous chapters, connectivity allows a network's nodes to share information, knowledge, competencies, resources, and other value. Repeated connectivity among members takes form as network structures, such as the Hub-and-Spoke. Network structures enable or impede efficient and effective collaboration among members. The condition of each of these elements of connectivity—content, structure, and efficiency—can be uncovered in many ways as part of an evaluation process.

What is flowing through the network? This can be assessed by asking members what they are “giving to and getting from” each other, using surveys and interviews, and by observing communication and collaboration among members.

The connectivity structure of a network can also be discerned through a process called “network mapping,” which we discuss in detail in Chapter 19. Different structures have different effects on connectivity within a network. A Hub-and-Spoke structure, for instance, limits relationship-building and collaboration among the nodes that are the spokes, but connects the hub to all the other nodes. A Dense Cluster structure promotes intense connectivity among a small core of network members, but limits their connectivity with nodes on the periphery.

The efficiency of a network's connectivity can be measured, in part with the use of network maps and a methodology called “Social Network Analysis.” As the Barr Foundation invested in increasing the connections among organizations that provided after-school programs for students, it also measured the degree to which connectivity was changing. Consultant Stephanie Lowell reports that data was collected from some 1,000 organizations in sports and arts programming, including their links to each other. “Efficiency refers to the average number of steps it takes for any one node to reach another node in the network,” she explains. “A rule of thumb in the network research field is to strive for efficiency at or near three.” After Barr-supported weavers had been active connecting many of these organizations, the efficiency of connections among the sports organizations improved to 3.8 steps on average (from 4.6 steps) and that of the arts organizations improved to 3.2 average steps (from 6.0 steps).¹¹⁰

Assessing Network Health

A special committee of members of Lawrence CommunityWorks met several times to discuss how they would know if their network was “healthy,” the conditions they felt were essential for the network to achieve its long-term goals. They identified several, all of them measurable:

- The membership is growing.
- An increasing proportion of members is actively involved in the network.
- Members are engaging in multiple kinds of activities provided by the network.
- There are increasing levels of member participation in the stewardship and management of the network.
- The network membership is increasingly diverse.
- Members are coming together in different combinations in the network (for example, youth and adults, members with different social and ethnic affiliations, new members and more experienced members, leaders and others).
- Members are making and taking advantage of both strong and weak ties in the network.

Some of these indicators are about the network's connectivity, but others are about its usefulness to members and its attractiveness to non-members. Clearly, the membership group believed that LCW would be more sustainable if its members have more than one reason to participate in it and they take more responsibility for managing the network.

We suspect that any network can come up with a similar kind of scorecard by which to gauge its robustness, resiliency, and other essential characteristics. They will be tailored, of course, to the network's purpose. In evaluating its efforts to boost capacity in Boston's after-school programs, the Barr Foundation established network-building metrics that include "smart network" indicators such as the strengthening of intermediary organizations in the network, improvement of information flows and the spread of "best practices," an increased number of "voices get to the table" for discussion of after-school issues, and the emergence of new network weavers and hubs.¹¹¹

Other writers about networks have identified the following indicators, all of which have been discussed in previous chapters of the Handbook:

- Distributed control of the network.
- Sufficient financial resources.
- Attractive value propositions and the right balance of individual and collective value propositions.
- Adaptive management culture.

In writing about network evaluation, Heather Creech, of the International Institute for Sustainable Development, introduces the question of whether networks have a normal "life cycle." This is an intriguing and perhaps essential concern for network evaluation. For example, although it makes sense for LCW to seek membership growth at this stage of its life, perhaps that will not be an important measure of health in a later stage.

As Creech and Ramji put it, while networks are typically evaluated against their "original intentions," is there also a "norm" for network operations against which a network can be compared?

The life-cycle of a network can be seen as its organizational growth from initiation to a mature stage of operations. In our observations of networks, we have noted four different stages in the life of a network: the start-up; growth (increasing, decreasing or constant); decline leading either to closure or renewal; and long-term sustainability. Life-cycle analysis is an interesting investigation into the evolutionary process of a network: how and when positive and negative, external and internal factors cause the network to experience either an expansion phase or contraction phase during each period of operation.¹¹²

Creech and Ramji then introduce a preliminary framework of the network life cycle that depicts changes over time in the quality of interaction and work of the network. Time is divided into stages of years—1-3, 4-6, 7-10, and 10+--with corresponding shifts in the quality of relationships and collaboration among network members, the development of network systems, and value-creating activities.

This is a brave effort. Their speculation, Creech and Ramji acknowledge, assumes that the length of time a network has been in operation is quite significant. Our own experience with production networks suggests that the progressive development of connectivity, alignment, and production—the essential elements of a network—is achieved at quite varying speeds. It may be accurate to say that a start-up phase of 1-3 years is normally needed, but this covers such a large range of time that it will not reveal much about why some networks form much more quickly than others. Moreover, many networks are not intended for long-term sustainability—the 10+ years stage—but are intentionally self-liquidating. We suspect that a more robust framing of norms for network development would include a model of the structural evolution through which networks go, such as the framework developed by Valdis Krebs and June Holley, which we used in Chapter 10.

Assessing a Network's Outcomes

Networks have the same difficulties as organizations when it comes to providing evidence of the impact of their activities and outputs. Establishing a cause-and-effect relationship between what a network is doing and what outcomes/impact it is producing is not always straightforward. Significant change processes take time and the contribution of your efforts to these processes is often difficult to measure, especially in the short- to medium-term.

Some networks address this challenge by identifying *intermediate indicators* of network performance. “We can look at incremental changes—changes in attitudes, actions and behaviours [among policy makers/influentials]—that are a direct outcome of [a network's] work,” report Creech and Ramji in a review of assessment approaches for knowledge-creating networks.

Lawrence CommunityWorks uses an annual survey to ask members to report on decisions they have made that have been influenced by their experience in the network. These decisions are intermediate indicators, progress markers that are relevant to (or “on the way to”) LCW's long-term goal of promoting higher levels of civic participation and engagement.

Some LCW Annual Survey Questions

Has your participation in the Network in the last year led you to make a decision to

- Vote? (yes/no)
- Run for office? (yes/no)
- Get involved in political campaign? (yes/no)
- Take action with your neighbors to solve a local problem? (yes/no)

Whatever the outcomes networks are supposed to produce, a formal evaluation of networks will usually ask whether or not using a network approach to produce the outcomes has been worth it. Would a different approach, relying, for instance, on a single organization, have been more effective or less costly? In short, because networks are considered to be a new, untested approach to social change, they may be required to prove themselves against alternative models for getting things done.

Such an evaluation must start with a clear understanding of why the funder and organizer of the network thought using a network approach would pay off; in the words of the evaluation field, what role does networking play in their “theory of change”?

The Barr Foundation has done as good a job as we’ve seen in trying to be explicit about why it invests in network approaches. In its “Field of Dreams” initiative to increase after-school opportunities for youth in Boston, it made a calculated bet that increasing connectivity among after-school organizations would have the desired effect. Here’s how it described its testable hypotheses:

The theory of change underlying this investment in networks is based on the core belief that achieving the goals of increased quality, scale and sustainability of after school opportunities for Boston’s youth requires significant systemic change. More specifically, Barr believes that:

- *Greater connectivity within and across selected after-school program areas (youth sports, arts, and teens) will support the development of sector-wide social capital and adaptive capacity to achieve long-term, sustainable change and positive outcomes for children.*
- *Fostering emergent, “bottom up” activity among players in the sector—in part by crossing boundaries to bring together organizations in new ways—will be critical to sector capacity and resilience.*
- *Investment in network “weavers” whose job is to understand the structure and needs of the sector, improve knowledge sharing, catalyze and facilitate relationship development, and begin to bring organizations together to work towards common goals is a viable way to achieve stronger networks and stronger sector-level capacity.*
- *Investing in network building is a highly leveraged way to achieve desired outcomes, and a strong complement to other investments in building the capacity of a portfolio of individual organizations.¹¹³*

Barr's follow-up evaluations have been driven by these hypotheses about network advantage. As you can tell, working network evaluation from a theory of change puts a heavy burden on articulating why you think a network is the best way to generate the results you want to see. Unfortunately, as we noted earlier in the Handbook, there is not much evidence one way or the other about the comparative financial efficiency of networks for social change—a question that many funders have.

Lessons for Assessing Networks

*** *Anticipate and build the assessment system your network will need as it evolves.*** Sooner or later a network's organizers, members, and funders will want to know how well the network is performing. It's smarter to tackle the topic sooner, since a good assessment requires data that is easier to collect at the time things are happening rather than much later. It's also better to build the feedback and learning process in early, so that it is clear to the network that assessment is essential to managing the network, not just an add-on chore.

Of course, as the network evolves, so must the evaluation system. Fast-growing Lawrence CommunityWorks needed a new network information system so it could track connections and activities within the network. Traynor found a possible tool to use when he met with the organizers of LUPE, a network of mainly Latino immigrants in Texas that used its collective buying power to negotiate with local businesses for price discounts for its members. The program was linked to a membership card system that provided members with proof of identification. After extensive discussions among LCW staff, leadership, and a special committee of members organized for the purpose, the network decided to implement an Enhanced Membership Platform (EMP), a plastic, bar-coded membership card system modeled after the LUPE system. The EMP has point-of-contact data collection capability; it automatically records member participation in network activities when the card is swiped. With this new data-gathering capacity, LCW had new opportunities to track the network's activities.

*** *Don't be funder-centric in thinking about evaluation.*** Network organizers who worry mainly about funders' expectations and need for evaluation, should more closely consider the "emergent demand" from their own network members for more self-assessment and accountability. When a funder requires evaluation, align that process so that it can also meet the feedback needs of network organizers and members.

*** *Assess multiple dimensions of the network: the results it is producing, how it produces them (as a network), and the development of the network itself.*** To have a well-rounded assessment that informs organizers, members, and stakeholders such as funders, you need to know all of these things—and much of the data that you need can be gathered all at the same time.

*** *Be wary of rigid assessment frameworks that can stifle creative impulses and ignore emerging initiatives and solutions.*** Some networks are entirely open and evolving, while others have formalized plans and agreements; they vary along a

formal/informal continuum. At the informal end of the spectrum (in most connectivity nets for example), monitoring is the principal assessment activity. At the other end of the spectrum (e.g. production networks with specific plans and timelines) members may develop more formal evaluation plans. Nevertheless all networks need room to grow and change. Evaluation processes should inform network stakeholders as they make decisions about the network, but should not become a “straight-jacket” that binds the network to following a plan or to avoiding having a plan.

* ***Tap other networks to gain perspective about how your network is doing.*** Some networks turn to other network practitioners to assess their work and explore possible improvements. They take advantage of the experience of people who have been in their shoes and who can take a look at their network practice and offer honest feedback on network activities and plans. Some “participatory evaluators” approach network assessments using some of the same techniques as learning partners who are not “evaluators.” Like peers, they seek the insiders' view with the advantage that they have stronger methodological skills and are likely to have greater credibility with external audiences. Third-party evaluators who are truly participatory engage network organizers and members in every aspect of the evaluation, from design through analysis.¹¹⁴

19. VISUALIZING NETWORKS: MAPS THAT REVEAL

One of the most fascinating aspects of networks is the pictures you can make of them. Using special software, you can depict the links among the nodes—and find the distinct structure or shape of a network, which may reveal telling characteristics about the network. (For more on network structures, see Chapter 10.) Making and analyzing network “maps”—visual depictions of relationships among a network’s nodes—is a key competence for network builders. But as fascinating as network maps are, there’s a lot to learn about why and when to invest in creating them.

*** *Network maps present complex information in a way that makes it easier to “see” connections and their patterns.*** Who is connected to whom? Who has more connectivity or reach than others in the network? Which nodes are strongly connected and which are weakly connected? Which are becoming more connected, which are losing connectivity?

A network map of NetKAL early in the life of that network of 24 Korean-American professionals in Los Angeles, revealed that two members were much more connected to other members than the rest of the members were. But they were well connected in quite different ways. One was directly connected (by 1 “degree of separation”) to about half of the members. The other connected directly to only a quarter of the members, but *those* people were well connected to other members (2 degrees). Working through just these two “hub” nodes, you could easily reach almost all 24 members of NetKAL.

When we displayed to NetKAL members the map we’d made of their connectivity, many of them immediately began spotting patterns, such as which members were relatively unconnected to others. The exercise created some excitement because it made visible something—everyone’s connections to each other—that was otherwise hard for anyone to see.

You can map many aspects of a network. In Boston, a group of foundations mapped the funding sources for hundreds of after-school programs—the financial links between funders and organizations, and discovered that many people’s assumptions about the flow of money were incorrect. In Michigan, a new network of community innovators started by mapping the combinations of “core competencies” that could be assembled from the organizations in the network.

*** *Network maps reveal opportunities to build connections that can maximize the power and potential of your network.*** Who’s not connected but should be? Where are the hubs and bottlenecks in the network? A network map of an 8th grade class in Detroit, with 17 students who had been together for nearly three years, revealed that two of the students connected with every other student when it came to their learning activities (collaborating on projects or homework, for instance). At the other extreme of connectivity, three students connected to very few other students. The well-connected students were natural hubs in the classroom, and their

teacher used them to build even more connectivity within the class by spending more of their time working with students who were relatively unconnected.

*** Network maps make everyone better networkers.** In the early stages of a network's development, network organizers are likely to spend time weaving connections among the members. But every network member is also a potential network weaver. Weaving—the ability to see patterns and opportunities in a network and act on them—is a basic networking capacity that all members can develop. When a network's members see maps of their network, it can improve their “eye” for the network's connections and help them see what weaving they could do. In research on “structural holes” in networks, Ron Burt and Don Lonchi show that even minor training can improve people's ability to see and act on network opportunities. It turns out that most of us are not very good at recognizing bridging opportunities to close “structural holes.” But, the research shows, if you know what a network “bridge” is and looks like, you'll find and act on these opportunities more readily.¹¹⁵

*** Network maps show how a network's structure is evolving—and can be used to assess the health of a network.** A map is a snapshot of a network's structure, and taking “before” and “after” pictures can reveal how a network is evolving. Has it moved, for instance, from a Hub-and-Spoke” stage, as described by Holley and Krebs in Chapter 10, to a more advanced structural stage? Has it expanded to include people who once were beyond the “horizon” of the network? Has it lost connections to some nodes?

A map of nearly 500 Boston arts and culture organizations serving children after school found that they were not well connected with each other and relied on a few people acting as connectors. On average, it was calculated, organizations were six connections (degrees of separation) from each other—quite a “distance.” However, the picture changed after a weaver spent a year connecting many these organizations to each other. On average, organizations were then three steps away from each other, and a hub-and-spoke structure had emerged with the weaver at the center.¹¹⁶

When to Map

Network mapping is fun and revealing—but you have to know when to use this tool, since it can require a lot of effort to develop the information for the maps. A network map is much more than an inventory of the nodes and links in a network; it shows the precise structure and quality of a network's connections and relationships. But if the network has not yet focused in on a specific purpose, it may be too soon in the network's life for mapping connections that will reveal useful information.

Imagine that 15 people have come together with the notion of forming a network to influence economic development in their community. They have some connectivity and alignment around a general purpose, but they don't yet know what they want their network to produce: Public policy advocacy? Innovations? Public awareness? If you were to map the connections between these 15 people, you might learn something about how to strengthen the more than 200 potential connections among them. If you were to map who else those 15 people know in their community,

you would likely have a map with hundreds, maybe thousands, of additional nodes. That would give you some sense of the breadth of the network's connections in town—"we know a lot of people"—and the depth, or redundancy, of some of these connections—"many of us know the same people." But how helpful is this information if you don't know what the network wants to achieve?

If, on the other hand, you knew that the network intended to organize for policy advocacy in economic development, then your mapping exercises could be more focused and fruitful. You still might map the general connections among the network members. But when you asked the members who they knew in the community, you might focus the question down to: "Who do you know in the community who either decides public policies (e.g., a city councilperson or state legislator) or influences public policy-making (e.g., a significant employer, a neighborhood group president)?" You might also ask, "Who in the community influences public policy, whether you have connections to them or not?" This might result in a map with a few dozen or even a hundred, but not thousands, of nodes; it provides the network with more useful information for developing strategies to build its connections and effectiveness.

About Mapping Networks

A simple network map with a small number of nodes can readily be drawn by hand. But the analysis and display of more complex network information is best achieved with special software that can sort, measure, and organize data for easier interpretation. Although most software programs are difficult for the average user, having been developed for limited distribution by mathematicians, sociologists, or graph theorists, the technical assistance and mapping tools themselves are increasingly being adapted to serve new "lay" markets.

Network mapping software currently in use in the nonprofit sector includes:

- Inflow, www.orgnet.com
- UCINET 6 and Netdraw—a network analysis program with Netdraw, a visualization package, www.analytictech.com
- Netminer, www.netminer.com

The basic steps for mapping a network are as follows:

- **Identify the network you want to map.** What is the set of members (people, organizations) that you want to include and the type of connection you want to track? A relationship between individuals or organizations may be defined in many ways, from simple contact (Who talks to whom?) to more complicated exchanges (Who supports whom? Who learns from whom?). How many degrees of connection are you mapping? Where is the "horizon" or "boundary" of the network?
- **Gather network data.** Software programs will do the calculating and display results, but relational data have to be collected and entered first.

Information about network relationships can be collected through a variety of methods, including observation, interviews, documents, and electronic records, as well as from surveys (either direct or on-line). Network questions typically establish the existence of a link, the kinds of relationship or flows between nodes, and the frequency of contact and strength of the tie. Mapping software will sort and display nodes with different attributes (such as people working in the same region or serving particular constituencies) so long as these data are also gathered and entered into the network database. A map of a network can depict many aspects of the relationships between nodes. Most simply, it can show who is connected to whom. But it can also show *qualitative* aspects of the relationships, such as the strength or weakness of ties between nodes, or which nodes share a value proposition, or which nodes connect to people outside of the network that others in the network want to connect with.

- ***Generate and interpret maps.*** A simple display of “who’s connected to whom” can be a powerful tool for detecting network patterns and designing network strategies. Typically, you will be able to “interrogate” the data along these lines: Where are the strong connections in the network? Where are the weak ones? Where are the gaps in connectivity? What structure(s) is the network taking on? (Hub-and-spoke, multi-hub, others?) It is important to remember, however, that no particular pattern of links is desirable in itself. A small, closely knit network may be ideal for exchanging complex information, but not for finding new ideas. Isolated nodes at the periphery of the network may provide access to valuable new information that more closely connected nodes at the center of a network cannot.

PART IV

NET GAINS IN THE SOCIAL-CHANGE SECTOR

In this final part of the Handbook, we turn to the broader sector or field of social-change—the nonprofits and philanthropic entities—and ask how it might more rapidly and effectively adopt network-centric thinking after many decades of organization-centric approaches.

We first considered this topic back in 2004. Since then we have witnessed and participated in many promising experiments in network building. Much more is being written about using networks for social change. More tools, such as network mapping software, have become available. And the many network practitioners we know have gone through one “learning cycle” after another, much to our benefit as we harvested their lessons for this Handbook.

But awareness and use of network approaches have certainly not reached anything close to critical mass in the civil sector. In the final chapter we suggest five ways that more momentum can be built.

20. BUILDING THE CIVIL SECTOR'S NETWORKS: FIVE STRATEGIES

In our work with nonprofit network builders we have seen that some networks unleash effects that have great power to innovate, disturb, ignite, and dramatically change systems. Other networks are much more modest in their impact. Although the potential power of networks attracts much of the interest in connectivity, most people seem to want to build networks that they can control, stabilize, and use instrumentally for their own ends. Thus, they may end up sacrificing much of the power that networks can unleash. Their more “conservative” networks tend to become more like organizations over time. Perhaps this is sensible; dramatic effects are not needed for all purposes. But a better understanding of networks could allow more fully informed and intentional choices to be made.

If our Handbook provides some useful ideas about networks in an accessible way, then it probably also stimulates a desire to learn more. For some readers it may also raise this additional matter: if networking approaches are currently positioned in just a small corner of the civil sector’s brain—at the experimental edge of innovation—how can they be moved into its heart and bloodstream? How can the sector progress from stirring anecdotes to systemic arrangements?

It is easy to collect stories about nonprofit networks. The storytellers—all sorts of network organizer who are gaining practical experience in the art and science of networking—enjoy telling their tales. They may be short on theory and big on questions, but nonetheless they believe that network approaches promise important benefits for philanthropic and nonprofit organizations.

Yet it is commonplace to observe that the civil sector lags behind the “edge of innovation.” Many explanations are offered. The organizations work in isolation from each other, so there are no good ways to spread examples of excellence.¹¹⁷ Civil organizations have limited resources, so they cannot pay much attention to adopting new approaches.¹¹⁸ Nonprofits may simply lack the know-how and tools to move in new directions.

These and other systemic barriers to change may be impeding the testing and adoption of networking approaches by nonprofits and philanthropies. The spread of networks “is taking place more slowly within civil society organizations” than in the private sector, observe Creech and Willard of the International Institute for Sustainable Development: “There still appears to be a separation between institutions, with their internal management structures, and networks that have identities of their own—rather than organizations internalizing and capitalizing on their participation in networks.”¹¹⁹ Jon Pratt, head of the Minnesota Council of Nonprofits, also sees slow progress with the sector’s adoption of networking, but points to a different reason: Nonprofit managers and boards don’t yet have the capacities to become avid networkers, he says. They need ways to “assess the strength of their network relationships, map the linkages and understand how network strategies can advance the work of their organization.”¹²⁰

In spite of these difficulties, it is evident that innovative leaders in the civil sector are already pursuing activities to embed networking in the sector’s way of working. We

can see five strategies for accelerating the penetration of network approaches that will build the sector's long-term ability to more effectively improve life in communities.¹²¹

Strategies for Network Approaches

1. Discover the “hidden networks” already embedded in the civic sector—and be more intentional about using them.
2. Develop far-flung communities of practice—hives—that create, adapt, and spread network tools and skills.
3. Develop numerous experiments to demonstrate how civil organizations can improve their capacities by embracing network approaches.
4. Pioneer the use of network analysis and strategies as ways to dramatically change large-scale systems in society.
5. Use *viral marketing* to spread the idea of networks throughout civil society.

1. Discover the “hidden networks” already embedded in the civic sector—and be more intentional about using them. It is time for the civil sector to eyeball its own networks. Mapping the sector's own connectivity and making these maps visible to all would help generate and awareness of the extent to which networks are part of the sector's way of working and where the potential lies to activate and strengthen networks. In short, the sector should figure out where its *hives* and *hubs* are. Translation: within the sector, what are the existing networks through which ideas could flow?

We are not aware of many maps of the linkages among nonprofit and philanthropic organizations and individuals, but we suspect they would reveal several patterns: the civil sector's hives are largely *local* phenomenon (bounded by geography); mostly based in *niches*, such as economic development, education, or environment; quite *fragmented* (many gaps due to isolation); and *dominated* by a few hubs (either a relatively large organization or a funder focused on a niche in a place). These sorts of maps could lead to decisions to bridge holes, span boundaries, or develop new hubs—to increase connectivity.

Gideon Rosenblatt argues that the environmental movement is a sprawling network “made up of very real interconnections between people and organizations that is greater than the sum of its individual parts.”¹²² The network's health would be improved, he continues, by redesigning its loose, unintentional structure around a set of specialized organizations. Whether you agree or not, he is using network thinking to examine an entire field in the civil sector and coming up with ideas about how to use connectivity to strengthen the field.

2. Develop numerous experiments to demonstrate how civil organizations can improve their capacities by embracing network approaches. Most people are not “early adopters”; they want more certainty of success than early experimenters can have. For them, seeing is believing; when it comes to adopting an innovation, they want to know that it works. This is a crucial step in reaching scale with change: risk-taking innovators demonstrate what does and does not work. Many experiments with networking approaches should be attempted. A “learning agenda” should be articulated.

(We can say right off the bat that it is critical to learn much more about the economics of networks.) But that is not all. Experiments should be designed with feedback loops so that others can learn what happened and why it happened. Nor is that enough. The feedback from many experiments should be assessed visibly and candidly using clear standards; this should be about learning, not about burying failures or burnishing public images.

3. Develop far-flung communities of practice—hives—that create, adapt, and spread network tools and skills. The civil sector has a long history of organizing to create and spread knowledge products, such as books and online tools, which practitioners can use. Information about and assistance with network tools and skill building can be spread through market mechanisms and through “communities of practitioners” that meet to learn from experts and each other. Learning communities of this sort usually require funding to prime the pump.

4. Pioneer the use of network analysis and strategies as ways to dramatically change large-scale systems in society. Networking is not just about building the capacity of the civil sector. Network strategies can also be used as levers for change in communities. The many “systems” the civil sector entities try to change—health care, education, real estate development, and the forest product industry, to name just a few—all have networks at work within them. The health care system has practitioner networks and economic linkages among, for instance, laboratories, physicians, hospitals, and insurers. Education systems have networks of teachers and administrators, and networks of policy developers and decision makers. The real estate sector has networks of developers who take on projects together, and the forest products sector has networks of tree growers, loggers, manufacturers, and retailers. These networks can be analyzed, their interactions, structures, and dynamics assessed. And this sort of analysis may inform the civil sector’s strategies for influencing these systems.

5. Use “viral marketing” to spread the idea of networks throughout civil society. “Viral marketing is an ideavirus in which the medium of the virus is the product,” explains Seth Godin, author of *Unleashing the Ideavirus*. “It’s an idea where the idea is the amplifier.”¹²³ In this case, networking may be both the idea and the medium for the transmission of the idea; a network may be its own virus. More networking can beget more networking.

Of course, it won’t be this simple, considering some of the barriers to innovation in the civic sector. Is the civil sector in an adaptive posture that is open to change or is it in a condition of equilibrium, of excessive order or disorder that is closed to change? We claim no special insight into the answers, but it seems useful to note that forces for both change and continuity are at work in the sector. When it comes to potential sources of equilibrium, most veterans of efforts to help civil sector organizations improve point to the fundamental relationship between nonprofits and funders (the capital market for nonprofits).¹²⁴ “Lack of collaboration is mostly due to stupidity and competition,” one consultant in a network building process told us.

Every organization has a sense that they need to be first out of the box with new ideas to impress funders. They have pride of authorship. At the same time, there is a lack of market discipline. Not all funders perform good due diligence on proposals; many support duplicative efforts.

The likelihood of resistance means that viral marketing approaches will need to be quite strategic. Should the virus of networking be aimed at influential hubs in civil society? Or should it “attack” many different entry points at the same time and later focus on a target. Or should the virus “piggy back” into the sector on some other innovation? Or will it be necessary to develop entirely alternative pathways for the virus?

Whatever the answers, the aim is the same: to help the “ideavirus” and practices of networking to reach a tipping point in civil society.

A NETWORK GLOSSARY

Networks are all around us. We rely on them and are a part of them. But few of us share a language to describe them. Here are some key terms and concepts that appear in the Handbook.

Adaptive Capacity	A network's ability to assemble capacities and disassemble them with relative ease. Links among people or organizations can be added or severed, or they can become latent, meaning they are maintained at a very low level of connectivity, or more active.
Alignment Network	A network that seeks to align people or organizations to develop and spread a collective value proposition.
Bandwidth	The different types of information that can be shared by members of a network. More bandwidth in a network helps to build relationships and connectivity between members.
Bonds	The ties or links between members or nodes in a network. See "weak ties" and "strong ties."
Boundary	The "outer edge" of a network where people or organizations are not members of the network.
Bridges	Links forged between people at a geographic or social distance from each other.
Collective Value Proposition	A reason for organizing a network that is broadly shared by the members and reflects what members can do for each other.
Connectivity Network	A network that seeks only to connect people in ways that allow easy flow of and access to information and transactions.
Coordinator	Someone who helps nodes to undertake collective action for production, by ensuring flow of necessary information and other resources, development and implementation of agreements among nodes.
Core	At the core of a network, members with "strong ties" organize the purpose of the network and perform much of its work. They also connect, usually through "weak ties," to those on the network's "periphery" to draw and create value for them too.
Dense Cluster	A network structure in which the members are all connected to each other through "strong ties."
Distributed Authority	The power to make decisions is spread among many nodes working fairly independently of each other, rather than being centralized or concentrated in the hands of a few.
Facilitator	Someone who helps network members establish collective value proposition and negotiate collective action plans for production.
Horizon	The drop off point in a network beyond which it is difficult to see who is in the network and what is happening in the network. In social networks this horizon of "observability" is usually two connections away, a member's direct contacts and their direct contacts.

Hub-and-Spoke	A network structure in which one node/member is connected to all of the other nodes, but the other nodes are not connected to each other. The hub plays a central role in organizing the spokes. Also called “Star” structure.
Link	The connection or relationship between two points or members or “nodes” in a network.
Maps of Networks	Pictures that display the pattern of connections among nodes, revealing specific shapes and other characteristics of a network.
Network	A set of “nodes” or points connected by “links” or pathways. In social networks, the “nodes” are people or organizations; the “links” are relationships.
Node	A member in a social network; may be an individual or an organization.
Periphery	The open, porous “boundary” of a network where members come and go and usually have weak ties to the members at the core of the network.
Production Network	A network that fosters joint action for specialized outcomes by aligned people or organizations.
Reciprocity	The give-and-take between people when they work together or support each other; a powerful way to build relationships between network members.
Resilience	The capacity of a network to withstand stresses, such as the dissolution of one or more links, because its nodes quickly reorganize around disruptions or bottlenecks without a significant decline in their functionality.
Small World Reach	The capacity of some networks to provide remarkably short “pathways” between individuals separated by geographic or social distance.
Steward	A network member who informally helps to build the network, but not as a formal position within the network. Typically, helps connect people to each other.
Strong Ties	As opposed to “weak ties.” Strong ties are built on trust, understandings, and experiences among nodes. Typically they are built by people who are relatively equal and share common bonds such as profession, family, or ethnicity. These emotional bonds of friendship, intimacy, and reciprocity endure over time. They provide social capital, efficient relationships, for the network and this, in turn, results in efficient communication and aligned action.
Structure	A network’s structure is the pattern formed by the way its nodes are linked. There are several main structures. For instance, when many nodes connect to a single node, a Hub-and-Spoke structure is created.
Value	A network creates value for its members by enabling them to share information, connections, knowledge, expertise, services, resources, and funding with each other. Also see “collective value proposition.”
Weak Ties	As opposed to “strong ties.” Weak ties are built on less intense, committed relationships between members than strong ties. Typically they connect people with different interests, values, and ways of

	interacting; they connect socially isolated individuals and groups. They are valuable to a network because they may provide connections to resources the network doesn't have, but they require less "maintenance" than strong ties and are less reliable.
Weaver	Someone who works to increase connections among nodes, both the number of links and the bandwidth quality of links. Also may focus on growing the network by connecting to new nodes.

RESOURCES FOR NETWORK BUILDERS

There is a robust literature about networks—books, articles, studies, online manifestos, and more. Much of this writing focuses on particular types of networks: nets of commercial innovators and businesses, NGO advocacy networks in Latin America and Africa, networks of environmental organizations, government agencies in collaboration, and so on. In this section we identify a range of documents that we have found quite useful in learning to understand networks in the nonprofit and other sectors. They are in alphabetical order by author's name. Those that we consider to be a "Must Read" for network organizers and funders are marked with three bold stars (***)

*** **Albert-Laszlo Barabasi, *Linked: The New Science of Networks*** (Cambridge, Massachusetts: Perseus Publishing, 2002),

An illuminating exploration of the science of networks for the lay reader by a participant in the research. Especially strong in its explanation of how networks do what they do.

Madeline Church et al, "Participation, Relationships and Dynamic Change: New thinking on evaluating the work of international networks," Development Planning Unit, University College of London, DFID Working paper # 121, 2002

Nine professional network coordinators working in the field of international development reflect on their experiences. They identify approaches to monitoring and evaluation that are adapted to networks and share some helpful tools and templates.

Heather Creech and Aly Ramji, "Knowledge Networks: Guidelines for Assessment," International Institute for Sustainable Development (2004), www.issd.org.

Contains guidelines for evaluating network effectiveness, structure, governance, efficiency, resources, sustainability, and life-cycle. A distillation of Creech and Ramji's experience with knowledge networks and international NGOs. Includes some sample interview protocols for assessing network effectiveness and efficiency.

*** **Heather Creech and Terri Willard, "Strategic Intentions: Managing knowledge networks for sustainable development,"** International Institute for Sustainable Development (2001), www.iisd.com,

An enormously useful analysis of the many tasks in organizing networks—with clear frameworks and advice. Somewhat limited because it is based exclusively on Creech and Willard's experiences with knowledge-creation and innovation networks, but well worth the attention. Includes excellent chapters on network management and governance, forming and working within virtual teams, and network monitoring and evaluation.

Stephen Goldsmith and William D. Eggers, *Governing by Network: The New Shape of the Public Sector* (Washington, D.C.: The Brookings Institution, 2004),

Focusing on the public sector, Goldsmith, a former mayor of Indianapolis, and Eggers use a network framework to examine collaborations and partnerships in government—and the breakdown of traditional bureaucracies.

Mark Granovetter, “The Strength of Weak Ties: A network theory revisited,” *Sociological Theory*, Volume 1 (1983) 201-233.

The original article in which Granovetter argues that “weak ties” are critical for innovation and development because they provide people with access to information and resources beyond those available in their immediate circles.

John Hagel III and John Seeley Brown, “Creation Nets: Harnessing the Potential of Open Innovation,” April 2006. Available at www.edgeperspectives.com.

Hagel and Brown explore the far-flung “open innovation” networks emerging in the commercial sector, and identify a “distinctive set of management techniques” that the organizers of these networks use to ensure focus and value creation. This is a conceptual treatment, worthwhile because it focuses on challenges of managing a type of network—open innovation—that nonprofits should be thinking about.

***** June Holley and Valdis Krebs, “Building Smart Communities by Network Weaving,”** 2002-2006, PDF at www.orgnet.com.

Basic network concepts are explained in this accessible introduction to mapping and analyzing inter-organizational and community networks. Research is based on work with the Appalachian Center for Economic Networks (ACEnet). Easy-to-interpret maps describing a typical network’s evolution illustrate the advantages of “knowing your network” and “knitting your network.”

Kevin Kelly, *New Rules for the New Economy: 10 Radical Strategies for a Connected World* (New York: Viking, 1998).

By the former editor of WIRED magazine, this classic primer explains network rules and principles that underlie the networked economy.

Jed Miller and Rob Stuart, “Network-Centric Thinking: The Internet’s Challenge to Ego-Centric Institutions,” *Planetnetwork Journal*, available at <http://journal.planetwork.net/article.php?lab=miller0704>.

Arguing that the new “tools of digital democracy”—online petitions, blogs, and meet-ups, for instance—are strengthening network-centric approaches, Miller and Stuart detail in plain language the forces that keep civil society organizations stuck in the “ego-centric” thinking of “old power” organizations

Peter Plastrik and Madeleine Taylor, “Network Power for Philanthropy and Nonprofits” and “Lawrence CommunityWorks: Using the Power of Networks to Restore A City,” (Barr Foundation: 2004), available at www.barrfoundation.org.

Drawing on cases of nonprofit networks, the first of these articles makes a case for widespread use of networks in the civil sector and examines the practical uses of the knowledge developed by “network science.” The second article provides a detailed look at a remarkable grassroots network growing in Lawrence, Massachusetts.

***** Gideon Rosenblatt, “Movement as Network: Connecting People and Organizations in the Environmental Movement,”** (Creative Commons: January 2004). Available at www.movementasnetwork.org.

Rosenblatt, executive director of ONE/Northwest, takes a “whole field” perspective, arguing provocatively that the environmental movement is a large network of organizations and people, but the health of the network is in jeopardy: the organizations are “badly fragmented,” live in “competitive friction,” and don’t connect well with each other. “By specializing, restructuring and improving connections between organizations,” Rosenblatt envisions, “the movement has an opportunity to transform itself into a dynamic network with far greater resilience, responsiveness and power.”

John Scott, *Social Network Analysis: A Handbook* (London: Sage, 2000).

An accessible introduction to the theory and practice of social network analysis (SNA) in the social sciences. Scott explains basic concepts, uses, and methods in language that is technical but easier to interpret than most textbooks on the subject. Helpful for understanding network metrics and mapping tools.

Paul Skidmore, “Leading Between: Six characteristics of network leaders” in Helen McCarthy, Paul Miller and Paul Skidmore (eds), *Network Logic: Who governs in an interconnected world?* (London: Demos, 2004).

Skidmore outlines key leadership skills and approaches adapted to a networked world, in one of several articles in this volume by leading thinkers in networks across a range of disciplines.

James Surowiecki, *The Wisdom of Crowds: Why the Many Are Smarter than the Few and How Collective Wisdom Shapes Business, Economies, Societies, and Nations* (New York: Doubleday, 2004), pp. 158-161.

Surowiecki, a staff writer for The New Yorker, brilliantly describes the ways that decentralized but group processes—from betting on sports to identifying the SARS virus—aggregate into unexpected patterns of “collective intelligence.” This is a powerful network dynamic at work.

***** William J. Traynor and Jessica Andors, “Network Organizing,”** ShelterForce, March/April 2005.

Drawing on their experiences building the Lawrence CommunityWorks network, Traynor and Andors offer important advice for developing large-scale, grassroots networks that connect community residents to opportunities and each other.

***** Duncan Watts, *Six Degrees: The Science of A Connected Age*** (New York: Norton and Company; 2003),

Perhaps the most reader-friendly of the books explaining network science, filled with fascinating stories about a wide range of networks and clear explanations about the scientific analysis of network phenomena.

***** Mary Wissemann and Kristina Egan, “Building a Multi-Interest Movement for Smart Growth: The Massachusetts Smart Growth Alliance Story of What Works and How We’re Facing Our Challenges,”** May 2006.

After three years as a network of organizations, the Alliance took stock of how it was doing. A smart, readable, in-depth look at the key design issues for a policy advocacy network and how they have been handled.

END NOTES

All quotations in the Handbook are from interviews or author's direct engagement with speakers (at presentations or during consultations) unless cited below.

¹ Albert-Laszlo Barabasi, *Linked: The New Science of Networks* (Cambridge, Massachusetts: Perseus Publishing, 2002), p. 7.

² Helen McCarthy, Paul Miller, and Paul Skidmore (Eds), "Introduction" in *Network Logic: Who governs in an interconnected world?* (United Kingdom: Demos; 2004), p. 11.

³ Jon Pratt, "Nonprofits as Networks," can be found at www.mncn.org.

⁴ The number of public charities registered with the IRS increased 76 percent between 1992 and 2002, according to the National Council of Nonprofit Organizations, data cited in J. R. Labbe, "Make Educated Choices As Charities Multiply," *Detroit Free Press*, February 4, 2004.

⁵ Jonathan Peizer, "The Quiet Revolution in Non-Profit Capacity Support," October 31, 2003, www.soros.org/initiatives/information/articles.

⁶ Gideon Rosenblatt, "Movement as Network: Connecting People and Organizations in the Environmental Movement," January 2004, www.movementasnetwork.org. Rosenblatt is executive director of ONE/Northwest in Seattle.

⁷ See, for instance, Christine W. Letts, William Ryan and Allen Grossman, *High Performance Nonprofit Organizations: Managing Upstream for Greater Impact* (San Francisco: Wiley & Sons, 1999) and Michael E. Porter and Mark R. Kramer, "Philanthropy's New Agenda: Creating Value," *Harvard Business Review*, November-December 1999.

⁸ Maine Community Foundation, "Networks-Based Capacity Building Program: Toward Stronger, More Vital Communities in Western Maine," www.mainecef.org/html/grants/available/networkcapbuilding.html.

⁹ Pratt, "Nonprofits as Networks."

¹⁰ See Gary Wolf, "How the Internet Invented Howard Dean," in *Wired*, January 2004, on how Dean's campaign used the Meetup site on the Internet to grow from 3,000 members in early 2003 to 140,000 members by November 2003. See Watts, *Six Degrees*, on the Internet, HIV/AIDS, electricity grids, Toyota, and corporate directors.

¹¹ John Arquilla, professor of defense analysis at the Naval Postgraduate School, quoted in Thom Shanker, "Hezbollah's Successes Have Sent A Warning to the U.S. Military—Welcome to 'Network' Warfare," *Montreal Gazette*, July 30, 2006.

¹² Albert-Laszlo Barabasi, *Linked*, p. 7.

¹³ Clay Shirky, in "Work on Networks: A GBN Tour," at www.gbn.org. Shirky, in "Work on Networks: A GBN Tour," at www.gbn.org, mentions a number of seminal books that have triggered great interest in the business community, including John Seely Brown and Paul DuGuid, *The Social Life of Information*, Robert Putnam, *Bowling Alone*, Malcolm Gladwell, *The Tipping Point*, Barabasi, *Linked*, and Watts, *Six Degrees*.

¹⁴ See Mitchell Waldrop, *Complexity: The Emerging Science at the Edge of Order and Chaos* (1992).

¹⁵ Duncan J. Watts, *Six Degrees: The Science of A Connected Age* (New York: Norton and Company; 2003), p. 26.

¹⁶ Stephen Goldsmith and William D. Eggers, *Governing by Network: The New Shape of the Public Sector* (Washington, D.C.: The Brookings Institution, 2004), p. 23.

¹⁷ Nor is a network a democracy, in which a majority of voting individuals hold sway over others. A network is not a democracy any more than it is a market or an organization. In a democratic structure, such as a local government, the power to make decisions is distributed to individuals who have equal rights as voters (for representatives or policies). But decisions in most cases require approval of at least a majority of the individuals or their representatives, and majority-decisions, such as taxation, are subsequently imposed on all individuals. Networks, on the other hand, are voluntary associations of members; unlike citizenship in a democracy, an individual has to choose to be in a network. (Democracies, like organizations and markets, may contain networks, of policy advocates, for instance, or legislative caucuses.)

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- ¹⁸ William Traynor presentation at conference, “Creating More Impact Through Network Strategies,” in Portland, Maine, October 27, 2005. The conference was co-sponsored by the Maine Philanthropy Center, Common Good Ventures, and the Wendling Foundation.
- ¹⁹ Joel Millman, “Immigrant Group Puts A New Spin on Cleaning Niche,” *The Wall Street Journal*, February 16, 2006, p. A1.
- ²⁰ Bhaskar Chakravorti’s *The Slow Pace of Fast Change: Bringing Innovations to Market in a Connected World* (Boston: Harvard Business School Press, 2003).
- ²¹ From “An Evaluation of the Mt. Agamenticus to the Sea Conservation Initiative,” August 2005, conducted by the Quebec Labrador Foundation.
- ²² Kevin Kelly, *New Rules for the New Economy: 10 Radical Strategies for a Connected World* (New York: Viking, 1998).
- ²³ Watts, *Six Degrees*.
- ²⁴ Watts, *Six Degrees*.
- ²⁵ Watts, *Six Degrees*, p. 26.
- ²⁶ Kelly, *New Rules for the New Economy*, p. 25.
- ²⁷ See www.moveOn.org/about/.
- ²⁸ Silverman quotation from Julie Bennett, “The New World of Marketing: Word-of-Mouth Campaigns Replace Traditional Tools,” *Wall Street Journal*, February 7, 2006, p. B7.
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- ³² Mary Wissemann and Kristina Egan, “Building a Multi-Interest Movement for Smart Growth: The Massachusetts Smart Growth Alliance Story of What Works and How We’re Facing Our Challenges,” May 2006, p. 6.
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- ³⁴ Watts, *Six Degrees*, pp. 254-260.
- ³⁵ Kathleen Kingsbury, “Money’s Paper Chase,” *TIME*, Inside Business, July 2006, pp. A31-32.
- ³⁶ Gary Wolf, “Reinventing 911,” *WIRED*, December 2005, pp. 208-223.
- ³⁷ Marion Kane quotation: presentation at conference, “Creating More Impact Through Network Strategies,” in Portland, Maine, October 27, 2005. The conference was co-sponsored by the Maine Philanthropy Center, Common Good Ventures, and the Wendling Foundation.
- ³⁸ Fund for Our Economic Future: presentations at Joint Michigan-Ohio Community Foundation CEO Retreat, Ann Arbor, MI, February 16, 2006.
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- ⁴⁰ Wissemann and Egan, “Building a Multi-Interest Movement for Smart Growth.”
- ⁴¹ Ford Foundation study cited in Bonnie L. Shepard, “NGO Advocacy Networks in Latin America: Lessons from Experience in Promoting Women’s and Reproductive Rights,” *The North-South Agenda*, February 2003.
- ⁴² In a memo for the Barr Foundation’s Network Research Project, Ruggles, a consultant in Boston formerly with Ernst and Young’s innovation office, adapted the framework of network consultant Ross Mayfield. See <http://radio.weblogs.com/0114726/2002/10/21.html#a16>.
- ⁴³ Gary Mulhair, Ed Robinson, Kristine Alvarez, and Katy Childers, “Assessing the Potential of Collaborative Network Capacity: Preliminary Summary Report,” in manuscript, February 2004.
- ⁴⁴ Marion Kane, presentation, “Creating More Impact Through Network Strategies.”
- ⁴⁵ Eric Lipton, “After Storms, Red Cross Takes Loans,” *The New York Times*, October, 2005, p. A19.
- ⁴⁶ Thomas Friedman, *The World is Flat* (New York: Farrar, Straus and Giroux; 2005) p. 9.
- ⁴⁷ *Ibid.*, p. 176.
- ⁴⁸ *Ibid.*, p. 417.
- ⁴⁹ Goldsmith and Eggers, *Governing by Network*, p. 7.
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- ⁵² John Hagel III and John Seely Brown, "Creation Nets: Harnessing the Potential of Open Innovation," April 2006. Available at www.edgeperspectives.com.
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- ⁵⁵ Ibid.
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- ⁵⁸ John Cassidy, "Me Media," *The New Yorker*, May 15, 2006, p. 52.
- ⁵⁹ Dine Originals story: Kristina Dell, "Eateries, Unite," *TIME Inside Business*, May 2006, p. A11.
- ⁶⁰ Creech, "Form follows Function."
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- ⁷⁵ Creech, "Form follows Function," p. 23.
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- ⁹⁰ Karen Stephenson, "Towards a theory of government," in Helen McCarthy, Paul Miller, and Paul Skidmore (Eds), *Network Logic*, p. 40.
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- ¹⁰⁶ Shepard, "NGO Advocacy Networks in Latin America."
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- ¹⁰⁹ Taschereau and Bolger, "Networks and Capacity."
- ¹¹⁰ SML Associates, "Building The Field of Dreams."
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- ¹¹² Creech and Ramji, "Knowledge Networks."
- ¹¹³ SML Associates, "Building the Field of Dreams."
- ¹¹⁴ The W.K. Kellogg Foundation's "Evaluation Handbook" has more on participatory approaches. The Handbook is a good all around source of information about the components of "evidence-based" evaluation recommended by many philanthropic organizations. Available at www.wkkf.org, see Toolkits and then Evaluation.
- ¹¹⁵ Burt and Ronchi's article "Teaching Executives to See Social Capital" can be downloaded from <http://faculty.chicagogsb.edu/ronald.burt/research/index.htm>
- ¹¹⁶ Barr Foundation, "Mapping the Arts and Culture OST Network: A Learning Session," June 12, 2006.
- ¹¹⁷ Manual Pastor and Rachel Rosner, "Communities Armed with Buckets Take Charge of Air Quality," in *Sustainable Solutions: Building Assets for Empowerment and Sustainable Development*, Ford Foundation, July 2003. www.fordfound.org. "Examples of excellence may go unrecognized, and community groups wind up working in isolation," note Pastor and Rosner. "As a result, the advantages of a new approach to organizing or advocacy may not spread to those who need it."
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¹²¹ Most of this chapter is based on a previous article by Plastrik and Taylor, “Network Power for Philanthropy and Nonprofits,” prepared for the Barr Foundation in 2003.

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¹²³ Seth Godin, *Unleashing the Ideavirus* (New York: Hyperion, 2001).

¹²⁴ Jonathan Peizer, “The Quiet Revolution in Non-Profit Capacity Support,” lays out a detailed description of the grantee-donor relationship. Funders, he points out, usually support a nonprofit’s programmatic activities rather than its capacity needs because they are locked into wanting to “demonstrate noticeable effects in tackling a problem of social value.” And they often act in splendid isolation: “Noticeable effect is important to donors because their constituents, board members or living donors expect the money they expend to demonstrate tangible results... Donors purposefully try to define a unique niche for themselves, so their first instinct is not necessarily to partner with others.” Peizer concludes that the donor—grantee relationship can be dysfunctional when it comes to building organizational capacity.