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Leveraging Grantmaking: Understanding the Dynamics of Complex Social Systems

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Introduction

In the summer of 2006, a group of local foundations supported the leaders of Calhoun County, Michigan (population 100,000), to develop a 10-year plan to end homelessness (Stroh & Goodman, 2007). The agreement forged by government officials at the municipal, state, and federal levels — along with business leaders, service providers, and homeless people themselves — came after years of leadership inertia and conflict among service providers regarding what needed to be done to solve the problem instead of just cope with it. Moreover, the plan signaled a paradigmatic shift in how the community viewed the role of temporary shelters and other emergency response services. Rather than be seen as part of the solution to homelessness, these programs came to be viewed as one of the key obstacles to ending it.

The plan won state funding, and a new executive director supported by a multi-sector board began steering implementation. Service providers who had previously worked independently and competed for foundation and public monies came together in new ways. One dramatic example was that they all voted unanimously to reallocate HUD funding from one service provider's transitional housing program to a permanent supportive housing program run by another provider. Jennifer Schrand, who chaired the planning process and is currently Manager of Outreach and Development for Legal Services of South Central Michigan, observed, "I learned the difference between changing a particular system and leading systemic change."

Why was this intervention so successful when many other attempts by foundations to improve the quality of people's lives fall short? For example, urban renewal programs of the 1960s were backed by good intentions and significant funding, yet they failed to produce the changes envisioned for them. Moreover, the programs often made living conditions worse — leading to such outcomes as

Key Points

- The nonobvious interrelationships among elements in a complex system often thwart people's best intentions to sustainably improve system performance.
- The complex, nonlinear problems that most foundations address can be solved most effectively by thinking systemically instead of linearly about these problems.
- Systems thinking offers a range of analytic tools to improve our capacity to think systemically, including ways to distinguish problem symptoms from root causes, reinforcing and balancing feedback, system archetypes, mental models, and system purpose and goals.
- Applying these tools enables us to target high-leverage interventions that can lead to sustainable, system-wide improvement.
- These tools can be applied using a five-step implementation process.

abandoned public housing projects and increased unemployment that resulted from apparently successful job training programs (Forrester, 1969). Stories of well-intentioned yet counterproductive solutions continue to be numerous, as we learn that temporary shelters can undermine community efforts to end homelessness, food aid can lead to increased starvation, and drug busts can increase drug-related crime. In other cases, short-term successes are frequently not sustained and the problem mysteriously reappears, as, for example, when civic leaders invested in programs to reduce urban youth crime or international donors funded the drilling of wells in African villages to improve access to potable water.

"When you are confronted by any complex social system … with things about it that you're dissatisfied with and anxious to fix, you cannot just step in and set about fixing with much hope of helping. This is one of the sore discouragements of our time"

The planning project to end homelessness combined two significant interventions: a proactive community development effort engaging leaders in all sectors along with homeless people themselves, and a systems diagnosis that enabled all stakeholders to agree on a shared picture of why homelessness persisted and where the leverage lay in ending it. The purpose of this two-part article is to focus on the less commonly used intervention: applying systems thinking to help foundations make better decisions about how to use their limited grantmaking resources for highest, sustainable impact. Part 1 addresses two key questions:

- Why are good intentions and obvious solutions not enough to solve the chronic, complex problems many foundations seek to address?
- Where are the leverage points for improving system performance in sustainable ways?

Part 2 of the article will focus on how foundations can increase the return on their social investments by aligning their grantmaking system with the dynamics of the social systems they seek to improve.

The Nonobvious Nature of Complex Systems

Lewis Thomas, the award-winning medical essayist, observed, "When you are confronted by any complex social system … with things about it that you're dissatisfied with and anxious to fix, you cannot just step in and set about fixing with much hope of helping. This is one of the sore discouragements of our time" (Thomas, 1979, p. 110). The homelessness and other stories above all epitomize this poignant insight. They share other specific characteristics:

- The solutions that were implemented seemed obvious at the time and in fact often helped achieve the desired results *in the short term*. For example, it is natural to provide shelter, even temporary, for people who are homeless or offer food aid when people are starving.
- The longer-term impacts of the same solution tend to neutralize short-term gains or even make things worse *in the long term.* For example, the temporary shelters provided by Calhoun County led to the ironic consequence of reducing the visibility of its homeless population, which reduced community pressure to solve the problem permanently.
- The negative consequences of these solutions are *unintentional*; everyone is doing the best they can with what they know at the time.

How can the interactions over time among elements in a complex system transform the best of intentions into such disappointing results? The reason lies in part because of our tendency to apply linear thinking to complex, nonlinear problems. Systems and linear thinking differ in several important respects, as shown in Table 1 (see, for example, Senge, 1990).

For example, a linear approach to starvation might lead donors to assume that sending food aid solves the problem. However, thinking about

TABLE 1 Distinguishing Linear Thinking from Systems Thinking

Dimension	Linear thinking	Systems thinking
Causality	There is a direct connection between problem symptoms and their underlying causes.	System performance is largely determined by interdependencies among system elements that are indirect, circular, and nonobvious.
Time	A policy that achieves short-term success ensures long-term success.	The unintended and delayed consequences of most quick fixes neutralize or reverse immediate gains over time.
Responsibility	Most problems are caused by external factors beyond our control.	Because actions taken by one group often have delayed negative consequences on its own performance as well as the behavior of others, each group tends to unwittingly contribute to the very problems it tries to solve and to undermine the effectiveness of others.
Strategy	To improve the performance of the whole, we must improve the performance of its parts.	To improve the performance of the whole, we must improve relationships among the parts.
	Tackle many independent initiatives simultaneously to improve all the parts.	Identify a few key interdependencies that have the greatest leverage on system-wide performance (a.k.a. leverage points) and shift them in a sustained, coordinated way over time.

it in a systemic way would raise concerns about such unintended consequences of food aid as depressed local food prices that deter local agricultural development and leave a country even more vulnerable to food shortages in the future. From a systemic view, temporary food aid only exacerbates the problem in the long run unless it is coupled with supports for local agriculture.

Because the problems addressed by foundations are largely systemic, one step they can take to increase the social return on their grantmaking investments is to *think systemically (vs. linearly).*

The Basic Tools of Systems Thinking

There are several complementary approaches to systems thinking, including general systems theory (see, for example, Bertalanffy, 1968), dynamic feedback (see, for example, Senge, 1990), and complex adaptive systems (see, for example, Zimmerman, Lindberg, & Plsek, 1998). This article focuses on dynamic feedback and introduces such tools as

1. The iceberg — a tool for distinguishing problem symptoms from root causes
2. Reinforcing and balancing feedback
3. Mental models — what people believe or assume to be true
4. System purpose and goals
5. Archetypes — recurring stories or patterns that stimulate insight into more complex dynamics.

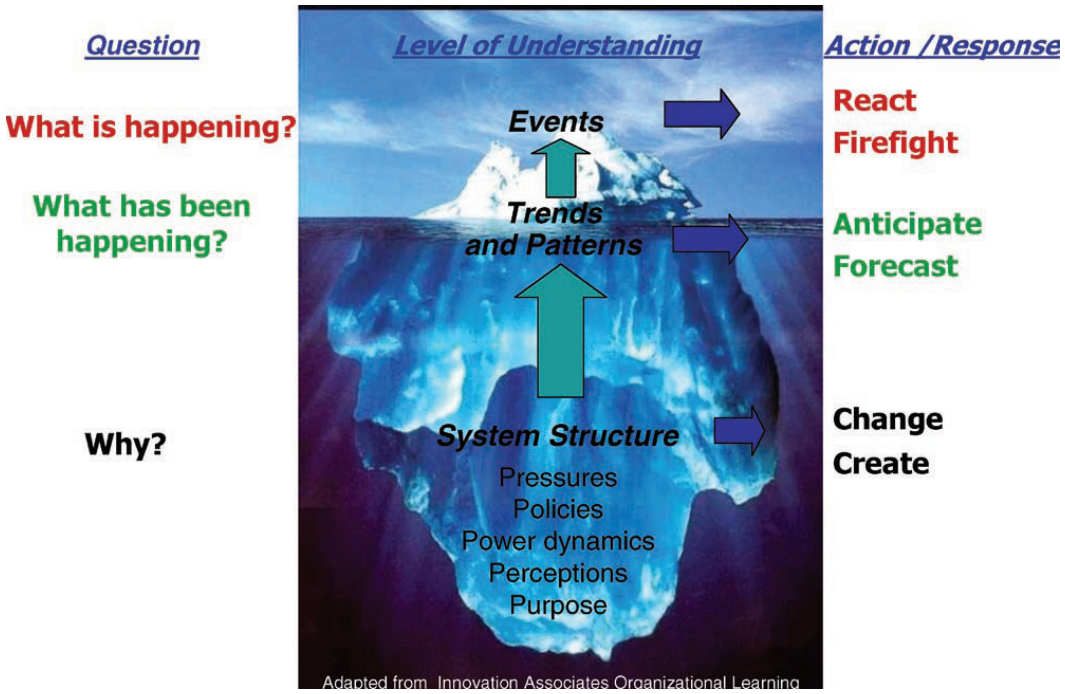
They are not difficult to learn and may shape a more impactful grantmaking process.

Tool 1: The Iceberg

Linear thinking tends to mask the nonobvious relationships between problem symptoms and causes that complex systems exhibit. The iceberg is a simple tool for distinguishing symptoms from causes. As shown in Figure 1, it distinguishes three levels of insight — each of which is informed by a specific question and prompts a certain type of action or response.

We often focus our attention on responding to individual *events.* We want to know what is happening and react quickly to the crisis at hand. For example, the untimely death of a homeless person or appearance of people asking for money or food

FIGURE 1 The Iceberg



in a downtown area might temporarily increase community pressure to solve the homelessness problem. Alternatively, natural disasters such as Hurricane Katrina, the Indonesian tsunami, or a major drought call for rapid deployment of resources to save lives and property. Yet as we see in the food aid example, *how* we respond to a crisis can have an enormous impact on the long-term health of the people we help. These impacts are not necessarily obvious unless we think them through.

Sometimes we step back from individual events long enough to recognize ongoing *trends or patterns*. We ask what has been happening over time and try to anticipate the future based on the past. Trends can often be surprising and disturbing. For example, efforts to reduce homelessness in Calhoun County had leveled off despite the fact that the estimated number of homeless people continued to increase. Moreover, visibility of the problem as measured by civic and media attention had declined over many years even though the problem continued to worsen. This disturbing pattern is summarized in Figure 2.

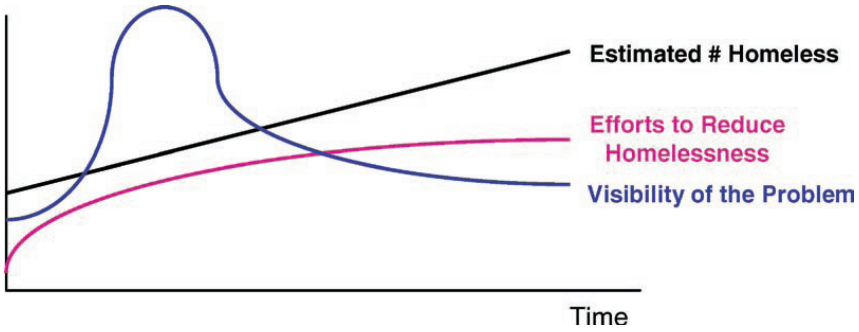
In the face of such patterns, we want to know why the problem persists and permanently change the trends to ensure a significant and lasting decline in homelessness. The root causes of a chronic, complex problem can be found in its underlying *System Structure* — the many circular, interdependent, and sometimes time-delayed relationships among its parts. The structure includes both easily observable components — such as current pressures, policies, and power dynamics — and less obvious factors such as perceptions and purposes (goals or intentions) that influence how these components affect behavior.

In the homelessness example, people's perceptions (mental models, mind-sets, beliefs, and assumptions) included the following:

- Many people are homeless because they want to be.
- We are working as hard as we can to help people who are homeless.
- Funds must be directed toward the most visible problems.

The actual intention of the shelter and emergency services system was to temporarily reduce the problem's *visibility* and *severity* without addressing the underlying causes of socioeconomic pres-

FIGURE 2 Trends in Addressing Homelessness



sure coupled with personal vulnerability that gave rise to the problem. The system was not designed to end homelessness despite the espoused efforts of many to do so.

Hence, a second leverage point for foundations is to use the iceberg to *dig below more obvious events and trends in order to clarify the system structures at the root cause of complex, chronic problems*.

Tool 2: Reinforcing and Balancing Feedback

Reinforcing and balancing feedback are the two basic circular structures that describe how systems evolve over time. More complex dynamics result from combinations of these two feedback structures.

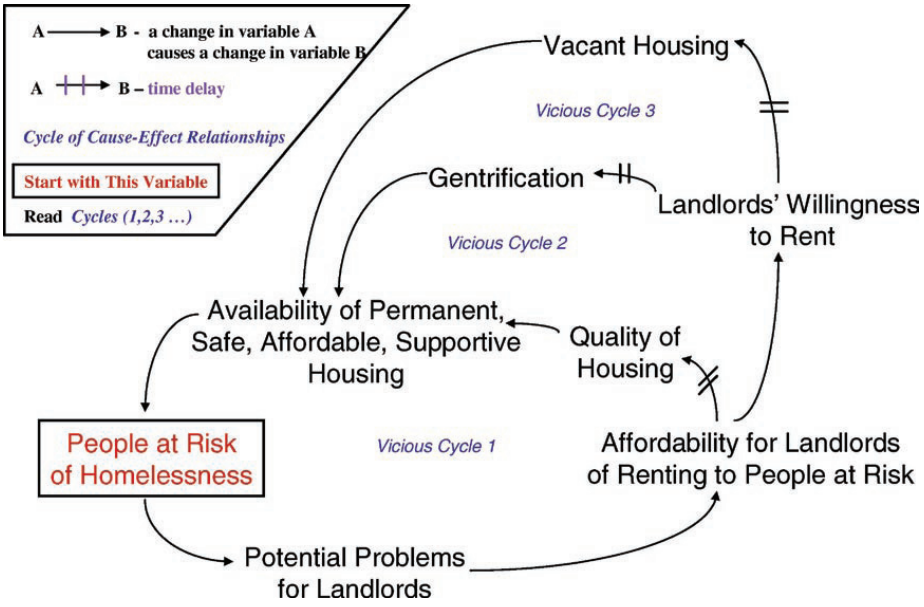
Reinforcing feedback is the basis for what we know as virtuous and vicious cycles. It explains the development of both engines of growth (a.k.a. flywheels) as well as spiraling deterioration. For example, Jim Collins has applied the flywheel concept he introduced in his book *Good to Great* (Collins, 2001) to suggesting how social sector organizations can develop their own engines of success (Collins, 2005, pp. 23–28). He believes that success in the social sector hinges on the ability to grow organizations (not just programs) by building a brand that attracts support that yields demonstrable results and in turn strengthens the brand. Collins also points out that the same reinforcing dynamic can produce the opposite effect, as when an organization that performs poorly weakens its brand reputation, which makes it more difficult to attract resources and drives results down even further. Several overlapping vicious cycles in the homelessness case explain how the number of people at risk of becoming homeless tended to increase over time, and how homelessness could coexist with vacant housing (see Figure 3).

Most people are accustomed to thinking of growth as a linear process. However, reinforcing feedback describes a more common process in social and economic systems — that of exponential growth where a quantity increases by a constant percentage of the whole in a constant time period. Such phenomena as increases in savings and population are familiar illustrations of exponential processes. Foundations seeking a long-term return on their grantmaking investments benefit from cultivating critical mass or tipping points that build sustainable momentum in a social system (Ball, 2006; Gladwell, 2000).

The following French riddle points out several important implications of exponential growth (Meadows, Meadows, Randers, & Behrens, 1972). Imagine a lily pond where the lily plant doubles in size every day, and the pond is totally covered by the lily in 30 days. When is the pond half-covered? The answer, which is surprising for many people, is 29 days; that is, half of the pond is covered just one day before the pond is completely blanketed by the lily. How much of the pond is covered in 15 days? The answer here is 0.0025%; that is, half-way into the month the lily is barely noticeable.

The exponential nature of organic growth has several consequences for foundation decision making. First, most people tend to expect to see

FIGURE 3 Deterioration of Affordable Housing



improvements faster than they are capable of developing. Expecting the system to shift quickly can lead to unrealistic demands for growth that ultimately slow improvement down if not kill it entirely. Alternatively, people can miss or misinterpret small improvements and give up prematurely on supporting a change that takes time to manifest. Figure 4 depicts the exponential nature of organic reinforcing growth and contrasts it with the more typical linear assumption people hold about how things *should* grow.

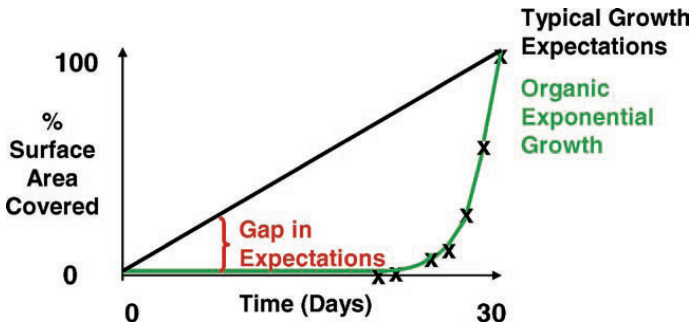
Second, a success engine or flywheel is built not only on the individual factors that contribute to growth, but also on how these factors interact to reinforce each other over time. For example, successful micro-lending programs integrate community involvement, peer support, financial investment, economic results, job creation, and community reinvestment in ever-expanding spirals. An implication for foundation managers might be that they evaluate grantee plans based on the clarity and soundness of their structural design — how the parts fit together — rather than on the individual elements themselves. It can be helpful to notice that one approach to increasing the effectiveness of a theory of change is to explain how parts of the system are intended to interact in both direct and indirect ways over time.

Third, because exponential growth also applies to seemingly trivial problems getting much worse over time, it is important to monitor such problems early on and consider addressing them rapidly instead of hoping they go away. For example, the "broken windows theory" suggests that community instability is catalyzed by disorderly conditions (Kelling and Wilson, 1982). The theory is based on research showing that a car in good condition in a poor neighborhood would be vandalized only after one window had been broken. It has led police departments around the country to control minor misbehaviors and maintain a clean environment to prevent major crimes from occurring (Johnson, 2009).

Hence, a third leverage point for foundations is to *cultivate engines of growth slowly and break potential vicious cycles quickly*.

Balancing feedback is the second foundational structure in complex systems. It is the core dynamic of problem-solving or goal-seeking behavior. We recognize it in our daily experience, for example, when we balance our needs for activity and replenishment by eating when we get hungry or sleeping to refresh ourselves. In contrast to reinforcing feedback loops that *amplify* an existing condition, balancing feedback seeks

FIGURE 4 Lessons From the Lily Pond



to *correct* or reverse a current state to bridge the gap between actual and desired performance. For example, a foundation might fund a mentoring program between older and younger students to improve graduation rates or a counseling program to reduce teen pregnancy. When balancing feedback accomplishes a desired goal, the corrective process often becomes invisible. When we eat enough food or get enough sleep, we tend to take these functions for granted. Alternatively, foundations might terminate funding for a program that appears successful and divert funds to meet a more pressing need.

By contrast, we are more aware of balancing processes when a system is *not* accomplishing the goal we state for it. In other words, balancing feedback also helps explain why systems do not change despite people's best efforts to improve them. Simple corrective processes fail to function as intended in at least one of three ways.

First, we often stop investing in the solution once a problem appears solved. This act of "taking the pressure off" often leads the problem to recur — much to the frustration of the problem solvers. For example, urban youth crime in Boston was a serious problem in the early 1990s. Political and community leaders banded together to develop numerous coordinated solutions in response, for instance, community policing, neighborhood watches, gang outreach, and after-school programs. When youth crime declined as a result, political leaders felt obligated to shift funds to more obviously pressing problems. As a result, they gradually began to cut back on the crime prevention programs that worked so well, and the problem returned (Fox, 2003).

The second tendency is to fail to appreciate the time required to effect change. For example, a recent success story on curbing teen drinking and substance abuse in one Massachusetts community of 46,000 where adults also exhibited above average rates of alcohol and drug abuse described how coordinated improvements had gradually taken hold over a period of 11 years (Moscowitz, 2008). Such patience and persistence is rare. Normal reactions in the face of time delay are either to become impatient and push for premature results or to give up too quickly.

The third way in which balancing loops can fail to correct an existing situation is when there is lack of agreement on the goals of the system, the current level of performance and what drives it, or both. For example, a report sponsored by the Ball Foundation noted there is no lack of educational innovation in selected U.S. schools and school districts (Institute on Education and the Economy, 1995). However, educators seeking to disseminate these innovations on a broader scale were confronted by serious disagreements about both the goals of K–12 education and current performance levels.[1] Some school districts defined their goals in terms of test scores, while others viewed graduation, subsequent employment, or the motivation and capacity for continuous learning as the desired result. Similarly, these school districts measured actual performance

[1] The author wishes to thank Jennifer Kemeny and Sherry Immediato for this insight based on their work in the project.

differently in terms of test scores, how children performed after graduation, and indicators of creativity and self-directed learning. It is very difficult to define and disseminate a particular strategy when the desired future, system goals, and/or perceptions of current conditions are ambiguous or conflicted. By contrast, anchoring the system in a common picture of the desired state (for example, through shared visioning) and a common understanding of current reality and why it persists (for example, through systems thinking) builds *creative tension* that aligns and propels the efforts of multiple stakeholders (Senge, 1990).

These insights about balancing loops point to three additional leverage points that foundations might focus on:

- In order to reduce the risk of taking the pressure off, *ensure that effective solutions are reinforced and can be sustained over time*.
- Respect time delays: *be patient and persistent* in your grantmaking.
- *Establish a clear and compelling shared vision, joint goals, and a common understanding of current reality before developing strategy*.

***The influence of mental models can direct foundations to another leverage point:* clarify and shift mental models that influence the way the system operates.**

Tool 3: Mental Models

Mental models encompass what people believe or assume to be true. They are often described as paradigms, mind-sets, beliefs, assumptions, cultural narratives, norms, expectations, or simply perceptions. Mental models significantly impact how people behave and perform. For example, the "shelter mentality" in Calhoun County turned out to be such a significant factor in perpetuating homelessness that the 10-year plan to end homelessness identified shifting people's mind-set to valuing a comprehensive array of support, housing, and employment services as one of their top goals. Other critical mental models that needed to be addressed included "Many people are homeless because they want to be" and "Funds must be directed towards the most visible problems."

While mental models are necessary to help us simplify the world, they are inherently limited and can often become outmoded as conditions change. To ensure that current mental models are still relevant and useful, foundation staff might do the following:

- Surface current beliefs held by system stakeholders, including people in the foundation.
- Test the utility rather than validity of these beliefs, that is, determine if the beliefs help people achieve the results they really want instead of whether or not they are true.
- Encourage stakeholders to expand their views by supporting them to learn from each other.
- Point out disconfirming data that challenges the validity of current beliefs.
- Consider how existing data might be interpreted differently, for example, by accounting for time delays or the tendency to take the pressure off of a "solved" problem.
- Help people clarify the future they want to create and define new beliefs or assumptions that support them to achieve it.
- Establish experiment(s) that people can run to test the viability of these new beliefs and assumptions.

The influence of mental models can direct foundations to another leverage point: *clarify and shift mental models that influence the way the system operates*.

Tool 4: Purpose

A foundational principle in systems thinking is that a system is exquisitely designed to achieve its current purpose. This principle has two implications:

- It is important to understand the payoffs of the status quo no matter how dysfunctional it appears to be

- System goals are more effective when they target desired results instead of expected effort.

First, a core reason that systems resist change is that the purpose achieved by the current system — as defined by its vision, mission, values, goals, and/or metrics — is more compelling than its espoused purpose. For example, community leaders in Calhoun County pursued goals of reducing the visibility of homelessness and temporarily easing people's pain through shelters even though they espoused a goal of permanently ending homelessness. Any one stakeholder in a system can undermine its own ability to achieve espoused goals because it holds competing goals without recognizing the discrepancy (Kegan & Lahey, 2001). Conflicting goals can also be held by different stakeholders in the system — as when Israeli settlers and Islamist extremists hold goals of one unified religious state west of the Jordan River while the majority of the populations on both sides favor a two-state solution (Stroh, 2002).

In order for people to reconcile what they say they *want* the system to accomplish with what it actually *is* accomplishing, people have two basic choices. The ideal solution is to realize both purposes simultaneously. For example, it is possible to design homeless shelter services in a way that simultaneously supports people to achieve permanent housing. However, the both/and solution is often not feasible either because focusing on short-term goals frequently undermines the system's ability to achieve long-term goals or because certain goals are inherently incompatible. The alternative under these circumstances is to consciously choose one of the two intentions and primarily focus on this result. In the case of Calhoun County, community leaders consciously chose creating permanent, safe, affordable, and supportive housing rather than coping with homelessness as their purpose going forward.

Second, because it is often easier to measure effort than results, people tend to create systems that utilize a lot of resources for questionable outcomes. Well-known systems theorist Donella Meadows explains:

> If the desired system state is good education, measuring that goal by the amount of money spent per student will ensure money spent per student. If the quality of education is measure by performance on standardized tests, the system will produce performance on standardized tests. Whether either of these measures is correlated with good education is at least worth thinking about. (Meadows, 2008, p. 138)

The implication for foundations is to distinguish and reconcile desired results with current outcomes and metrics.

In the case of Calhoun County, measuring prevention of homelessness is more difficult than measuring either temporary care or resettlement in permanent housing. However, it has been estimated that one dollar spent on prevention is worth six dollars required to house people who have become homeless. Success in reducing the risk of homelessness might be difficult to evaluate, but risk reduction is very effective.

The implication for foundations is to *distinguish and reconcile desired results with current outcomes and metrics.*

Tool 5: System Archetypes

Most complex problems arise from combinations of many reinforcing and/or balancing feedback processes. The good news is that we can gain preliminary insight into a wide range of dynamics by learning a dozen or so system *archetypes* or classic stories. The archetypes are recurring patterns that appear in many different situations. They are well-understood, easily transferable across different system contexts, and often serve as catalysts for discerning even more complex dynamics (Kim, 1993).

One of the most common archetypes is the story of *Shifting the Burden (to the Quick Fix).* This is the basic archetype of unintended dependency

or addiction. The dynamic describes a situation where people are aware of a long-term, fundamental solution to a problem symptom. However, they choose to implement a quick fix instead because it is easier to do so and in fact temporarily relieves the problem symptom. Over time, continuous dependence on the quick fix makes it increasingly difficult to implement the long-term solution even if people wanted to. As a result the problem symptom gradually gets worse. Addiction to shelters and emergency services constituted a core dynamic in perpetuating homelessness in Calhoun County (see detail in the next section). Other examples include countries that become addicted to food aid while undermining the more fundamental response of local agriculture development, African villages that became dependent on the government to fix wells the government had installed, and our nation's dependence on prisons instead of community socioeconomic development to reduce urban crime.

***The implication for foundations is to* look for archetypal patterns of behavior that begin to explain why a complex problem persists.**

Other common archetypes include *Fixes That Backfire* — the story of unintended consequences, *Limits to Growth* — the story of unanticipated constraints, *Tragedy of the Commons* — the story of optimizing the parts in a way that destroys the whole, and *Accidental Adversaries* — the story of partners who become enemies. An example of a Fix That Backfires occurs when drug busts take criminals off the street and thus reduce drug-related crime in the short run, but also remove drugs from circulation, thereby increasing drug prices and requiring addicts to steal more to pay for the reduced supply in the long run (Friedman, 1976). Foundations often face the challenge of Limits to Growth when they find it difficult to help their grantees scale up a successful experimental program. Tragedy of the Commons manifests in the overgrazing of such shared environmental resources as fisheries, water, and air. Nonprofit, public, and private sector organizations that seek to benefit from collaborating to solve a shared problem risk becoming Accidental Adversaries when they focus on the blind spots and shortcomings of their respective partners instead of building on each others' strengths.

The implication for foundations is to *look for archetypal patterns of behavior that begin to explain why a complex problem persists.*

Applying the Systems Approach

Implementing the systems approach involves:

1. Building a strong foundation for change by engaging multiple stakeholders to identify an initial vision and picture of current reality
2. Engaging stakeholders to explain their often competing views of why a chronic, complex problem persists despite people's best efforts to solve it
3. Integrating the diverse perspectives into a map that provides a multipartial and more complete picture of the system and root causes of the problem
4. Supporting people to see how their well-intended efforts to solve the problem often make the problem worse
5. Affirming a compelling vision of the future and supportive strategies that can lead to sustainable, system-wide change.

For example, in the homelessness case, the local Homeless Coalition had been meeting for many years to end homelessness. Their shared desire to serve the homeless had been undermined by disagreements about alternative solutions, competition for limited funds, and limited knowledge about best practices. Although many understood the importance of a collective effort to provide critical services, housing, and jobs to both homeless people and those at risk of losing their homes, they were unable to generate the collective will and capacity to implement such an approach. They lacked a shared vision of the future they wanted to create, an understanding of current reality,

FIGURE 5 Shifting the Burden to Temporary Shelters

and a common appreciation of how they were all contributing to that reality. Finally, the promise of state funding if they could agree on a 10-year plan to end homelessness, the provision of funding for developing the plan by local donors, and the use of a team of consultants experienced in community development, systems thinking, and national best housing practices enabled them to break through years of frustrated attempts.

The Coalition with the help of consultants enlisted and organized the support of community leaders across the nonprofit, public, and private sectors along with themselves and representatives from the homeless population. They established a set of committees and task forces as well as a clear and detailed planning process. While they began by *articulating* a shared vision of ending homelessness, they would not be able to really *commit* to this result until they fully understood the system dynamics that perpetuated the problem. My colleague Michael Goodman and I were brought in specifically to apply systems thinking to (1) understand the dynamics of local homelessness, (2) determine why the problem persisted despite people's best efforts to solve it, and (3) identify high-leverage interventions that could shift these dynamics and serve as the basis for a 10-year plan. Through interviews with all key stakeholders, we analyzed a number of interdependent factors that led people to become homeless in the first place, get off the street temporarily, and find it so difficult to secure safe, supportive, and affordable permanent housing.

We learned that *the most ironic obstacle to implementing the fundamental solution was the community's very success in providing temporary shelters and supports.* These shelters and supports had led to several unintended consequences. One was that they reduced the visibility of the problem to the community overall. The low visibility was compounded by the facts that (1) many people were naturally reluctant to see the problem in the first place, (2) people who were homeless were also fearful of being seen and hid their condition as best they could, and (3) there was a lack of accurate data about the extent of the problem. The overall lack of visibility reduced community pressure to solve the problem and create a different future.

The temporary success of shelters and other provisional supports also tended to reinforce funding to individual organizations for their current work. Donors played a role in buttressing existing funding patterns through their pressure to demonstrate short-term success. Such reinforcement

TABLE 2 Leverage Points

1.	Think systemically (vs. linearly) to be strategic
2.	Dig below obvious events and trends to clarify system structures at the root cause of complex, chronic problems
3.	Cultivate engines of growth slowly and break vicious cycles quickly
4.	Ensure that effective solutions are reinforced and can be sustained over time
5.	Respect time delays: be patient and persistent
6.	Establish a clear and compelling shared vision, joint goals, and a common understanding of current reality before developing strategy
7.	Clarify and shift mental models that influence the way the system currently operates
8.	Distinguish and reconcile desired results with current outcomes and metrics
9.	Look for archetypal patterns of behavior that begin to explain why a complex problem persists
10.	Reduce dependence on quick fixes and develop shared vision in support of a fundamental solution
11.	Incorporate movement toward the fundamental solution into quick fixes that cannot be avoided

decreased the service providers' willingness, time, and funding to innovate and collaborate. This in turn led to

- Fragmentation of services
- Competition for existing funds
- Lack of deeper knowledge of best practices
- Reluctance to overcome government restrictions that made it difficult to innovate
- A shelter mentality.

The community's collective ability to implement the fundamental solution was undermined as a result. The essence of these dynamics is described in Figure 5.

Because archetypal dynamics are recurring and we understand what causes them, we also know a lot about the leverage points that help shift them. There are three proven interventions to transform the *Shifting the Burden* archetype:

1. Reduce dependence on the quick fix, often by exploring the mental models that influence their use
2. Build shared vision among key stakeholders that motivates people to implement the more fundamental solution
3. To the extent that people must rely in part on the quick fix, seek to apply it in a way that makes it easier (not harder) to implement the fundamental solution.

For example, in the homelessness case, we helped the county define goals based on these interventions that formed the basis for a 10-year plan subsequently approved by the state:

- Challenge the shelter mentality and end funding for more shelters
- Develop a community vision where all citizens have permanent, safe, affordable, and supportive housing
- Align the strategies and resources of all stakeholders including funders in service of this vision
- Redesign shelter and provisional support programs to provide more effective bridges to critical services, housing, and employment.

Two years later the county continues to make progress toward these goals. The program has an executive director, in-kind funding for space and supplies, additional funding focused on long-term strategies, and a community-wide board supported by eight committees underway

with clear charters producing monthly reports on their goals. A community-wide eviction prevention policy was changed to enable people to stay in their homes longer, and a street outreach program is going well to place people into housing.

The implications of the *Shifting the Burden* dynamic for foundations committed to funding fundamental solutions are to *reduce dependence on quick fixes, develop shared vision in support of the fundamental solution, and incorporate movement toward the fundamental solution into quick fixes that cannot be eliminated.*

A summary of all 11 leverage points appears in Table 2.

Summary and Conclusions

Good intentions are not sufficient to produce positive outcomes. This is especially important because nonobvious system dynamics often seduce us into doing what is expedient but ultimately ineffective.

At the heart of systems thinking is the ability to trace a problem from how it often manifests in the form of a specific event or a disturbing trend to determining and addressing its underlying root causes. This involves defining the various components of systems structure: formal elements such as pressures, policies, and power dynamics as well as more informal yet often governing aspects such as perceptions (or mental models) and purpose (or goals). It is especially useful to clarify how these components interact. The analytic tools of reinforcing and balancing feedback as well as frequently recurring system archetypes provide catalysts for understanding the often nonobvious interdependencies that shape system performance over time.

System behavior changes as a result of making a few, key coordinated changes over time. Based on this introduction to how dynamic systems function, the article has identified a five-step change process and 11 leverage points for achieving sustainable, system-wide improvement.

***The implications of the* Shifting the Burden *dynamic for foundations committed to funding fundamental solutions are to* reduce dependence on quick fixes, develop shared vision in support of the fundamental solution, and incorporate movement toward the fundamental solution into quick fixes that cannot be eliminated.**

Despite the many benefits of this approach, it is also important to recognize the challenges foundations might face in implementing it. Systems thinking urges us to expand our horizons of *time* — approaching what we do in the short term within a clear long-term context — and *space* — engaging many diverse stakeholders as partners in a continuous learning process. Part 2 of this article will help foundations meet these challenges by suggesting ways in which they can align their programming approaches and systems with the dynamics of how complex social systems behave and evolve.

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Leveraging Grant-Making—Part 2: Aligning Programmatic Approaches With Complex System Dynamics

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Key Points

- The purpose of this two-part article is to enable foundations to increase the leverage of their grant-making resources by working effectively with the dynamics of complex social systems.
- This article examines how foundations can align planning, implementation, and evaluation efforts with the behavior of the social systems they seek to improve.
- Asking powerful questions of staff, board, grantees, and other stakeholders helps to transform how they think about their goals and strategies.
- In addition to using the power of questioning, foundations function more systemically by suspending their assumptions about their effectiveness and what is possible, creating the cultural shifts needed, learning from others, and developing their systems thinking capabilities.

Introduction

A number of foundations have begun to apply a systems approach to parts of their work, but far fewer have taken a comprehensive systems approach to all aspects of a single program. The Food and Fitness (F&F) initiative of the W.K. Kellogg Foundation (WKKF) provides a concrete example of what a comprehensive systems approach might look like.

F&F began as a response to staff and board member concerns about the rising rate of childhood obesity and early onset of related diseases such as type 2 diabetes. Instead of focusing on "curing" individual behavior and reacting to symptoms, the program officers who led this work intentionally began by examining the interrelated systems that were producing these symptoms and asking, "What is the future that WKKF truly cares about creating for children and their families in communities?" Their experience will be woven throughout this article to illustrate what systems thinking looks like when applied to a foundation's programming.

Whereas Part 1 of this article focused on the dynamics of complex social systems, Part 2 addresses the implications of those dynamics for foundations by answering several key questions:

- Why is it important for foundations to develop a systemic approach to their programming?
- How can foundations integrate systems thinking into their core functions of planning, implementation, and evaluation?
- What powerful questions can we ask ourselves and others to generate a more systemic approach to our work?
- How can we move toward thinking and acting systemically?

Making the Case for a Systems Approach

A systemic approach contributes to philanthropic effectiveness by enabling foundations to take complex dynamics into account, anticipate resistance to change, and tailor best practices to specific situations. These outcomes contribute in

turn to more comprehensive planning and better results.

Ricardo Salvador, program officer at WKKF, points out that social systems are very complicated, and it is important to acknowledge and work with this complexity. Systems thinking enables diverse stakeholders with different points of view to integrate their perspectives, monitor how many parts of a system interact simultaneously, and trace the implications of different solutions over time. Without a more complete appreciation of system complexity, he believes that you cannot produce desired or lasting results.

The F&F Business Case

The WKKF program officers who initially led F&F, Linda Jo Doctor and Gail Imig, knew that many well-intentioned programs had attempted to address childhood obesity by focusing on nutrition, education, or exercise. Some targeted policy change, whereas others focused on individual behavior, but data clearly showed undesirable outcomes continuing, especially among vulnerable children.

WKKF had long supported developing a healthy, safe food supply and increasing consumption of good food. In addition to their previous education and community change experience, the lead program officers recently had participated in an intensive organizational learning capacity-building program. They believed that applying a systems approach to F&F would increase the likelihood of engaging a diverse group of people and organizations, fostering collaboration and finding innovative strategies to change the underlying systems, and thereby creating and sustaining the healthy results everyone seeks for children and families. Because the issue was highly complex and prior efforts to address the issue in simpler ways had been unsuccessful, the program officers determined that a systemic approach would be essential to achieving long-term goals.

Integrating Systems Thinking Into Planning

Of the three major foundation programming functions—planning, implementation, and evaluation—systems thinking can play an especially important role in improving planning effectiveness.

Part 1 of this article described five steps in applying a systems thinking approach (Stroh, 2009):

1. building a strong foundation for change by engaging multiple stakeholders to identify an initial vision and picture of current reality;
2. engaging stakeholders to explain their often competing views of why a chronic, complex problem persists despite people's best efforts to solve it;
3. integrating the diverse perspectives into a map that provides a multi-partial and more complete picture of the system and root causes of the problem;
4. supporting people to see how their well-intended efforts to solve the problem often make the problem worse; and
5. affirming a compelling vision of the future and supportive strategies that can lead to sustainable, system-wide change.

Of the three major foundation programming functions—planning, implementation, and evaluation—systems thinking can play an especially important role in improving planning effectiveness.

This section suggests how to integrate these steps into the program planning process.

Step 1: Building a Foundation for Change

Building a strong foundation for systemic change involves engaging diverse stakeholders in the planning stage. This is a cornerstone of the F&F initiative. WKKF developed its knowledge base by bringing together researchers and theorists from around the country in fields such as public health, nutrition, exercise physiology, education, behavior change, child development, social change, and social marketing. The foundation also assembled

a group of "community thought leaders," practitioners from around the country, to have a conversation about the current realities in their communities, as well as their visions for communities that would support the health of vulnerable children and families. In addition, WKKF engaged with other foundations throughout the U.S. in conversations about their collective thinking on childhood obesity and the roles foundations might play. From all of this, a collective vision for the initiative began to emerge — not as a reaction to the immediate circumstances, but from an enriched understanding of current realities, as well as deeply shared aspirations for the future:

> We envision vibrant communities where everyone—especially the most vulnerable children—has equitable access to affordable, healthy, locally grown food, and safe and inviting places for physical activity and play.

Asking powerful questions is an especially effective way of inviting people onto a level playing field and surfacing and strengthening everyone's mental models. Throughout this article we offer questions to ask at different stages to improve people's abilities to see more clearly and create what they want.

BOX 1 Questions for Building a Foundation for Change

- Who needs to be engaged in this conversation? Who has been historically excluded but needs to be invited into this conversation?
- What is the future we and our partners truly care about creating?
- What is our intended impact? What long-term results do we want to achieve, and for whom?
- What events and patterns of behavior over time do we notice that are related to this vision? What are the key gaps between our vision and current reality?

Step 2: Engaging Stakeholders to Explain Often Competing Views

Ricardo Salvador notes that one characteristic of social systems is that different observers view them differently. Jillian Darwish, executive director of the Institute for Creative Collaboration at KnowledgeWorks Foundation, adds that conversations in which people clarify their own mental models, listen deeply to others, and find a way forward together are essential to creating sustainable change.

Building on the results of Step 1 above, systems mapping is one tool to help stakeholders see how their efforts are connected and where their views differ. This tool extends the more familiar approaches of sociograms or network maps to show not only who is related to whom, but also how their different assessments of what is important interact.

Part 1 of this article presented the iceberg model. F&F's conversation among community thought leaders was structured using that model. Examples of questions included, "What is happening now regarding the health and fitness of children in your communities that has been capturing your attention?" "What are some patterns related to health and fitness of children that you're noticing?" "What policies, community or societal structures, and systems in your communities do you believe are creating the patterns and events you've been noticing?" "What beliefs and assumptions that people hold are getting in the way of the health and fitness of children?" This conversation ended with the question, "What is the future for supporting the health of children and their parents that you truly care about creating in your community?"

Initially each participant's comments reflected his or her own work and the competition for resources that typically accompanies community engagement. Some believed the lack of mandated daily physical education caused childhood obesity. Others faulted school lunches. Some hoped parents would prepare more meals at home rather than eating out. Several blamed the rise of fast-food establishments. In the ensuing conversation, participants began to consider one another's thinking. They came to realize that no single explanation, including their own, could fully explain the health outcomes they saw. The conversation revealed different perspectives and experiences but also began

aligning participants around common beliefs and a deeper, broader understanding of the issue.

BOX 2 Questions for Engaging Diverse Views

- Why have we been unable to solve X problem or achieve Y result, despite our best efforts?
- What solutions have been tried in the past, and what happened as a result?
- What has been working? What can we build on?

Step 3: Integrating Diverse Perspectives

Systems maps integrate diverse perspectives into a multi-partial picture of the system and provide a deeper understanding of a problem's root causes. Participants in F&F, both at WKKF and in grantee communities, came to see that the obesity epidemic in children was the result of national, state, and local systems failing to support healthy living, rather than a consequence of accumulated individual behaviors. They began to recognize the interrelationships among systems such as the food system, the quality of food in schools and neighborhoods, the natural and built environment and its role in supporting active living, safety, public policy such as zoning, and a myriad of other factors. They also started to understand how individual organizations' good intentions and actions could actually undermine one another's efforts. These conversations paved the way for collaboratively creating strategies and tactics in later phases of the work.

BOX 3 Questions for Integrating Diverse Perspectives

- How do the underlying factors contributing to the problem relate to one another?
- How do changes in one factor influence changes in others?

Step 4: Supporting Responsibility for Unintended Consequences

One characteristic of social systems introduced in Part 1 is that people often unintentionally contribute to the very problems they want to solve. Systems thinking enabled communities working in the F&F initiative to uncover potential, unintended consequences of their efforts. For example, marketing the concept of eating locally grown food without developing a food system that can provide it can lead to increased prices for that food, putting it out of reach for schools, children, and families in low-income communities, thus decreasing the consumption of good food among F&F's target population. By focusing on documenting the incidence of disease and health problems, the public health and medical community could unintentionally pull attention and resources from supporting communities in creating environments for healthy living. Pushing for policies to allow open space to be used for community gardens could have the unintended consequence of reducing access to open space for children to play and be active.

If people understand how they contribute to a problem, they have more control over solving it. Raising awareness of responsibility without invoking blame and defensiveness takes skill—yet it is well worth the effort.

BOX 4 Questions for Exploring Unintended Consequences

- What well-intended actions in the past have led to where we are now?
- How might we as a community or foundation be unwittingly contributing to the problem?
- What unintended consequences can we anticipate that might arise from our work together?

Step 5: Affirming a Compelling Vision and Developing Strategies

Once a foundation for change has been developed and the collective understanding of current reality has deepened, the last planning step is to affirm a compelling vision of the future and design strategies that can lead to sustainable, system-wide change. This step entails

1. affirming a compelling vision,
2. developing and articulating a theory of change,
3. linking investments to an integrated theory of change, and
4. planning for a funding stream over time that mirrors and facilitates a natural pattern of exponential growth.

Affirming a compelling vision. Part 1 of this article noted that that a system is exquisitely designed to achieve its current purpose—no matter how dysfunctional its behavior appears to be (Stroh, 2009). One implication of this principle is that people can only commit to a shared vision of a desired future once they have clarified the benefits of the current system that they might need to give up.

Talking only with people who think alike and speak the same professional language is easier and quicker than developing a common language with people from all parts of the community, and it allows specific individual goals to be achieved, often economically and efficiently. Yet working together to create and commit to a shared vision can result in powerful outcomes and typically unleashes both energy and resources that ultimately lead to the achievement of shared goals with significantly greater depth and breadth.

Examples of early drafts of shared visions created by New York City and Northeast Iowa F&F collaboratives indicate the potential of a collective vision:

> *New York City 2015 (excerpts).* All New Yorkers share an equal quality of life and have access to healthy and affordable food and opportunities for active living through physical spaces that accommodate all needs. Low income and communities of color have markets, gardens, and institutions that provide fresh, affordable healthy foods as well as recreational facilities and a built environment that supports daily active living, like interconnected bike paths, reduced traffic, additional green spaces and parks that will help draw communities together socially and safely. Children attend schools that foster healthy lifestyles through a curriculum that supports daily physical activity, food and fitness oriented education and healthy and locally procured food options. New York City leads the country in progressive policy reform with respect to food and active living in a diverse, urban setting and is positioned as a national and international model.
>
> *Northeast Iowa Food and Fitness Initiative.* Northeast Iowa is a unique place where all residents and guests experience, celebrate, and promote healthy locally grown food with abundant opportunities for physical activity and play EVERY DAY. Healthier people make stronger families and vibrant communities.

Although these two vision statements differ in length and detail, each reflects the commitment of the diverse community members who created them. As Jillian Darwish says, "We love what we create; if someone else is doing the creating, we don't necessarily embrace it."

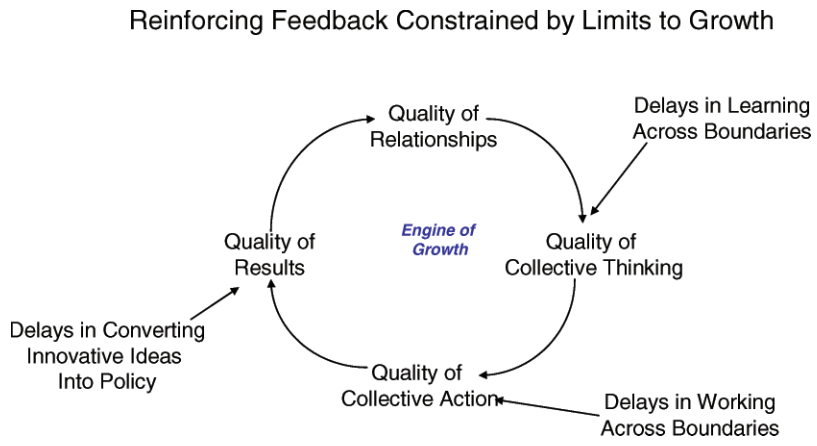
BOX 5 Questions for Affirming a Shared Vision

- What goals is the system currently designed to achieve (i.e. what are the benefits of the way things are)?
- How can we reconcile differences between espoused goals and current benefits? For example, can we align people around a meta-goal or achieve both espoused and actual goals at the same time?
- What is the shared vision that people commit to work toward together?

Developing and articulating a theory of change. We have focused so far on applying systems thinking to understanding the root causes of chronic, complex problems. The same tools can be used to clarify and test theories of change about how we want things to unfold in the future. A theory of change articulates how to bridge the gap between vision and reality. It specifies

- vision and goals,
- strategies, and
- how these strategies are intended to support one another over time to achieve the desired goals.

FIGURE 1 Building on Strong Relationships in Rural Iowa



Most of the issues foundations address are complex. Using systems thinking to develop theories of change enables the integration of multiple perspectives and factors into one explicit picture of how the many elements of these complex issues need to work together over a period of time to take hold and be sustainable. Because different stakeholders are likely to begin with different assumptions about how to achieve their goals, it is useful for foundations to collaborate with stakeholders to align their change theories and build a single more robust and supportable theory.

Unlike logic models that are suited to mapping solutions to simple problems, system theories describe how levels of performance, inputs, and outputs are intended to interact with each other over time. Theories of systems change can be based on either a core reinforcing loop or a core balancing feedback loop, as introduced in Part 1 of this article.

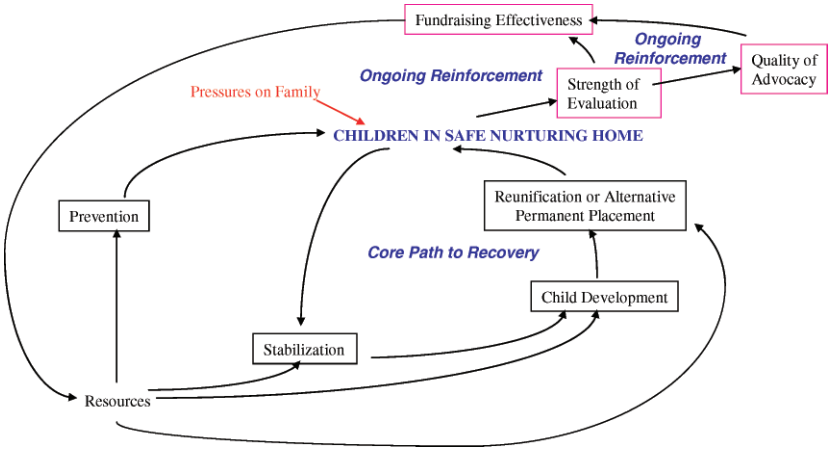
Core theories of reinforcement focus on how to amplify what is already working in the system and grow this desirable performance over time. Participants in the regional F&F initiative in Northeast Iowa believed that establishing and cultivating high-quality relationships in their rural communities would help them move toward more collective thinking about how to take advantage of their agricultural base and open space, as well as more collaborative action, better results, and even better relationships. They also recognized potential limits to growth, acknowledging that delays in learning and working across boundaries, as well as in converting innovative ideas into new policies, would try people's patience. They invested in collaborative technologies, engaged policymakers early in the process, and set realistic expectations around what could be accomplished in a given time frame. Figure 1 summarizes their theory of change, which is based on Daniel Kim's Core Theory of Success (Kim, 2001):

The second theory of change is based on investing in corrective actions to solve an existing problem or reduce the gap between a current and desired state. This balancing structure specifies the goal of the system, actual performance, and corrective action(s) intended to bridge the gap. Additional reinforcing loops sustain investment in the corrective actions over time. Reinforcing loops counter people's tendency (described in Part 1) to take their attention off a solution that is working and reallocate resources to more pressing problems, only to have the original problem return.

A child welfare agency developed a theory of change with the goal of maintaining children in safe, nurturing homes. Their programs or corrective actions focused on

- preventing children from being separated from safe, nurturing family environments in the first place; and

FIGURE 2 Child Welfare Agency's Theory of Change



BOX 6 Questions for Developing and Refining a Theory of Systems Change

- In order to achieve our vision, what factors are key to our success?
- How are those success factors causally related to one another?
- What is our theory of systems change?
- What theories of change do our grantees and collaborators hold?
- What do end users believe needs to be done?
- How aligned are the above views? How can we integrate different views to strengthen the theory?
- If the core theory is intended to amplify what is working now, then how will multiple success factors reinforce one another over time and create one or more virtuous cycles? What are potential limits to growth, and how might these be addressed?
- If the core theory is designed to take corrective action, what is a balancing loop that specifies the goal of the system, the actual performance, and the corrective action(s) we plan to use to bridge the gap? What reinforcing loops will be put in place to ensure that solutions are sustained over time?
- How will we test and refine the theory of change over time?

- supporting children who had to leave their homes through a process of stabilization, development, and reunification or placement in a new safe, nurturing family environment.

The agency also specified reinforcing loops to sustain an ongoing resource stream by

- highlighting successes through careful evaluation and
- using evaluation to stimulate additional fundraising and create effective advocacy campaigns.

Linking investments to an integrated theory. Having an integrated theory of systems change can help a foundation shape its investment strategies. First, it provides a framework for explicitly defining impact and better identifying programs and grantees to support. Roberto Cremonini, chief knowledge and learning officer at the Barr Foundation, observes that, although Barr funds individual organizations, it does so within a larger context set by its program areas, goals, strategies, and theories of change.

Second, a clear theory of change can help you assess the likely value of specific proposals. Decision criteria can include not only a proposal's alignment with the theory, but also the opportunity a proposal presents to test and strengthen the theory. Explicit theories of change that incorporate systems mapping have helped board members and program officers at WKKF reach clarity about proposed programs as they make invest-

ment decisions. Moreover, grantees report that mapping their theories improves their ability to both obtain foundation support and allocate their own funds more productively.

Third, the theory can support a foundation to expand the mix of its investment strategies. Jan Jaffe, senior director at the Ford Foundation and project leader at GrantCraft, points out that grant-making is only one way in which foundations can further their mission. Other approaches to leveraging limited donor resources include: mission-related investments, making loans, convening diverse stakeholders, developing grantee capacity, providing technical assistance, and communicating for impact and advocacy (see references at www.grantcraft.org).

F&F provided planning grants to communities but also offers a host of other resources. A technical assistance team is available to support grantees with using a systems thinking approach to their own work. Community initiative leaders are convened for capacity building and learning sessions. Annually, 20 people from each of the nine communities attend a networking conference where they share strategies, learning, and successes. Meanwhile, a group of foundations meets to build on one another's commitment to the goal of all children having access to healthy eating and active living. The mix of investment strategies is critical to the initiative.

Planning for a natural funding stream. Systems change takes a long time, but most foundation funding does not take this time delay into account. Many foundations set inappropriately high expectations for how much can be accomplished in a 2- to 3-year period and fail to plan for funding streams that match natural growth patterns.

Instead, Jan Jaffe points out that funding itself must be understood as a system to be cultivated. There must be sufficient patient capital up front to fund the normal early stage of slow growth. In order to ensure scale up and support the rapid growth that characterizes later stages of successful innovation, foundations need to plan for funder collaboratives involving multiple funders —including the private and public sectors along with networks of foundations—as well as funding for different needs such as research and development, capacity development, technical assistance, and small as well as big parts of a system.

One approach to balancing the long-term pace of meaningful change on complex issues and foundation needs for results and stewardship of resources is to support work in phases—planning, implementation, and transition to sustainability. For example, the first phase of support for F&F communities (currently coming to a close) centered on creating collaboration for aligned action in the nine funded communities, as well as among partner foundations. The result will be

BOX 7 Questions for Linking Investments With Your Theory of Systems Change

- What investments can we make to achieve maximum leverage and sustainability (positive ripple effects over time)?
- How do individual proposals
  - improve information flow and relationships among different elements of the system?
  - address underlying beliefs and assumptions?
  - specify goals that focus on results desired by diverse stakeholders?
  - enable us to strengthen and test our theory of change?
- Conversely, how might specific proposals
  - undermine our ability to either prevent or permanently solve the problem?
  - create negative unintended consequences?
  - minimize potentially negative unintended consequences?
- If quick fixes are required, how might they be designed to ensure movement toward a more fundamental solution?

F&F community action plans that are far beyond WKKF funding.

The systems approach to this work resulted in unanticipated positive consequences. Developing relationships, engaging in high quality conversations, and committing to a common vision during the "planning phase" produced immediate results in many of the communities. In Northeast Iowa, Luther College, the public school district in Decorah, and the city council created a proposed community recreation plan under which Luther College would grant a no-cost lease on 50 acres of land for a city-wide sports center and would raise the money to build an indoor aquatic center; the city would build soccer and tennis courts; and the school district would raise money for maintenance. Documenting these results during each phase of work is critical to maintaining momentum and funding for long-term system change.

BOX 8 Questions for Conversation About the Appropriate Funding Timeline

- What is our funding plan over time?
- How does this plan align with natural growth patterns and our own theory of change?
- How do we plan to involve different partners to meet different needs over time?
- How will we document results and stewardship of resources over time?

Integrating Systems Thinking Into Implementation

Because social systems are impossible to control and tend to produce unintended as well as planned consequences (both positive and negative), the most useful mindset to cultivate during the implementation stage is one of continuous learning. Cultivating this learning orientation often involves expanding a foundation's role and continuing to refine the theory of change.

One of the most important roles foundations can play in facilitating systemic action is to convene others. Because foundations are typically a third party with high credibility, they can use the power dynamic to constructively bring together, in various combinations, grantees, other stakeholders in the private and public sectors, experts in particular content or skill areas, and other foundations with similar missions. Grantees can also use a foundation's convening power to bring together their own stakeholders and employ a systems thinking approach with them. For example, the Northeast Iowa F&F initiative was able to engage a broader set of stakeholders in capitalizing on their interdependencies thanks to the credibility and experience offered by WKKF.

A key strategic approach of the Barr Foundation is to strengthen connections within and among networks. Their commitment evolved out of former Executive Director Marion Kane's experience at the Maine Foundation, where foundation staff spent significant time connecting people and helping them see aggregate patterns. Convening grantees and/or stakeholders enables them to gradually move from a competitive to a collaborative stance. It builds social capital to complement the human, fiscal, and structural capital the foundation also works to develop. Funding learning networks and providing "network weavers" enables Barr to facilitate new connections, insights, and behaviors over time.

Foundations also can serve as useful system monitors, staying alert to the blind spots in all systems —especially around race and gender assumptions —and communicating with clarity about their own roles in the system and the change process. For example, the Open Society Institute invited 100 of its grantees – including former prisoners, social justice lawyers, and academics – to test and refine its theory of change about reducing recidivism among recently released prisoners (Stroh, 2007). A central tenet of the F& F initiative is the importance of engaging the populations most vulnerable to poor nutrition and fitness as active participants in the planning as well as implementation process. The community effort to end homelessness described in Part 1 recruited homeless people to participate throughout its project in similar ways.

Finally, foundations committed to working systemically continuously challenge and refine their

theories of change based on new information from pilot project findings and inputs from additional stakeholders. Both internal and external learning and developments have influenced the evolution of F&F's theory of change at the national level. A clarified mission and new vision statement for WKKF resulted in a clear directive that F&F work must demonstrate results for vulnerable children and their families and that actively engaging historically excluded people as partners is essential to success. Early learning also identified the importance of the quality of food in schools to achieving the F&F vision.

BOX 9 Questions That Support Foundations to Implement Their Plans Systemically

- In what ways will the roles we are planning to assume affect the results we are trying to achieve, both as a help and as a hindrance?
- What capacities, if grantees had them, would improve their likelihood of success in the long term?
- What role could we play as a convener on this issue? Who would come to the table because we are the convener? Who might not come because we are the convener? Who else needs to be involved?
- What capacities and resources do we need that aren't part of our repertoire? Who might we engage to provide those?
- What quality of relationship among us, grantees, and collaborators will enhance the success of this work?

Integrating Systems Thinking Into Evaluation

From a systemic perspective, evaluation is best viewed as a continuous process punctuated by milestones for monitoring and modifying the theory of change. It begins with identifying the patterns to track in the planning stage and clarifying how these patterns are expected to shift over time if the strategies are successful. Effective evaluation takes natural growth patterns and time delays into account. It looks for consequences of interventions along multiple dimensions: short-term versus long-term, intended versus unintended, and positive versus negative. As the theory of change is tested over time, new system maps of how relationships among different factors have actually evolved and what new factors have become influential can be developed.

In addition to encouraging more frequent feedback, a systems approach to evaluation tends to involve a more diverse group of stakeholders (GrantCraft, 2007).

Laurie Lachance, evaluation director for the Center for Managing Chronic Disease at the University of Michigan and member of the F&F evaluation team, emphasizes the importance of evaluating progress toward the vision, capacities built, and resources used and developed, as well as how the work reflects the goals of diverse stakeholders.

President of Signet Research and Consulting Marilyn Darling has developed a structured process for ongoing evaluation and learning called *emergent learning*, which is used by foundations such as Barr and The Hartford Foundation for Public Giving (Darling and Parry, 2007). It cycles through four steps:

1. Collect behavioral data on an existing issue.
2. Determine the root causes of that behavior by analyzing the systems structure that produced it.
3. Develop a new hypothesis or theory of change about how you want to see the issue shift over time.
4. Identify opportunities that enable you to test this theory and gather new data.

Steps 1 and 2 support foundations to drill down the iceberg model described in Part 1 of this article in order to understand why a problem exists, while Steps 3 and 4 help them move back up the

iceberg by clarifying how they believe the future can unfold.

In addition to encouraging more frequent feedback, a systems approach to evaluation tends to involve a more diverse group of stakeholders (GrantCraft, 2007). It engages end users, grantees, program officers, and intermediaries as well as external evaluators in generating engaged and multifaceted assessment.

BOX 10 Questions for the Evaluation Stage

- How will we monitor progress toward our shared vision?
- What patterns do we expect to change over time? How and when will we track them?
- What are the short- and long-term results we are looking for in light of what we know about natural exponential growth?
- How do we plan to measure success, particularly where key desired outcomes tend to be qualitative?
- How will we take into account the fact that most quick fixes make no difference or actually make matters worse in the long run? How will we manage our own desires for immediate results?
- What small successes can we target that are deliberately designed to build toward positive and sustainable long-term outcomes?
- How will we track both positive and negative unintended consequences of interventions and learn from them?

Shifting to a Systems Approach

Here are five steps to take to begin or accelerate the journey toward thinking and acting more systemically:

1. Suspend current assumptions about how effective you are now and what else is possible.

Look critically at the foundation's current effectiveness and appreciate how much money has been spent pursuing outcomes that were not accomplished or that were achieved in the short run only to be neutralized later.

2. Identify cultural shifts to make in the philanthropic approach.

Ann Mansfield, a co-convener of the Northeast Iowa F&F initiative; Kathleen Enright, president and CEO of Grantmakers for Effective Organizations; Jillian Darwish; Lisa Wyatt Knowlton, a founding partner of Phillips Wyatt Knowlton; and Linda Jo Doctor suggest that the cultural changes described in Table 1, below, are needed to use a systems thinking approach to philanthropy.

3. Ask questions designed to cultivate a more systemic approach.

One way of making these cultural shifts is to ask a different set of questions. The questions in this article stimulate a more systemic way of working.

TABLE 1 Cultural Shifts

From	To
Knowing	Learning
Arms-length funder	Partner
Individual expertise	Collective thinking
Control	Collaboration through engagement, shared visioning, and aligned action
Giving grants	Using a mix of investments: convening, capacity building, technical assistance, grants, loans, and others
Short-term funding for quick fixes	Patient investment for long-term, sustainable results

4. Learn from others who are working more systemically.

Jan Jaffe suggests that people doing social justice work provide good examples because they are willing to confront core issues (such as structural racism), make waves, and help people deal with resistance to change. Working systemically takes patience, strength, and courage, as well as insight, precisely because it challenges people's deeply held biases and underlying intentions.

5. Build your capacity in systems thinking.

Kathleen Enright suggests that a needed skill set for systems thinking includes testing one's own assumptions, engaging others in conversation and action, exploring mental models with others, and facilitating leadership. Grantmakers for Effective Organizations offers two especially helpful resources (2007, 2008). You can hire people with expertise in systems thinking as staff or consultants. Another alternative is to develop competencies in-house with existing staff.

Closing

There are many ways in which foundations can align their programmatic approaches and systems with the behavior of the social systems they seek to improve. It is useful to begin by clarifying the reasons for applying systems thinking, then work over time to integrate systems thinking into the core functions of planning, implementation, and evaluation. One strategy we highlighted is to ask staff, board, grantees, and other stakeholders systemic questions that help transform how they think about their goals and approaches.

From a grantee's perspective, Ann Mansfield summarized the benefit of using systems thinking: "The tools helped us put a pause on the quick fix." In concluding why she chose the path of systems thinking for F&F, Linda Jo Doctor quotes W.K. Kellogg from a letter he wrote in the 1930s: "It is only through cooperative planning, intelligent study, and group action that lasting results can be achieved." Systems thinking provides frameworks and tools that can enhance philanthropy's efforts to achieve lasting systems change results.

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