Catalytic Leadership

Strategies for an Interconnected World

Jeffrey S. Luke
These popular approaches often prescribe a set of skills that help executives to pursue organizational excellence, take charge, stimulate extraordinary performance by employees, or change an organization's internal culture by being transformational. However, because these approaches are fundamentally based on hierarchical authority, they cannot be transferred easily to the interconnected and nonhierarchical contexts of public problems.

Chapter One

The Interconnected Nature of Public Problems

As we approach the twenty-first century, educational levels in the United States are the highest ever. The economy continues to grow, doubling since the 1960s alone, and the United States leads the world in economic competitiveness (International Institute for Management Development, 1996). Yet nagging public problems continue to capture the headlines. The United States has the highest teen birthrate among all the industrialized countries (Guttmacher Institute, 1996), and it also leads the world in the number of children killed by gunfire (Centers for Disease Control and Prevention, 1996). In urban areas such as New York City, Salt Lake City, and Seattle, gang violence threatens lives, teenagers find employment and self-esteem in the illegal drug trade, transportation congestion drives away growing business enterprises, and air pollution continues to raise health concerns. Rural areas have not escaped serious economic and social problems either. They are troubled with a dramatic loss of jobs in traditional industries, such as agriculture and timber, and a lack of opportunities for youth. Many inhabitants of small towns feel a general sense of helplessness.

Scores of problems demand attention; people are hungry for immediate solutions. Why is it so difficult to solve anything? How can one individual make a significant difference? What type of leadership works in addressing these difficult public problems? Case studies of successful efforts to improve the quality of life, reduce social problems, and stimulate job generation reveal several common leadership tasks. Most interesting is that the type of leadership required is different than what we would normally imagine.
The traditional "take charge" kind of leader is not successful with the complex problems facing the country. A different type of leadership has emerged in small rural towns that are trying to diversify their economies, in urban areas that are trying to increase public safety in their streets, and in metropolitan regions that are trying to clear up their air basins. In this form of leadership—catalytic leadership—individuals and groups convene multiple stakeholder groups and facilitate and mediate agreement around tough issues. They think systematically and strategically about short- and long-term actions and their impacts. Individuals are passionate about reaching a particular outcome, yet are flexible and inclusive on strategies to reach the desired results. We live in a world of complex interconnections in which take-charge leaders are less successful than individuals and groups who provide the spark or catalyst that truly makes a difference.

Emerging public leadership tasks are best understood, however, by illuminating the context in which we find ourselves at the end of the twentieth century. Today's public problems are interconnected—crossing jurisdictional, organizational, functional, and generational boundaries—and are intertwined with other public problems. The authority to solve public problems is fragmented and disbursed over an ever-tightening web of constraints. No single person, agency, or jurisdiction has sufficient power to develop and implement solutions unilaterally (Bryson and Crosby, 1992).

**Emphasizing Public Leadership, Not Public Sector Leadership**

Institutionalizing more government leadership does not work. Public organizations are often sluggish, are hampered by constraints, and have short time frames—usually election to election. The problems most troubling to communities, regions, states, and the nation—those problems that are high on the public agenda—seem largely immune to intervention by government alone. Governance in the United States is characterized by a dynamic interplay among government agencies, nonprofit service providers, business enterprises, multinational corporations, neighborhood groups, special-interest and advocacy groups, labor unions, academia, the media, and many other formal and informal associations that attempt to influence the public agenda.

Although books and theories on leadership offer a plethora of approaches, few focus on leadership for solving public problems with diverse, interconnected groups. Contemporary organizational approaches to leadership do not work well for leaders attempting to address persistent public problems in an interconnected context. This type of leadership must focus attention and mobilize sustained action by multiple and diverse stakeholders to address issues usually defined in terms of desired outcomes or results. This form of leadership is pursued not only by elected officials and appointed public administrators but also by individuals in the private, educational, and nonprofit sectors, including civic leaders and community volunteers. To address pressing social, economic, and environmental problems, we need public leadership, not public sector leadership.

Successful public leadership has the difficult challenge of solving complex, boundaryless public problems in highly interconnected political and interorganizational contexts in which authority is shared and power is fragmented. Such leadership is essentially nonhierarchical and occurs outside organizational boundaries. This intergovernmental and intersectoral leadership faces constraints and challenges that are substantially different than those facing contemporary organizational leadership.

**The Interconnected Web for Public Leadership**

In the last twenty years, a quiet crystallization of interdependencies has set in that has changed the way we engage in public action. We are now tied into multiple webs of interconnections never before witnessed in human history. Public and corporate executives have mistakenly focused on complexity while lamenting the increased turbulence and unpredictability in which they are forced to manage and lead. The cause of this turbulence and complexity, however, is an underlying interdependence and interconnectedness that creates unforeseeable and unintended consequences on organizations and agencies. This web inextricably ties together historically separate economic, social, and environmental problems. Global, regional, and local interdependencies are connecting political and economic fortunes of communities, states, and national governments more closely than ever before.

Interconnections and interdependencies did not develop slowly, in a linear fashion, one step at a time. Rather, their emergence is
similar to the process of crystallization—instantaneous connections forming to link and bind historically separate and autonomous agencies, organizations, and institutions. Evolutionary biologists call such a quick shift in a species’ environment an anagenesis—a rather sudden, qualitative shift in evolutionary development. As a result of this social anagenesis, public leadership has changed fundamentally at the local, state, national, and global levels, leaving little resemblance to the context for self-governance that has existed during the two hundred years of American history. There are no precedents for us to follow because no human society so interconnected has previously existed.

The problems confronting communities, regions, states, and the nation are so interwoven that new skills and strategies are required to lead effectively in the public interest. This requires a fundamentally new way of viewing public problems and new strategies for acting in the public interest. The major challenge facing elected officials, public administrators, business leaders, nonprofit executives, community activists, and citizens is not managing complexity and turbulence. Rather, the challenge is how to address critical public problems successfully in a highly interconnected world. This interconnectedness stems from two fundamentally new characteristics: the boundaryless nature of public problems, and the existence of shared power and fragmented authority in the public arena.

Teenage Pregnancy: A Practical Example

Although the subject of considerable debate, the root cause of teenage pregnancy is impossible to pinpoint. While adolescent mothers share several common characteristics, no single cause can be clearly attributed to adolescent pregnancy. Generally, it has as much to do with a history of childhood sexual abuse or molestation, dysfunctional family circumstances, drug and alcohol abuse, low school achievement, low self-esteem, and lack of hope as it does with early onset of adolescent sexual activity, lack of contraceptive knowledge, and lack of access to family planning services. It is a multifaceted issue with no root cause. It requires multiple strategies and concerted action by several groups for addressing it: educational strategies in schools to encourage abstinence and reproductive understanding; plentiful alternative recreational opportunities; child-abuse prevention and counseling programs to prevent sexual maladjustment; and easy access to counseling and contraceptives for sexually active teens.

Similar difficulties in defining and solving public problems occur whether leaders focus on increasing the number of high-tech jobs, improving the quality of a regional workforce, reducing teenage drug abuse, or decreasing air pollution in metropolitan areas. These issues defy easy solutions because they are essentially interconnected problems. They have several characteristics that differentiate them from the traditional kinds of problems that public leaders and citizens have historically confronted.

The Interconnecting and Boundary-Crossing Nature of Public Problems

Public problems are essentially discrepancies or gaps between a current situation or condition and a desired condition or situation. The problems that confronted public leaders in the past were often simple engineering-type problems, such as how governments could build roads and ports to meet expanding vehicle usage, how school districts could plan for growth in school-age populations, and how communities could build a physical infrastructure for attracting industries. The problems facing us today, such as diversifying the local economy in a global setting or preventing alcohol and drug abuse among high school students, are much more difficult to define, analyze, and solve because they are intertwined with other related problems. Table I.1 summarizes the characteristics of interconnected problems and their impacts on public leadership.

The most troubling public problems cross jurisdictional, organizational, functional, and generational boundaries. The world is shrinking, drawn together by an increasingly interdependent, globalized web. Interdependencies involve "mutual dependence," where actions of one individual or agency influence or constrain actions of another. High-cost, very important mutual dependencies, or interdependencies, can be distinguished from low-cost, relatively unimportant mutual dependencies, or interconnections (Keohane and Nye, 1977).
Table 1.1. The Interconnected Nature of Public Problems.

<table>
<thead>
<tr>
<th>Characteristic of Interconnected Problems</th>
<th>Impact on Public Leadership</th>
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<tr>
<td>Problems cross traditional boundaries</td>
<td>Requires cross-boundary thinking and action:</td>
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<tr>
<td>Problems cross organizational and jurisdictional boundaries</td>
<td>Interorganizational arrangements required to address the problem</td>
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<td>Issues are often &quot;cross-cutting,&quot; transcending functional boundaries</td>
<td>Cross-functional teams required</td>
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<td>Problems cross temporal and generational boundaries</td>
<td>Must consider intergenerational impacts</td>
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<td>Involved in interrelated web of other problems; &quot;wicked&quot; or no tame; caught in &quot;swamp&quot;</td>
<td>Extremely difficult to untangle cause-and-effect relationships; difficult to find just one &quot;cause&quot;</td>
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<td>Problems are socially constructed:</td>
<td>No natural consensus on problem definition:</td>
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<td>Range of problem representations, depending on one's cognitive and emotional biases</td>
<td>Multiplicity of conflicting problem definitions; public leader influences definition process</td>
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<td>Strategies emerge from one's definition of problem and &quot;mental model&quot; of causes and effects</td>
<td>Agreement on problem definition is critical for concerted action</td>
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<td>No optimal solutions:</td>
<td>No quick fixes or easy remedies:</td>
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<td>Problems are intractable and never entirely solved</td>
<td>Seek improvements in conditions or outcomes, rather than problem elimination</td>
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<td>Technical remedies ineffective; real progress requires deeper systemic changes</td>
<td>Multiple strategies needed, a &quot;portfolio of strategies&quot; rather than the one, right solution</td>
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Geographical, Functional, and Generational Interdependencies

The most common form of interconnectedness is geographical. Pollution has no geographical boundaries. Air and water currents carry wastes and toxic substances far beyond their original sources. Similarly, drug abuse, juvenile crime, and teenage gangs cannot be contained within a particular geographical area.

Geographic interconnections are blurring historical distinctions between what is "global" and what is "local," with a considerable number of issues now crossing national, state, and local government boundaries. Acid rain is a tangible example, in which industrial emissions of sulfur dioxide mix in the atmosphere to create toxic rain. At least 50 percent of the acid rain falling in Canada originates in the United States, creating an environmental and economic problem that transcends geographical boundaries (Peach, 1991).

This is the type of interconnected policy problem that public leaders increasingly face. For example, an aggressive campaign to reduce the number of "street people" in downtown San Francisco, prompted by complaints from local businesses that panhandlers were scaring off customers, resulted in a dramatic increase in the homelessness problem across the San Francisco Bay, in Berkeley. Homelessness does not recognize political borders. Effective public leadership requires understanding that public problems are interconnected and that they cross geographical and political boundaries.

Blurring geographical boundaries means that actions in one part of a state, region, or globe have consequences in other areas. Costs and benefits of any action or policy are seldom evenly distributed. "Turning Brazilian jungles into orange groves may be good news for the food processor in Sao Paulo, the Dutch company that owns the tank ships, the juice distributor in Newark, the Tokyo banker who managed the project, and those of us who like cheap o.j.; but it is bad news for the Brazilian Indians, Florida orange growers, and environmentalists" (Council of State Planning Agencies, 1989, p. 6).

Functional Interdependence

Issues such as job creation, educational reform, teenage pregnancies, and affordable housing require efforts from a variety of
functional areas of expertise. In state and local economic development job creation is significantly influenced by the quality of K-12 education, access to post-secondary education, the quality of natural resource amenities, and the availability of an electronic infrastructure to facilitate high-speed communications. Yet there is considerable functional fragmentation in solving public problems. When the federal government mandated that the City of Los Angeles stop disposing treated sewage into the Pacific Ocean, alternative disposal strategies were anticipated to have serious negative ripple effects in other areas of quality of life. For instance, they would worsen air quality, increase traffic congestion, and expand landfill usage (Kirlin, 1991). Addressing such cross-functional issues requires joint, collaborative efforts among many distinct government agencies and between the public and private sectors.

**Intergenerational Boundaries**

Major problems and issues confronting public leaders also have intergenerational significance. The consequences of our actions and policy decisions are often known only long after the fact (and even then with some ambiguity). Decisions made by earlier generations directly shape the policy issues we face today, and policy choices that respond to current problems can have significant influences on the quality of life and the capacity to govern for future generations. Past, present, and future generations are now interdependent, a temporal interconnection that ties together society in ways seldom considered in solving public problems.

**Causes and Effects of Interconnected Problems**

Although issues each have a unique history, interconnected problems are characteristically intertwined with related problems. Public problems are nested in a complex of other problems, and their multiple consequences "ripple out" unexpectedly. Problems are not separate issues but are intertwined with other related problems in an ongoing dynamic process. For every problem there is a whole constellation of other problems. For example, many of those imprisoned in state and federal correctional institutions have had trouble with alcohol and other drugs or were physically, mentally, or emotionally abused. As one correctional officer stated: "It's all connected."

It is not that an interconnected problem "contains" other problems; rather, it is "involved" with other problems. Interconnected problems are frequently, if not always, both a symptom and a cause of other problems. Poverty, for example, is linked to other social and economic problems as both cause and effect. It cannot be narrowed down to one specific cause or one specific consequence. To separate one problem out of its systemic context is much like pulling a live insect out of a big clump of soft bubble gum. There may be no absence of information regarding a problem; yet, our understanding and knowledge of the multiple causes and effects are limited to such a degree that it becomes extremely hard to untangle and pinpoint root causes.

**Ripple-Effect Stakeholders**

With interconnected problems, stakeholders do not exist in isolation from one another (Mitroff, 1983). The ripple effects expand to include people and organizations that may never meet. A poignant example exists in the Pacific Northwest, where fisheries, fishers, and leaders of small fishing communities are joining environmentalists to stop existing patterns of timber harvesting. Fish habitats such as the salmon spawning grounds are being slowly destroyed by the increased silting of mountain streams due to the clear-cutting of timber along stream beds. Logging practices distant from ocean fishing grounds can create such ripple effects as a significant decline in salmon stock, a reduced fish catch, and a deteriorating local coastal economy more than five hundred miles away from the timber harvest.

**Socially Constructed Definitions of Problems**

Defining a problem is increasingly difficult. In interconnected problems, with few obvious definitions and no clear boundaries, social and psychological factors play a significant role in defining the problem. A problem's definition has far less to do with data and scientific analysis than with values, traditions, and internalized mental models.

The fundamental cause or the source of a problem is difficult to isolate. Cause-and-effect relationships are difficult to untangle because multiple causes influence the problem. Simple "bounded problems" have easily discernible cause-and-effect trails and have
a finite set of workable solutions (Mitroff and Linstone, 1993). A problem boundary separates one issue from other issues and delineates an existence independent from other problems. Today’s public problems are “unbounded problems” with malleable and often invisible boundaries that make it nearly impossible to separate them from other problems. With no distinct or natural boundaries, it is very difficult to locate the exact cause of the problem, that is, to find where it is in the interconnected web that the trouble originates. Teenage pregnancies are clearly related to at least three other issues: personal self-esteem, school achievement, and child abuse at an earlier age. What is the cause and what is the effect?

Mental Models of Problems
To understand complex, intertwined problems, individuals develop and carry a “mental model,” or internalized picture, of what a problem is, what is causing it, and how to solve it. Mental models are networks of familiar facts, ideas, and concepts with specific yet simplified cause-and-effect relationships. The mental images assert “causal responsibility,” a belief about the sequence of causes that factually accounts for the existence of the problem. Individuals typically focus attention on information that is most salient to and that supports their internalized assumptions or mental model. Information inconsistent with one’s mental model is ignored, either unconsciously or consciously.

Interconnected and boundless problems involve a multiplicity of stakeholders, and each sees the problem from a unique perspective. Because the causes of problems are not clear-cut, conflicting formulations and definitions of any particular public problem are very likely. Interconnected problems have a range of representations, which vary depending on one’s mental model of each issue. For example, homelessness is simultaneously an affordable housing problem, an alcohol and drug abuse problem, an employment problem, a mental health problem, a spousal abuse problem, and an immigration problem. Any environmental, social, or economic problem could be similarly analyzed. Economic development is simultaneously a workforce quality problem, a financial capital problem, a regional collaboration issue, a property tax issue, and an infrastructure problem.

Because it is hard to determine what the “real” problem is, there is seldom one correct solution upon which a consensus naturally or effortlessly emerges. Interconnected problems are not only extraordinarily difficult to define, they do not lend themselves easily to technical remedies or quick fixes. Resources are always limited. Further, with the multiplicity and diversity of stakeholder groups, each with a well-defined set of preferences, there is a natural competition for the “right” solution.

A multiplicity of stakeholders and affected parties are involved with each public problem. They see the problem and its best solution from their own perspective or mental model. Among the affected parties, specific, objective criteria for sorting through potentially successful strategies and identifying the “best” solution are often in conflict. There is also little incentive for leaders to sponsor pilot efforts to test the effectiveness of risky interventions, because resources can seldom be devoted to experimental or demonstration projects. Even on those rare occasions when there is a pilot program, it is extremely difficult to separate and isolate the effects of the experimental program from those of outside influences. With several equally promising solutions emerging, “good” strategies are differentiated from “bad” strategies according to an individual’s personal preferences, interests, and political or ideological biases.

The reality that problems have multiple definitions is not trivial. The way a situation or problem is defined guides and frames solutions. The choice of how to define the problem determines the kind of data, facts, and analyses developed to explain the issue. It also determines the nature of the recommended problem resolution. How the problem is defined has a very powerful influence on the strategies, actions, and interventions that seem appropriate to narrow the gap of what is and what ought to be.

With complex, interconnected problems, short-term fixes are alluring. Unfortunately, there are no easy cures for interconnected public problems. For example, a recent newspaper editorial on reducing gang violence begins with the exclamation: “It’s guns. It’s the culture. It’s gangs. It’s values. It’s peer pressure.” The editorial ends with a call to action, not by proposing one particular solution but by emphasizing that any effective response must target the kids, the parents, the schools, and the community in a multifaceted effort. Although the newspaper editorial board
takes a risk by not recommending one particular solution or silver bullet, multilevel interventions are now soundly backed by empirical research.

**Realistic View of Problem Solving**

Problems may be temporarily reduced, but if the interrelated issues are left unresolved or unaddressed, the problem will quickly reemerge. Public problems have multiple causes, and one specific policy or strategy alone cannot eradicate the problem. The targeted issue or problem is imbedded and intertwined with long-standing issues. As long as these linkages are unaddressed, new directions or changes are unlikely to be sustained. Attracting high-tech industries with high-paying jobs cannot be accomplished by merely promoting a high-tech industrial park with easy access to transportation. A workforce trained and educated in new skills is also needed, as well as a local network of similar companies, good schools, clean air, and low crime that will attract and retain the executives and managers of such industries. Heroin addiction, a more wrenching example, cannot be completely solved without dealing with the constellation of related problems: underlying psychological factors, housing, job training, and education. Treating the addiction alone is insufficient.

The last distinguishing feature of interconnected problems is that they are never totally solved. There is no "stopping rule," or natural termination of a problem (Rittel and Webber, 1973). Consequences of policy choices take a long time to become clear, and the background noise of interrelated problems and policies easily overwhelms our ability to track the impacts of selected strategies (Mitroff and Linstone, 1993). In addition, there are seldom any objective criteria or outcome measurements that clearly and unambiguously signify that an optimal solution has been reached. For example, at what level or frequency do we say that teenage drug abuse is solved? When only 10 percent are abusing? Five percent? Zero percent? And air pollution: When is it solved? When smog alerts occur only seven days a year? Three days a year? When ozone readings are 120 parts per billion or 10 parts per billion?

Finally, public problems often need to be addressed repeatedly over time. At different times, the same problem or issue may require a different answer. As a result, they are often felt to be intractable. Rather, they may be re-solved, perhaps repeatedly, or reduced through successive small wins that push the issue closer to satisfactory levels.

**The Expanding Web of Constraints: The Problem of “Many Hands”**

Public problems not only are interconnected and intertwined with other issues, but they also exist in a governance context in which no one organization or jurisdiction is in charge of or contains an important problem or issue. Often, many different and independent agencies are involved and affected, and have only partial responsibility to address problems that spill into their boundaries. This creates a shared-power world in which everything depends on and has an impact on everything else. The power to stimulate or resist action on a particular problem is dispersed to and shared by a multiplicity of jurisdictions, organizations, and organized interests (Bryson and Einsweiler, 1991; Bryson and Crosby, 1992).

**Fragmented Authority**

Shared power does not automatically imply coherence. Too often it results in divided and fragmented public authority. The United States is unique in its division of governmental authority, with power shared among legislative, executive, and judicial branches. Formal authority for policymaking is dispersed among federal, state, county, and city governments, as well as the thousands of specialist districts and authorities that control such local activities as transit companies, air quality, and ports. The fragmentation has significantly increased simultaneously with the increasing interconnectedness of public problems. A striking example is a landfill in Southern California, which by 1996 was regulated by eleven state agencies and three regional agencies. None had absolute authority, but all sought to achieve state and federal environmental policy goals in the Southern California region (Kirklin, 1991).

**Proliferation of Stakeholders and Knowledgeholders**

For each issue or problem, there is a community of interests: problem "elites," opinion leaders, government and university experts,
engaged corporate leaders, activists, specific clients or consumers, and fragmented legitimate authorities. In the last decade there has been an explosive growth in the number and diversity of non-governmental groups in the development of public policy. These stakeholders and knowledgeholders are increasingly active in formulating responses to public problems. Stakeholders are organized groups, clients, and institutions who hold a stake in the issue and are key to getting solutions accepted and implemented. As the definition implies, stakeholders and knowledgeholders both exert a hold on an issue.

There are many explanations for this increase in stakeholders and knowledgeholders. Advances in communication technologies have lowered costs of direct-mail solicitation and have created new forms of inexpensive access, such as electronic bulletin boards, thus greatly speeding the efficient distribution of data and information. Because of the information revolution, many more citizen groups feel compelled to get directly involved in the resolution of burning issues. In addition, access to public agencies is now more widely distributed, beyond the select privileged groups of business executives and corporations that historically had enjoyed access. Although wealthy, elite groups still have considerable access and influence on particular policy areas, they are now only one of many special interests that attempt to influence public policy.

The number of knowledgeholders has also grown and includes university experts, government specialists, industry researchers, and activists who hold important information regarding the multiple dimensions characterizing interconnected problems. High-status knowledge, once guarded by officials, is more easily accessed and distributed because of the proliferation of electronic information exchange. New, specialized policy issue networks are causing a radical change in the structure of external pressure on solving public problems. By replacing historical party politics with policy issue networks, the channels in which influence is exerted have multiplied. The expanding web of individuals and organizations that significantly address issues, combined with the country’s continuing fragmentation of authority, have resulted in a dissipation of the traditional power structure (Dahl, 1994; Wilson, 1989).

**Diminished Influence of Special-Interest Groups**

Although there is an increase in the variety of conflicting and substantially independent special-interest groups and the intensity of their lobbying continues to increase, their influence is diminishing for three reasons. First, the proliferation of special-interest groups is matched by the political organization of neighborhood and citizens’ groups and the expanded involvement of knowledgeholders and ripple-effect stakeholders. Local, regional, and national citizens’ groups, for example, have increased their capacity to organize for effective action. They have become more active and sophisticated in communicating their concerns. As their skill in working with the media increases, the media are increasingly responsive. The media amplifies their concerns, magnifying a group’s impact through short stories and sound bites on national and local news networks. The cumulative effect is a thinning of power traditionally held by special-interest groups (Dahl, 1994; Thomas and Hrebenar, 1994).

Second, civic power has thinned within communities in the last several decades. This coincides with the downsizing and restructuring of large corporations and the growing influence of small businesses. Once clout and authority were wielded by a few businesspersons. Now local influence is spread among many nonbusiness leaders. As a local leader in Cleveland explained, “There was a time in this community when four people could decide to do something, and then just do it” (Henton and others, 1997).

Third, the sheer numbers of diverse groups result in political stalemates, with each group advocating for its preferred solution and fighting over declining governmental resources. Traditional interest groups are having more difficulty maintaining their strong positions due to “hyper-pluralism”—more groups advocating and competing for declining resources (Thomas and Hrebenar, 1994). This leads to a policy deadlock or “demosclerosis,” in which organized groups have multiplied to the point that they clog the arteries of democracy (Rauch, 1994). This inhibits the ability of any one individual, agency, or group to secure broad-based agreements and to mobilize people and resources effectively to address a public problem.

Addressing public problems today requires the interaction of many diverse groups and individuals. Interconnected problems do not lend themselves to easy cures by independent agencies acting
alone. Proposed actions affect an increasingly large number of stakeholders on any particular issue, and perceived adverse effects can evoke widespread resistance. The result is that large-scale, systemic, or comprehensive solutions that attempt to get at the roots of a public problem are often considered too far-reaching and radical by some and will likely be vocally opposed.

Constraints of Public Distrust

In addition to fragmented authority, a further complicating factor is the diminished public confidence in government’s ability to address difficult problems. The public feels strongly about the issues facing them and their families (Harwood Group, 1993a). However, there is an equally strong distrust that government agencies can solve these problems. That distrust has been rising for the last two decades. A variety of complex governance issues have fed this lack of trust, from the Vietnam War and the Watergate scandal in the 1970s, to the Reagan era of the 1980s, which consistently blamed government for many of the country’s failures (Lipset and Schneider, 1987). Consequently, the public has lost faith in major governmental initiatives that attempt to address serious problems.

The public’s perception that the government cannot solve problems leads to strong frustration with government leaders. Not only do people distrust and disrespect “bureaucrats,” but they feel dissatisfaction with elected officials who are seen as not telling the truth about or not taking responsibility for serious problems. Problems appear to be getting bigger, not smaller, while taxes continue to go up. One can point to the decline of American education, the rise of health care costs, the decay of physical infrastructure, the inability to site long-term nuclear waste facilities, or the continual and chronic urban and rural unemployment. Citizens perceive a severe disconnect with the taxes they are paying and the results they are seeing. Thus government is often seen as an obstacle rather than as a problem solver. Distrust can be so strong that hostility can be a common reaction when someone suggests that government play a stronger role in addressing an issue.

Even as our problems become more serious, citizens do not necessarily want one individual to save them. Although individuals may feel compelled to find a leader who can “work magic” or “do battle for us” on a particular problem (Heifetz and Sinder, 1988), there is simultaneously a great suspicion of leaders in our country. Bryson and Crosby (1992, p. 34) note that this “love-hate” attitude toward leadership reflects a unique tendency for Americans “to admire the heroic, charismatic individual who can lead troops or organizations to great victories yet at the same time, they distrust great concentrations of power and authority.” Even though the public tends to look to individual leaders for answers, today’s declining trust and confidence in the government significantly constrains traditional forms of leadership. This wariness is symptomatic of a longer-term decline in social trust and civic engagement in America over the last twenty-five years (Putnam, 1995).

Addressing Public Problems with Public Leadership

Governmental problem solving no longer means directly funding services. Distrust in government, dwindling revenue sources, thinning of traditional interest groups, and interconnected public problems frustrate those who wish to make a difference. Individuals easily feel overwhelmed. Common statements include: “It’s just too big for one person to solve.” “It’s so complex. I just don’t know where to start.” “It will take more time than I have to solve this.”

Yet large numbers of individuals do get involved in problem solving, so many, at times, that any action seems impossible. Out of frustration, one is tempted to go it alone and work on the problem with a very small, select group. Unfortunately, that approach does not work either. Problems are so complex and interconnected, and power to solve the problem is so shared and dispersed, that one person or agency has little power or authority to develop and implement solutions unilaterally. A seasoned city manager explains that “this is new turf for those of us in the professional urban management business. . . . We must diligently work behind the scenes to bring together the diverse interests that confront us on virtually every public meeting agenda” (Blumberg, 1987, p. 9).

Addressing interconnected problems does not yield readily to single efforts and is beyond the capacity of any one agency or jurisdiction. Authority and responsibility to solve the problem require diverse, independent stakeholders to come together around a common interest, mobilizing or galvanizing collective action. In
addition, responses to interconnected problems cannot be dictated from one public agency. What is needed is concerted action by multiple and diverse groups.

There are many examples of effective public leadership stimulating concerted action within this unique web of constraints. In 1985, Tillamook County’s teen pregnancy rate was the second highest in Oregon and higher than the national average. This fact went unnoticed by this small coastal community until a proposal for school-based health clinics was soundly defeated. Community leaders realized that their teenage pregnancy rate was second only to that of the state’s largest and most urban county containing Portland. That shocking realization stimulated multiple actions to curb teenage pregnancy. Early community efforts included a local teen parenting program and a Healthy Start program aimed at reducing second pregnancies among teens. The efforts then sharpened toward early prevention. The local YMCA sponsored teen girls’ recreation programs, schools added self-esteem and sexuality education to their curriculum, and churches taught refusal skills and abstinence within their teen groups. The local public health department significantly expanded its outreach to teens to include one-on-one counseling within forty-eight hours of the teen’s first inquiry. By 1994, Tillamook County reduced its teen pregnancy rate 75 percent, from 24 per 1,000 females to the state’s lowest rate of 7 per 1,000 (Luke and Neville, 1996).

In San Mateo County, California, on the southern part of the San Francisco Bay, several cities realized that East Palo Alto, a neighboring city, had the highest per capita homicide rate in the country. They also realized that its crime and drug problems were spilling into adjacent areas and that East Palo Alto lacked the resources to fight the problem effectively alone. Neighboring cities and the county joined with East Palo Alto in a concerted effort to address the problem. East Palo Alto witnessed an 86 percent decline in its homicide rate and a 60 percent reduction in other violent crimes without corresponding increases in neighboring jurisdictions (Bellone, 1994).

There are hundreds of similar examples of this type of public leadership across the country: affordable housing in West Garfield Park, Chicago, and Northeast Portland, Oregon; revitalized economies in Silicon Valley and Cleveland. Communities, states, and regions that are successfully addressing public problems realize they must work across traditional boundaries, creating partnerships and alliances among historically separate business, government, and education sectors. They are following a different kind of leadership process than prescribed in many organizational descriptions of contemporary leadership.

This type of leadership does not make the headlines. Rather, it provides a more quiet catalytic effect. It elevates the issue to the public agenda, convenes critical stakeholders, stimulates multiple initiatives to achieve goals, and sustains action over the long term. The primary role for public leadership is that of a catalyst—thinking about problems in a systemic or interconnected way, fostering dialogue and concerted action toward solving problems, and sustaining momentum over time. Unfortunately, guidance offered by contemporary organizational approaches to leadership has limited applicability to the nonhierarchical webs in which nagging public problems exist. Contemporary approaches to leadership focus on managing organizations and small-group leadership within organizations, not in solving complex public problems. Public leadership thus requires a redefinition of leadership to illuminate the unique tasks, strategies, and skills necessary to lead in the public interest in an interconnected world.
designed to achieve the general outcome of improving the water and sediment quality of the bay (see Figure 7.2).

**Stakeholder Analysis: Identifying Stakeholders and Their Interests**

Successful problem solving requires engaging a diverse set of stakeholders and their multiple interests. Stakeholder analysis is most critical when convening a working group to address a public problem and in identifying common and shared interests to forge agreements on strategies. A continuous and iterative stakeholder assessment process, however, is also important for developing advocacy coalition strategies and institutional networks that enhance strategy implementation (see Chapter Six). Strategic thinking thus involves two different levels of stakeholder analyses: stakeholders must first be identified through a stakeholder mapping process, and their diverse interests must be defined, understood, and updated as situations change.

**Stakeholder Identification**

Stakeholders are individuals, groups, and organizations with interests in the issue area. They hold a stake in either changing the issue or maintaining the status quo. Stakeholders also include individuals, groups, or organizations affected by the causes or consequences of the particular issue (Bryson and Crosby, 1992).

A stakeholder map graphically represents important stakeholder groups in the policy system, the smaller policy community, and the decision network. A good stakeholder map can easily have more than twenty specific stakeholder groups. An effort to reform education in Minnesota, for example, included more than thirty distinct stakeholder groups, which were eventually grouped by the state education commissioner into nine clusters (Roberts and King, 1999). A stakeholder mapping process conducted by a regional private industry council targeting the improvement of workforce quality categorized groups into four clusters: those needing their service; agencies controlling their funding; agencies needing funding; and other constituents (see Figure 7.3.).
Sustained action on important public problems requires leaders to involve not only the obvious and well-known stakeholders, but to go beyond the usual suspects (see Chapter Four). In a rush to convene groups and to hurry agreements, two important groups or sets of individuals are often overlooked. Knowledgeholders, particularly those with comprehensive, systemic perspectives, are critically important. In addition, ripple-effect stakeholders can add focus, attention, and energy to strategic efforts (see Chapter Four). With interconnected problems, the ripples affect a wider audience and expand to include people and organizations that one may never even see or meet. Ripple-effect stakeholders are affected by the second- or third-order consequences of an issue. As a result, there are no easily discernible boundaries that limit the number of stakeholders who have direct and indirect interests.

Stakeholders’ Goals and Interests

Identifying stakeholders alone is not sufficient for thinking strategically. Determining each stakeholder’s goals, concerns, or stakes can reveal strategic options ripe for consideration. Catalysts don’t merely imagine others’ interests. Stakeholders, once engaged in the effort, often reveal their interests either explicitly or implicitly, through stories and anecdotes. Successful catalysts look for underlying interests to forge agreements on strategies that satisfy the multiple interests of stakeholders. It is critical to recognize and work with the underlying concerns, desires, or fears that motivate an individual or agency to participate. However, it is sometimes necessary to take the analysis a step further and examine the underlying values of the stakeholders. Agreement on underlying values is not necessary for building agreement on viable options, yet understanding core values significantly helps in identifying underlying interests (Fisher and Brown, 1988).

Strategic thinking requires the capacity to recognize the basic needs and interests of key stakeholders, revealing areas of shared, complementary, and conflicting interests. Shared or mutual interests emerge when something is commonly valued by stakeholders and where working group members share an interest in a particular goal, outcome, or strategy. Complementary interests occur when differing interests or goals exist but are not in direct opposition. When priorities among stakeholders differ, specific trade-offs can be made, and each stakeholder feels a sense of joint gain even though her or his goals may not be the same. Contradictory interests are defined as interests and goals of equivalent priority or value that are diametrically opposed. Contradictory or conflicting interests require further digging to see if there are any underlying outcomes and goals that can provide deeper agreement. Short of that, external objective criteria must be identified to determine potential areas for negotiating agreement (see Chapter Eight).
Questions that begin to reveal underlying interests of stakeholders include the following (Bryson and Crosby, 1992):

- What are each stakeholder’s goals and concerns related to the problem area?
- How well does the status quo meet each stakeholder’s goals or satisfy her or his concerns?
- What criteria will each stakeholder use in deciding to come to the table?
- What criteria will each stakeholder use in evaluating proposed strategies?

Once a working group has convened and multiple strategies have been identified, further stakeholder analysis helps to guide a public leader’s efforts to sustain implementation. Although stakeholders cannot truly be directed or controlled, relationships must be managed to sustain action during implementation. Some actions are necessary to capitalize on supporters, while others help to neutralize resisters or opponents (Nutta and Backoff, 1992). Questions that stimulate strategic thinking around stakeholder relations during implementation include:

- Given stakeholders’ interests, what coalitions are likely to form around the issue?
- What actions are needed to deal effectively with each stakeholder and emerging coalitions?
- How can each stakeholder influence the agreement-building process?
- What is needed from each stakeholder to implement agreed-upon action strategies?

**Systems Thinking: Seeing Interconnections and Linkages to Identify Strategic Leverage Points**

There is often no absence of information or data regarding an issue being addressed. However, cause-and-effect relationships may be ambiguous. Persistent public problems confronting public leaders are caused by a web of relationships tightly interconnected with other public problems. For every problem, there is a constellation of other core problems. Unemployment, alcoholism, and drug abuse can easily lead to domestic violence and child abuse. Child abuse and neglect can later lead to increased potential for teen pregnancy, which then increases levels of unemployment and welfare. Poverty is linked to other social and economic problems as both a cause and an effect.

There are no optimal solutions, quick fixes, or easy remedies. Individuals must learn to deal with more variables, unknowns, nuances, and interactions than can usually be handled at one time. Rather than seeking one comprehensive solution, a portfolio of strategies is crafted—multiple strategies by multiple stakeholders targeting multiple leverage points.

Systems thinking is an increasingly used language and set of visual tools for communicating about and seeing multiple connections and interrelationships. Although the term “systems thinking” has no consistent definition, it generally involves the capacity to see the whole as well as its parts, to see multiple rather than single causes and effects (Forrester, 1992). Working groups need time to develop insights into these interrelationships. Systems thinking tools are critical to stimulate discussions in an analytical and reflective manner (see Table 7.9 for summary of tools).

Systems thinking in groups relies on a set of visual tools and systems diagrams that help clarify complex issues by clearly and concisely identifying core elements of a problem, and by drawing out the perceived interrelationships and assumed causal links. These links and connections are not equal in strength, however. Sophisticated visual tools such as structural diagrams and computer simulations can suggest which system elements might have the most leverage power. Systems thinking helps detect and clarify interrelationships, assess the importance and potency of these relationships, and helps reveal high-leverage interventions.

**Visually Mapping Causes and Effects**

The most simple approach to stimulate systems thinking is to brainstorm how an issue is interrelated with other issues. Impact network analysis provides a graphical presentation of potential ripple effects
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of an issue or action strategy. It is generated by brainstorming the possible impacts that might follow from an issue going unaddressed, or the multiple impacts that might result from implementing a particular strategy. A detailed cognitive map or causal diagram reveals individual perceptions of the various causes of a condition or problem. Individual interviews regarding the causes of teenage pregnancy in Tillamook County, Oregon, for example, revealed multiple causes (see Figure 7.4). Although such a diagram of causes and effects is difficult to confirm in an empirical, scientific manner, it does represent agreement by key stakeholders and stimulates their strategic thinking about an interconnected public problem.

Diagramming Interconnected Relationships

A third and increasingly popular approach to representing dynamic relationships graphically is the use of causal loop diagrams, which use simple loops to portray the relationships among policy variables. The Oregon Benchmarks, for example, is based on a policy model that ties together several elements in a circular cause-and-effect system called the “circle of prosperity” (see Figure 7.5).

A more complicated influence diagram or conceptual model suggests interconnections between multiple variables to explain a dramatic increase in foster care caseload in New York during the 1980s (see Figure 7.6). This concept model was used by key decision makers as a basis for developing a more complex computer simulation model that was then used to test various strategic options to reduce the costs and caseloads of foster care.

Graphical diagrams provide a visual, simplified way to surface individual assumptions about key variables, to portray causal linkages among multiple factors, and to illustrate interdependencies and implications. Simple word-and-arrow diagrams are often too general to develop computer simulations, but they are effective in communicating system insights that can be a foundation for a more detailed analysis. When greater precision is sought, computer-based models translate a working group’s pen-and-pencil diagrams into simulations that can be tested, refined, and used to illuminate high-leverage points.

A first step in developing computer-based models is to build a structural map or concept model (such as the one in Figure 7.6).
Such models take several days to develop collaboratively and test with key stakeholders and require the assistance of systems modelers and trained facilitators. Computer-aided simulations are more easily developed with commercial software such as think or STELLA. They graphically diagram significant relationships and generate a computer model using mathematical equations. Through multiple computer simulations, various strategic options are tested to assess potential impacts and resulting changes within the target system. Although high levels of technical proficiency are needed to create and run computer simulations, very little advanced training is required to use them once they are developed (Richardson, 1991).

**Benefits and Cautions**

Systems thinking is critical for effectively addressing interconnected public problems. Systems thinking tools can have important catalytic impacts. From simple cause-and-effect diagramming techniques to more sophisticated and expensive computer-modeling processes, systems thinking tools allow individuals and working groups to reveal and reflect on internal mental models and to grapple with the complexities of interconnected public problems. Systems thinking tools not only change the way working groups discuss interconnected and complex issues, but they also expand how individuals think about a particular problem or issue.

There are several virtues of using systems thinking tools in addressing public problems. First, the tools can help people recognize and analyze connections and interrelationships between and among variables that initially appear too complex and incomprehensible. Visual diagrams enhance a working group’s ability to understand an issue and its multiple causes and connections. Diagrams achieve this in a much more efficient manner than a typical text format. A strategic map, for example, is a one-page graphical representation of a proposed portfolio of strategies, including visual links that show interrelationships between proposed strategies. Such diagrams can distill the essence of a problem into a visual format that adds precision, can be easily remembered, and yet is rich in implications and insight (Richardson, 1991).

**Figure 7.5. A Simple Causal Loop Diagram:**

The Oregon Progress Board’s “Circle of Prosperity.”

A clean, appealing environment, a talented workforce, and responsive public services

Create opportunities for Oregonians, reducing poverty and crime

Generate revenues for excellent schools, quality public services, and public facilities

Diverse, value-adding industries that provide well-paying jobs


Systems tools have the potential to change or expand individuals’ internalized mental models. They closely fit what we know about how humans process information: people simplify complex issues into single constructs and then into mental models of simplified cause-effect relationships. Graphical diagrams and conceptual models elicit these underlying beliefs of cause-effect relationships, and when input into a computer model, they provide valuable insights on alternative strategies and their trade-offs. Even without developing a computer simulation to test various alternative strategies, the simple act of developing a shared conceptual model of an issue or a strategy map of potential action strategies can stretch people’s ability to think strategically.
A positive by-product can be the alignment of individual perspectives and internalized mental models.

Using these tools as facilitation techniques allows individuals to safely reveal their interpretations of the problem and its causes. It helps focus attention on interests rather than positions, and it allows differences in perception and values to become clear in a nonthreatening way. People can point to the visual diagram rather than at each other. Systems thinking tools have the added benefit of reducing destructive, vicious circles of negative emotions (Bryson and Finn, 1995).

Although systems thinking tools are relatively recent in addressing public problems, several concerns and caveats have emerged. First, complex diagrams and models can be more confusing than clarifying. Unless one "chunks" the insights embedded in the model, the insights can be lost in the complexity (Richardson, 1995). Catalysts must draw out insightful bits of the map as well as strategic implications. Second, working groups seldom end with finished maps or models. Instead, they develop snapshots that help them clarify the issue and develop effective strategies. In most cases, building the model is more important than the resulting model. The process of developing a shared mental model becomes a learning process about the issue. Eliciting ideas and deliberating and exploring varying perspectives are more important than completing a precise representation of the problem with all its causes and feedback loops.

The more simple cause-and-effect diagrams can be drafted in a few hours with the help of a facilitator. However, the complicated models and computer simulations require the expertise of systems modelers and process facilitators over several days. Developing computer simulations on such public programs as foster care, homelessness, mental health vocational placements, and probation and corrections are completed in the context of several one- or two-day group model-building workshops (Richardson, Andersen, Rohrbaugh, and Steinhurst, 1992; Vennix, Andersen, Richardson, and Rohrbaugh, 1992).

**Public Leadership Summary**

A key challenge for catalytic leaders is to think strategically and to encourage and nurture strategic thinking among key stakeholders. A wide variety of analytical techniques and tools can stimulate this conceptual process, including using data to show worsening conditions and troubling comparisons, sharing stories and metaphors that make an issue more real and salient, and framing strategic goals as desired outcomes.

A variety of systems thinking tools can reveal multiple aspects of problems, stimulating rich discussions on alternative action strategies. Analyzing issues and strategic responses with a systemic perspective can illuminate high-impact leverage points that can more effectively achieve sustained results. Systems thinking enhances the capacity to anticipate and evaluate the consequences of implementing specific action strategies, particularly the consideration of future consequences (including side-effects and surprise impacts). It involves envisioning beyond the present, and requires individuals to engage their frontal cortex to see multiple
and overlapping interdependencies and to anticipate their potential impacts. Systems thinking tools can often be powerful catalysts for this activity.

Strategic thinking requires widening one's horizons, modifying underlying assumptions and beliefs, and seeing previously unnoticed interconnections and systemic linkages. It requires a catalyst to revise his or her thinking in light of fresh insights and revealed perspectives and interests. The catalyst must also synthesize ideas into a workable plan or set of strategies. Catalysts encourage collaborative planning processes that use strategic thinking tools to assist working group members and other key stakeholders to engage in strategic thinking. Although interconnected problems often require deeper levels of strategic thinking, one public leader commented, "I would even be happy with merely shallow strategic thinking."