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Jewlya Lynn

PolicySolve

Julia Coffman

Center for Evaluation Innovation

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Passing in the Dark: Making Visible Philanthropy's Hidden and Conflicting Mental Models for Systems Change

Jewlya Lynn, Ph.D., PolicySolve; and Julia Coffman, M.S., Center for Evaluation Innovation

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Introduction

The philanthropic sector largely recognizes that the problems foundations seek to address are often “stuck” in broader systems that reinforce those problems. These systems are complex and adaptive, with many interdependent actors and factors connecting in often invisible ways to create these problems (Dooley, 1996; Human Systems Dynamics Institute, 2016).

Seeing the significant role that systems play, foundations are supporting strategies to help shift the patterns keeping those problems locked in place. We define “systems change” as the practice of confronting the causes of problems rather than treating their symptoms (Catalyst 2030, n.d.; Meadows & Wright, 2008). In many ways, the increasing focus on systems change has been a paradigm shift, fundamentally affecting how foundations approach social change, their underlying assumptions, and their ideas about the predictability of change. In complex adaptive systems, pathways to change rarely can be known in advance, solutions cannot be imposed, small actions can produce big and unanticipated changes, and there is no one right answer (Patton 2011; Snowden & Boone, 2007). This perspective has required changes in philanthropic practices and led foundations to see themselves as actors in, and influencers of, systems.¹

Key Points

- While the need for philanthropy to focus on systems change as a way to scale and sustain impact is now widely accepted, we see the sector largely failing to recognize that there are different mental models for how to change systems. Sometimes the approaches foundations use are based on competing mental models or models that are not a good fit for the systems, problems, strategies, or practices they are using.
- We see two mental models for systems change being used in philanthropy: systems dynamics and systems emergence. Strategies that use the systems-dynamics mental model aim at points of high leverage in a system and predict the kinds of changes that will occur. Strategies that use the systems-emergence mental model look for parts of the system that are under-resourced and experiment with ways to disrupt or reinforce them.
- Our mental models have implications for our effectiveness. We need to be aware of which models we are using and why, and to build our capacity to match our strategy, grantmaking, and evaluation approaches to the nature of the systems we are working in, the size of the problems we are addressing, and the systems holding them in place.
- This article explores these two mental models, provides examples of foundation strategies that use each, and offers tools for aligning mental models with philanthropic practice.

¹ The term “systems change” can be problematic because it can reinforce unrealistic thinking about a foundation’s ability to intervene “on” a system as if philanthropy sits outside of the system, permanently change a system that is constantly shifting, and intervene in ways that change the system in only good ways without any of the unintended consequences that inevitably accompany work that is complex and unpredictable. Despite its challenges, we believe the term is worth using, as it clearly separates this work from more programmatic philanthropic strategies.

TABLE 1 Metaphors for the Two Mental Models

Systems Dynamics: A Boat on a Familiar River	Systems Emergence: A Canoe in Unfamiliar Wetlands
<p>Our navigators are heading down a river toward a destination on the horizon. While that destination is challenging to see at the journey's start, the navigators have a clear sense of their end point and its location.</p> <p>The river and its ecosystem have been mapped before, so while the river is still regularly changing, its general layout is fairly well known. The navigators focus on the journey itself, how to navigate the known challenges, and how to approach unexpected weather and other obstacles or opportunities.</p> <p>Sometimes other boats come alongside, headed in the same direction and close enough for dialogue. Insights and ideas are shared. Sometimes the navigator's boat is slowed by a rock or a low-hanging branch.</p> <p>Adaptations to make it through these patches are critical. Yet, our navigators remain committed to staying on the river and do not shift their chosen route. The journey is consistent in focus and direction and the adaptations help to keep the journey on track.</p>	<p>Our navigators are in a canoe that is working its way through unfamiliar wetlands. The desired destination is somewhere on the horizon, which looks different at different times of the day. The canoe navigates messy waters, constantly selecting among potential paths. It encounters surprises, good and bad, in the shallow reeds.</p> <p>At times, other explorers cross paths with the navigators and may paddle alongside them or get in the same canoe for a while. Sometimes these explorers' knowledge, insights, and actions lead the navigators to alter their path.</p> <p>The navigators pay attention to different signals during the journey, like listening to the call of a specific bird at the journey's start or watching for more subtle cues later on, like the feel of the wind or the sound of the reeds, as they better understand their wetlands ecosystem.</p> <p>The journey takes unexpected turns and requires adaptation, yet progress is made as the navigators build new understanding about their environment and work their way toward the distant horizon.</p>

We wholeheartedly support the sector's increasing focus on systems. But as strategists and evaluators, we see many foundations ignoring some basic truths:

- *Systems are different.* Some systems are more complex and less predictable than others. Some are older and have been the target of many change efforts; others are still developing and not well understood.
- *There are different mental models about how to approach systems change.* By mental models, we mean the deeply held beliefs, assumptions, and ways of seeing the world that we use to examine problems and generate solutions (Kania et al., 2018).
- *We need to align our models and approaches.* Systems-change mental models and our strategies, tools, and approaches to learning

need to match the systems in which we are working, as well as the nature, scope, and size of the problems we are trying to solve.

Some foundations are adopting one-size-fits-all approaches to systems change without first understanding the systems in which they are working and without making explicit the mental models they are using. As a result, foundation staff, consultants, and those working in systems can approach change in counterproductive ways. Entire bodies of work can get derailed because actors are operating with conflicting and often unspoken understanding about how systems change. We need to make our mental models visible so that we can address conflicts in our thinking and align our tools, organizational requirements, and ways of working with mental models so that we do not undermine the possibility of our desired changes.

Two Mental Models for Systems Change

In working with dozens of foundations over the past three decades, we observe that two main mental models for systems change are being used in philanthropy: the systems-dynamics model and systems-emergence model. (See Table 1.) These are informed by a sizable body of work built by theorists who have observed patterns that occur in natural and social environments and have generated ideas about how systems work. The sections that follow:

- Identify elements of systems change that are in common across the models.
- Describe each mental model in more detail, including their differences and implications for philanthropic practices.
- Pose questions to help reveal the mental models being used in systems-change work.
- Offer an example of when philanthropic practices are mismatched across two models.
- Offer two examples, one for each model, of when philanthropic practices are aligned.

While we compare the two models and emphasize how they differ so that their distinctions are clear, we want to avoid binary thinking about their application. Certain systems call for the use of one mental model over the other, but there are also systems and problems where the use of both models simultaneously is useful. Finally, these are imperfect models and many strategies use elements of both. We should not feel boxed in, but instead build our capacity to discern how different aspects of the two models can benefit the work and make our thinking explicit.

Both mental models recognize that society is made up of many systems that drive positive

and negative outcomes, and both hold that most larger systems feature nested subsystems that have narrower aims. Both pay attention to the visible and hidden dynamics that help to describe and make sense of systems and look for patterns that reveal how a system behaves and protects itself from change. (See Table 2.)

Some visible dynamics are well-established and may be resistant to change, while others may still be forming; some might be visible to everyone, others only to system insiders. *The Water of Systems Change* (Kania et al., 2018), one of the most popular systems-change resources used in philanthropy, describes visible dynamics (policies, practices, resource flows, relationships, power dynamics) and hidden dynamics (mental models). How a system functions is often influenced by hidden and conflicting dynamics (e.g., competing narratives), which limits our ability to build a collective understanding about a system and explore a wide variety of solutions.

While the two mental models may describe the features of systems in similar ways, their respective approaches to how and why systems change differ significantly.

The Systems-Dynamics Mental Model

The systems-dynamics mental model is the most common way of thinking about systems change in philanthropy.² Some theorists aim to simplify them in order to better understand how to change them and focus on a system's more predictable dynamics — how they were formed, why they persist, and how they can be changed. Their typical operating assumption is that these dynamics are relatively stable and can be difficult to change.

Strategy and Focus

Users of this mental model locate specific leverage points in systems where interventions

² We use “systems dynamics” as shorthand for a combination of two theoretical lines of thinking that are often merged in philanthropic practice (general systems thinking and systems-dynamics theory), along with other bodies of work that originated from or influenced these ways of thinking. Jay Forrester (1968) originated systems-dynamics theory, which seeks to make visible and model dynamics within systems, making it easier to intervene in them. Donella Meadows worked with Forrester and used many of the same concepts, but developed insights more commonly understood as general systems thinking (Meadows & Wright, 2008). She added a focus on interrelationships among system elements, emphasizing commonalities across disciplines and contexts.

TABLE 2 Common System Concepts and Definitions

Visible Dynamics	Hidden Dynamics	Patterns
<ul style="list-style-type: none">• <i>System goals:</i> Publicly stated drivers of policies, practices, resources• <i>Policies and practices:</i> Laws, rules, standards, behaviors• <i>Informal rules:</i> Unstated expectations that drive system behaviors and options• <i>Power dynamics:</i> Who has decision-making power, authority, and influence• <i>Empowerment:</i> Agency and power of those marginalized or harmed by the system• <i>Resource flows:</i> How and to whom money, people, and information are distributed• <i>Structures/infrastructure:</i> Built environments, materials, and other assets• <i>System actors:</i> Individuals and organizations Relationships: Quality of connections between actors	<ul style="list-style-type: none">• <i>Mental models/ paradigms:</i> Culturally based, deeply held ways of understanding the world; assumptions and beliefs that influence actions and that can limit thinking about options• <i>Myths/cultural narratives:</i> Unchallenged, often conflicting stories about people, problems, and solutions in the system• <i>Bias:</i> Interpersonal and structural biases privilege or harm different groups• <i>Unstated goals:</i> System goals that underlie policy and resource choices.	<ul style="list-style-type: none">• <i>In visible and hidden dynamics:</i> How they emerged and persist, what has disrupted them, how they influence each other• <i>In system inputs:</i> Interconnections with other systems and their influence, including larger patterns (e.g. demographic or resource shifts)• <i>Delays:</i> Time between specific system changes and their impacts• <i>Positive feedback loops:</i> The strength of loops and the gain that results• <i>Negative feedback loops:</i> The strength of loops relative to impacts they seek to correct against• <i>Knowledge base:</i> Shifts in evidence and experiential knowledge about the problem and its solutions

Adapted from Lynn (2024), which draws on Farnham et al. (2020), Inayatullah (2017), Kania et al. (2018), Lynn (2023), Meadows (1999), PowerCube (2011), Stacey (1996), and Systems Sanctuary (2017).

can be effective (Meadows, 1999). They look for “high leverage” points where focused effort and resources to drive change can have an outsized and desired effect on the system.

For many systems-change efforts that use this model, high leverage points focus on feedback loops (or causal loops), or parts of the system where one dynamic feeds another, which then feeds more of the first dynamic (e.g., as American voters become more polarized, media serving voters become more polarized, which

leads to more polarization). Change efforts typically try to disrupt vicious feedback loops or reinforce virtuous ones.

Common leverage points in philanthropic strategies include:³

- policy and legal changes;
- changes in who holds power and who interacts with power brokers, through leadership development strategies, engagement of

³ Many of these align with a widely used resource in philanthropy (Meadows, 1999) on leverage points for intervening in systems. These often take a long time to change and require collaborative work that adapts over time. They are helpful to the systems-dynamics model because they predict a leverage point’s importance and suggest that sustained focus on that lever will have impact.

Overall, this approach relies on many predictions — about points of high leverage, expected outcomes of interventions, scaled impact of multiple outcomes, and the ideal visible and hidden dynamics of a healthy system.

proximate voices, or more direct electoral work;

- narrative changes, often using communications research and strategies, with framing aimed at opening willingness in the system for other changes;
- resource changes, influencing partners to invest in parts perceived as under-resourced;
- on-the-ground practice changes, such as supporting innovators or shifting the behaviors of early adopters within an industry;
- capacity-building and field-building efforts or other ways of strengthening nonprofits and people working on an issue, including bolstering their collaborative capacity; and
- deployment of specific programs or funding of specific capacities designed to fill a system gap (interventions over which the foundation or grantee has significant control).

Many philanthropic approaches to network and field-building strategies use a systems-dynamics mental model. For example, foundations may try to build a network among advocates and funders to advance a particular system goal, such as clean energy. The philanthropic leverage point is the effectiveness of the field of advocates and other actors. Investments assume that changing how this field or network operates will increase their influence in the system.

Grantmaking and Other Supports

Grants management associated with both models might include some of the same approaches — programming, general operating support, or rapid response. But the assumptions underlying their use differ. With systems-dynamics, program grants help to ensure work on specific leverage points. General operating support might go to a grantee working on a key point of leverage. A rapid response grant might respond to a disruptive moment when that point of leverage is particularly fragile.

With this mental model, experiments may reveal how to intervene on a leverage point. Experiments are typically designed to find ways of replicating what works best, and can range from testing out grantee partnerships to exploring strategies the foundation implements directly.

Outcomes and Adaptation

A strategy using the systems-dynamics mental model typically features a defined sense of the outcomes if changes to leverage points are successful. Overall, this approach relies on many predictions — about points of high leverage, expected outcomes of interventions, scaled impact of multiple outcomes, and the ideal visible and hidden dynamics of a healthy system.

While strategists who use a systems-dynamics model make predictions, they also acknowledge the uncertainty in their assumptions. They anticipate the need to adapt as they implement and pay attention to other influences that support or oppose their positions. However, strategy adaptations typically focus on strengthening their ability to influence at chosen points of leverage, rather than on questioning whether those leverage points remain viable to change.

Learning and Evaluation

With a systems-dynamics model, change efforts can apply evaluation approaches that are common to programmatic evaluation as well. Theories of change, outcome pathways, and impact can be predicted and measured, and hypothesized causal relationships can be examined. Systems-change efforts carry more uncertainty and are much less linear than most

programmatic strategies, however, so using evaluation to test assumptions is critical.

Not all systems-dynamics strategies are set up to be highly adaptive. The frequency and intensity of iterative learning processes should match expectations for adaptation. When rapid cycle learning is used with a systems-dynamics strategy that is not set up to adapt at the same speed, a disconnect can occur that might decrease buy-in for learning because its perceived costs exceed its value and reduce the willingness of teams to adapt when learning moments are needed.

Useful Tools

With this mental model, strategists commonly use systems mapping to both understand a system and to identify possible leverage points. Other tools used to support systems-dynamics strategies include causal loop diagramming (Sterman, 2000), theories of change (Connell et al., 1995), system lever typologies (e.g., Meadows, 1999), field-building assessments (e.g., Lynn, 2014), and social network analyses.⁴ These tools are sometimes used only once to inform system understanding before more traditional evaluation approaches are deployed. Other times they are repeated to determine if change is occurring. Causal evaluations of these strategies tend to use theory-driven methods like contribution analysis (Mayne, 2012), process tracing (Collier, 2011), or realist evaluation (Van Belle et al., 2021).

The Systems-Emergence Mental Model

Systems emergence is the second mental model being used in philanthropy, though to a lesser extent. It may be used by key strategists or teams, but typically it is not used by whole foundations. We devote more space to explaining this model because it is less understood and because we think it is underutilized and not well supported in philanthropy.

Theorists aligned with the systems-emergence model draw on complexity, critical race, social capital, and ecological systems theories, among others.⁵ Rather than try to simplify systems and predict how change will happen (with theories of change and leverage points), they embrace their complexity. They draw on the study of natural systems (e.g., ecosystems, plant anatomy, social systems within nature), recognizing emergent properties in many real-world systems. They see the future as a “dance between patterns and events” with attention to the history of systems behaviors and the role of events in disrupting them (Boulton et al., 2015, p. 29).

While terms here are Western in origin, it is the culturally embedded approaches to systems thinking in Indigenous communities that align most closely with this mental model and have significantly informed this way of thinking about how systems change.⁶ Some that align include:

- taking a holistic view of a system and not trying to parse or simplify it;

⁴ Systems-dynamics tools often are grounded in another mental model — that humankind has some level of control over the world. These tools relate to management, technology, knowledge, and planned action (Klein, 2021).

⁵ *Embracing Complexity*, by Jean Boulton, Peter Allen, and Cliff Bowman (2015), covers how to understand complexity and intervene to change systems amid complexity. Other resources include Margaret Wheatley (2023) on adaptive and collaborative approaches for complex challenges, with attention to the decline of civilization and the importance of looking at patterns that brought us here while relying on creativity and leadership to move forward; leading critical race theorist Patricia J. Williams (2021) on exploring complexity from the personal (how our brains try to order the disorderly) to the political and social (how narratives and legal structures reinforce patterns), which help us to understand the “live wire” of race; Thomas Homer-Dixon (2023) on applying complexity science to climate change, environmental conflict, and other global threats; and John Holland (1992, 2014) on how complex adaptive systems draw on our understanding of nature and apply to social systems and their self-organizing nature.

⁶ Indigenous approaches to systems thinking and complexity also add to the ways in which philanthropy understands systems change: honoring traditional knowledge and many ways of knowing to understand the system and how it is changing; rooting system understanding in cultural and spiritual beliefs; paying attention to people within the system and how they are connected to the land, ecosystem, and nonhuman actors; and attending to harmony with the environment (Common Ground, 2022; Goodchild, 2022; McIntyre et al., 2023). Even where Indigenous and Western concepts overlap, the Indigenous perspective and pathways to change can differ: Some Indigenous thinkers recognize that it is important to “turn the noise down on the dominant system” so that we can hear from more hidden and marginalized systems (McIntyre et al., 2023, p. 1963).

Systems-emergence work does not attempt to describe the characteristics of a healthy system, but it often does describe the outcomes the system should be able to achieve (e.g., how it looks for those who are marginalized when the system meets their needs). This requires deep, regular system sensing, examining what drives bad outcomes and seeing places to intervene. Systems-emergence strategies often focus on a part of the system that seems ripe for attention, even if the outcome of adding more resources or pursuing a specific change is not clear.

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- acknowledging the need for adaptability and the self-organizing nature of systems;
 - recognizing that there are many systems and that they interact, not trying to bind thinking to a specific or very visible system, or to tightly define a system's boundaries;
 - pattern finding, seeing the past, present, and future as deeply connected; and
 - bringing decision-making about the system to the community — that is, localizing change (Common Ground, 2022; Goodchild, 2022; McIntyre et al., 2023).

Often, theorists who use this mental model see systems as made up of interdependent and nested subsystems with their own behaviors and interactions (Holbrook, 2003). Some of these are highly complex and others are more predictable. By paying attention to these subsystems, enough conceptual clarity may be possible to discover places where impact can be achieved.

Strategy and Focus

Systems-emergence solutions are nonlinear and decentralized; change requires finding places to experiment within subsystems to shake them up and cause ripple effects (Boulton et al., 2015). Systems-emergence work does not attempt to describe the characteristics of a healthy system, but it often does describe the outcomes the system should be able to achieve (e.g., how it looks for those who are marginalized when the system meets their needs). This requires deep, regular system sensing, examining what drives bad outcomes and seeing places to intervene.

Systems-emergence strategies often focus on a part of the system that seems ripe for attention, even if the outcome of adding more resources or pursuing a specific change is not clear. For example, a systems-emergence philanthropic strategy might:

- Find and tap into the “green shoots” of innovation, or the places where novel solutions are already being explored. Unlike a systems-dynamics model, this is not about finding best practices to scale — it is to learn alongside emerging ideas.
- Fund underutilized or less explored parts of the system to see what new ideas will emerge, including the parts that historically have been hidden from view.
- Diversify the system's leadership by supporting people from nontraditional backgrounds to influence it or creating opportunities for individuals and organizations to self-organize.
- Support local organizations in finding contextually appropriate solutions and deepen

resources where solutions find traction. This is different from funding local organizations to do more with existing programs that their funders have decided to support.

- Engage with those affected by problems in disruptive processes to surface innovations (e.g., through games, alternative histories to explore the past, or futures exercises).
- Strengthen the reach and influence of narratives that emerge from communities, including through communications and mobilization (which differs from engaging in communications research to find the right narrative and language to shift narratives at scale, a solution more typical to systems-dynamics strategies).
- Deploy rapid-response funding for opportunities discovered by partners closest to problems (Holbrook, 2003; Kurtz & Snowden, 2003; Wheatley, 2023).

In philanthropy, many systems-emergence strategies aim to strengthen an ecosystem of actors, an approach recognizes that complex systems have powerful self-organizing dynamics that lead semi-independent and diverse agents to interact in ways that can be helpful or harmful (Miller & Page, 2007; Zimmerman et al., 2001). Unlike network and field-building strategies that use a systems-dynamics model and predict how actors will work together, systems-emergence strategies are more organic and support actors to find their own change opportunities.

Systems-emergence strategies have a different orientation to shifting power. Unlike a systems-dynamics strategy where leverage points to shift or build power are identified, assumptions about power are neither simple nor

direct and many ways of influencing power are tried. Systems-emergence strategies grounded in equity will often explore power seeking to redistribute it, including “reckoning with the past” and its relationship to current power dynamics and harms (Petty & Leach, 2020, p. 77). As power shifts, the experiences of the newly empowered add to collective understanding about how power works in the system and how to change it.⁷

Grantmaking and Other Supports

With the systems-emergence model, a general operating grant might be tied to a partner who shares an interest in systemic change, is values- and vision-aligned, and is working in adaptive ways. Program grants in this mental model often enable time-based, specific experiments that may lead to new experiments, expand the existing one, or eventually end the relationship. Rapid response grants can act on new learning as it emerges instead of waiting for a future grants cycle.

Using a systems-emergence mental model with an experimentation approach does not mean grants are smaller or that more are needed than with the systems-dynamics model. Large grants might be used to support partners in their own experiments or learning alongside the foundation.

Outcomes and Adaptation

Strategies based on systems emergence treat outcomes as less predictable and depend on rapid feedback, either informal (e.g., grantee-program officer relationships) or more formal (e.g., developmental evaluation or participatory learning). Feedback can lead to big shifts, such as abandoning a line of funding, or small ones, such as adding grantees to an existing collaborative.

⁷ This focus on power and self-organizing comes in part from theorists who focus on the notion that human relationships are part of the “capital” of a system, and that social capital affects how the system operates. Systems-emergence strategies in philanthropy are often grounded in Granovetter’s (1973) concept of “weak ties” that connect us to people outside of our own circles and give access to different information. Changing these seemingly small human assets in a system can be as valuable as more visible changes to institutions and resources: In public policy work, for example, shifting weak ties between diplomats (systemic change across countries) or between regulators and the regulated (systemic change within countries) can be as important as formal system changes. Much of the systems-dynamics work that looks at relationships focuses more on the visible connections among potential influencers (e.g., advocacy fields, social movements, organizational networks) and formal relationships within the system (e.g., who sits at decision-making tables; who is appointed or hired into key positions).

Using Experiments with a Systems-Emergence Mental Model

With the systems-emergence model, an experiment can be understood as a feedback loop — an intervention followed by learning about how the system is changing and what other actions might be useful. Experiments may or may not lead to scaling and replication. Even a successful experiment may be concluded if the system has changed in durable and meaningful ways or if new pathways have emerged.

Experimentation with this model is often community-based and participatory. Hamdi's (2004) work in urban planning in Egypt involved working with communities in informal settlements, engaging them in design and planning, and encouraging them to evolve organically. He began by involving residents in simple upgrades to sanitation or housing conditions, small interventions that allowed for trust to develop and made larger changes possible.

Learning and Evaluation

Systems-emergence adherents believe that experimenting with today's system is just that, an experiment, with often unpredictable results. As such, learning and evaluation is essential. Foundations often engage in embedded and ongoing learning practices, and it is common to see learning happening with external partners and grantees. Instead of learning focused on a planned destination, it is a journey of understanding the system better to find the next point of action.

Evaluators of systems-emergence strategies listen alongside strategists, capture insights, and seek evidence of systems change while exploring how it emerges. Michael Quinn Patton (1997, 2011) coined the term “developmental

evaluation” to explain the role of an evaluator who brings a systems-emergence mindset and acts as an embedded “critical friend” to the strategy team.

Evaluation approaches to understand causal relationships with this model use methods to make sense of emergent outcomes, such as outcome harvesting (Wilson-Grau, 2021), most significant change (McDonald et al., 2021), and the Qualitative Impact Assessment Protocol (Remnant & Avar, 2021). These methods discover outcomes, often in participatory ways, and investigate how they came about.⁸

Useful Tools

Tools like system mapping and theories of change are less useful for strategies that use the systems-emergence model as the relevance of their outputs quickly decreases. This is because the system is understood to be always changing (due to system interventions and other factors) and because of the need for rapid learning. They might be used upfront to help frame a shared understanding, but are rarely used in an ongoing way. Other tools include:

- Emergent strategy (Brown, 2017; Mintzberg et al., 2005) treats strategy as dynamic rather than as only planned and expands who has the agency to engage. While it can be used with the systems-dynamics model, it is particularly relevant to this model, which depends on steady listening and adaptation.
- The Cynefin framework (Snowden & Boone, 2007) describes systems as simple, complicated, complex, or chaotic and is widely used to help find the parts of a system that need different types of interventions.
- Emergent learning (Darling et al., 2016) offers principles and practices that help system

⁸ A favorite metaphor from the complexity world is jazz improvisation, where innovation and learning amid complexity require “(1) escaping the limits of one’s own competently patterned routines, (2) embracing errors and turning them into opportunities, (3) establishing minimal structures that permit maximal flexibility, (4) achieving a state of dynamic synchronization (a swinging “groove” or a “flow” experience), (5) combining materials into a sort of retrospective sense-making, (6) participating in a community of practice, and (7) playing both leading and supporting roles (soloing and accompanying or ‘comping,’ respectively)” (Holbrook, 2003, pp. 6-7). In philanthropy, these characteristics have implications for organizational and partnership practice and even how program officers show up in the work.

actors learn and adapt together primarily using experiential knowledge.

- Complexity aware monitoring (Momentum Knowledge Accelerator, 2021) is a complement to traditional monitoring that accounts for the dynamic nature of complex systems. It is useful when there are many competing variables, causal pathways to outcomes are unclear, and system actors have diverse perspectives.
- Futures thinking can include tools like the Three Horizons Framework (Curry & Hodgson, 2008), scenario mapping, futures stories, yarning (Atkinson et al., 2021), and policy gaming and other games (Geurts et al., 2007).
- Iterative and participatory systems sensing involves community members in documenting the nature of a system and problem. This type of learning has been resource intensive to implement, but technology has transformed this space through mobile phones (Goldman et al., 2009) and artificial intelligence-based platforms (e.g., Mali, 2023).

Which Mental Model Is Being Used?

Some systems-change strategies may employ both models simultaneously. Some systems have subsystems that are more predictable, where strategists can be confident that pushing on certain leverage points will lead to positive results. Those same systems may also have subsystems or dynamics across the larger system that are less familiar or in a state of flux, and where more experimentation is necessary and with no expectations for scaling or replication. Some foundations use policy advocacy strategies while also experimenting with efforts to change the composition and power dynamics of actor ecosystems in those systems. If both mental models are in play and there is a clear rationale for using both, then grantmaking practices and expectations around outcomes and learning should align to the distinct efforts. (See Table 3.)

Which Mental Model Does Trust-Based Philanthropy Use?

Trust-based philanthropy is a values-based approach that addresses the inequitable power dynamics among funders, nonprofit partners, and the communities they serve (Salehi, 2020). It works to change philanthropic practices by redistributing power toward grantees and communities so foundations can act with more humility and with mutual accountability.

Trust-based philanthropy is often implemented using a systems-dynamics mental model. The leverage point is the way that philanthropy works with those most proximate to social problems. The intervention is to change the nature of the funder-grantee relationship, with clear predictions about what is enabled in the system when this change happens.

Trust-based philanthropy can also use a systems-emergence orientation. But in this case, it is a question being explored alongside many others about the system and is not seen as a leverage point. Rather, it is a process of changing the relationship between funders and grantees and learning from those changes, which creates an environment where they can better work together on systemic change and then see what happens when their power dynamics shift.

When Mental Models Conflict in Philanthropy

Our mental models should match the systems being changed. Reasons for using a particular model should not be driven solely by what has been tried in a different system, what tools are already available, or by standardized accountability requirements that apply across the foundation regardless of strategy approach. Philanthropy is still learning how to best work with complex adaptive systems. We see both mental models at play in systems-change efforts, and we see mismatches between mental models and philanthropic practices.

Some foundations are applying a systems-dynamics mental model to all of their systems-change efforts, but some systems are too

TABLE 3 Exploring Mental Models: Comparing Their Central Features and Differences

Systems-Change Actions	Your mental model might be grounded in <i>systems dynamics</i> if:	Your mental model might be grounded in <i>systems emergence</i> if:
Defining and bounding the system	You have articulated the boundaries of the system, while recognizing most systems are not cleanly bound.	You articulate a problem but do not define the system because you assume systems have blurred, overlapping edges (but acknowledge that some subsystems may be more distinctly definable).
Mapping and understanding the system	You seek to describe what is most important about how the system behaves and what it includes. You define what the system could look like if it was healthy, and identify the system's virtuous, vicious, and balancing feedback loops.	You acknowledge and continuously seek the system's complexity and make visible its patterns. You look at the system as a complex whole rather than try to break it into specific behaviors or feedback loops.
Exploring the past	You are interested in finding feedback loops in the system that have existed over time, making something either better or worse. Your intent is to see how system components have interacted over time and influence one another so that opportunities to intervene and change these interactions surface.	You look for how small changes and events have led to large, unpredictable consequences, recognizing that causality in systems is not straightforward and the same action at two times can have different results. You explore the system's origins — why it emerged, who it was intended to benefit, and the original models behind it.
Developing strategy	You identify high-leverage points to intervene, looking for interventions where expected impact is greater than the effort it will require to intervene.	You experiment in a variety of ways in places that are ripe to disrupt and in smaller parts of larger systems where patterns can be better understood and change is more predictable.
Level of uncertainty	You feel confident about identifying clear system leverage points. You have comfort in predicting pathways to successful systemic change, while also knowing your choices will benefit from ongoing learning and adaptation.	You believe identifying clear points of leverage is unlikely and instead know that you need to act, learn, plan, and then act again. While initial ideas were enough to get you started, you expect many will not remain true over time.
Monitoring change	You predict how an intervention will change the system and then (perhaps) monitor those changes. You see outcomes as more predictable because you are engaging at high-leverage points.	You examine outcomes as they occur and (perhaps) capture what emerges regardless of intent. Because systems are ever changing, some changes may be predictable, but others unexpected.
Integrating learning	You use learning for targeted adaptations, looking for expected outcomes and adjustments when the strategy is off course. You attend to causal pathways and assess how changes really happened.	You integrate learning as core to strategy, recognizing that systems change as we act, and we need to listen and respond. You attend to causal pathways by looking for emergent outcomes and making sense of how change efforts and the system contributed to them.
Identifying who owns learning	You engage evaluators and learning facilitators to develop theories of change, frameworks, and other tools, but do not integrate them into day-to-day strategy making.	You take ownership of learning and evaluative processes and integrate them into day-to-day strategy (tapping into experts only as needed). You work on formal/informal learning with grantees or use an embedded evaluator.

complex for the types of predictions foundations are making about how to intervene. These foundations might be newer to systems work and therefore more risk-averse to experimentation. They might be overconfident about what is and knowable. The flip side is foundations that use the systems-emergence model and treat everything as complex, which may result in their missing more predictable change opportunities.

Other foundations are applying one mental model during strategy development and another for evaluation and learning. In recent years, for example, more foundations have been doing systems-change work that falls solidly within the systems-emergence model. But the approach to reporting almost always is aligned with a systems-dynamics model. Boards tend to favor clear predictions, quantitative metrics, and multiyear approvals that require commitments to grantees and how the work will be implemented, and thus can draw inappropriate conclusions about supporting a systems-emergence strategy because they don't think about the work as emergent.

We also see foundations applying a systems-emergence model when funding communities to self-organize, select priorities, and shift power. Yet, to meet typical strategy and accountability expectations, they feel compelled to develop frameworks that explain the work across many communities, use reporting tools that collect standardized data, and apply practices that retain funder control over strategy. Program staff, grantees, and evaluators can sense that resources have been wasted when these tools are used, fail to work, and then are rebuilt and tried again.

When Mental Models Conflict: The Building Healthy Communities Initiative

By Julia Coffman, adapted from Kim Williams-Pulfer (2023)

The California Endowment's 10-year Building Healthy Communities initiative experienced this kind of mismatch during the initiative's early years. The initiative had a goal of transforming 14 California communities devastated by health

inequities into places where all people can thrive. While the foundation was attempting to move toward a community-driven approach and had expressed the desire for communities to drive their own change processes, during initial planning it requested that BHC sites use extensive logic modeling to detail connections between activities and outcomes. Many of the communities rejected the process as too rigid.

The foundation struggled with wanting to ensure the initiative had sufficient strategic coherence while also wanting to give each community more power over decision-making. In response, it developed a series of outcome frameworks to guide BHC strategy and its measurement and rolled them out to communities to use in their planning. Local sites also saw these efforts as burdensome and were frustrated that the approach did not speak to their unique needs.

About halfway through the initiative, the foundation better aligned its practices with a systems-emergence mindset. A final framework was developed collaboratively based on the dynamics of the work happening in communities, and it resonated with BHC grantees and communities because their work drove its development and they could clearly see themselves in it.

The systems-emergence mental model, which BHC was using in its approach to seeing grantees as systems strategists, did not lend itself to stable frameworks. In fact, these kinds of tools can interfere with the learning inherent in emergent work. Resources can be committed to trying to get these things "right" across communities instead of an approach that gives room for adaptation while surfacing enough information for strategic coherence and accountability.

When Mental Models Are in Sync in Philanthropy

We have also seen foundations that are fully aligning their mental models to fit the systems they are working in, their strategies, and their approaches to learning and adaptation. The examples that follow are from two foundations that are part of the Omidyar Group. All

foundations in this group have been using an active systems-oriented practice for many years, where leaders across the organizations can come together and grapple with their approaches, along with consultants who support specific practices such as participatory systems mapping. Even with this common infrastructure, the models underlying the foundations' systems-change strategies are varied.

Systems-Dynamics Mental Model: Ending Slavery in the Seafood Supply Chain

By Ame Sagiv and Jewlya Lynn

Humanity United is more than a decade into a strategy to decrease slavery and forced labor in the seafood supply chain. While it recognizes the supply chain and market for seafood is global, its strategy began with a focus on Thailand and expanded regionally after years of work that showed significant progress, but that also faced barriers influenced by regional dynamics.

The strategy articulated four leverage points: 1) industry regulation, 2) worker organizing and empowerment, 3) safer migration pathways, and 4) business practices/corporate accountability. For each leverage point, the strategy is interested in affecting organized dynamics, or the stable patterns, in how governments, industry actors at different levels of the supply chain, nongovernmental organizations, and workers behave, including their motivations and needs.

The strategy has a theory of change with pathways and outcomes understood to be foundational to long-term change, articulates how a transformed system might look, and names assumptions about the larger context and how it enables and inhibits change. In the context of a systems-dynamics approach, this is also a deeply emergent strategy with real-time micro-adaptations, quarterly retreats for larger adaptations, twice-yearly systems-sensing retreats to explore how the system is changing more broadly and trends signaling future shifts, and an annual session to revise assumptions and outcomes. While an external partner facilitates the systems-sensing retreats, program staff lead the

soliciting of insights, knowledge management, and synthesizing.

New learning is captured in a visually organized learning log organized by theory of change elements and older insights are revisited as needed. Light-touch analysis occurs on potential trends, but primarily looks at signals of near-term shifts. For example, during the pandemic, assessments of how the system was changing looked for rapid shifts in patterns, attending to the increasingly disorganized dynamics that were a natural part of that period.

Grantee reporting requirements have varied as Humanity United's reporting needs for the board have changed, yet learning that guides adaptation is informed by many sources, including relationships with grantees and other stakeholders (including those opposed to their aims), "hot spot" on-the-ground partners, other grantmakers, research on specific leverage points and countries, and site visits to communicate with workers, businesses, and government actors.

During deep-dive and multiweek site visits, the team can see into parts of the system that are often hidden. For example, in Taiwan and Indonesia, the team participated in sessions where a fisherman's association discussed the severe pressures they are facing that lead to labor exploitation (and to suicides among vessel owners). Separately, the team talked to workers who are beginning to organize about their experiences on long-haul fishing boats and in processing factories. These varied and often opposing sources of insights and the frequency with which they are solicited allows for sensemaking and adaptation in real time instead of waiting for more formal mechanisms such as grant or evaluation reports, formats that struggle to capture the whole picture. Notably, sensemaking and adaptation are not just the sphere of the foundation — the on-the-ground organizations are also listening and adapting in response to their local context.

The strategy is relatively stable at a high level with its set of leverage points and its core

TABLE 4 Seafood Supply Chain Strategy and Learning Elements (Systems-Dynamics Model)

Strategy Features	Learning Mechanisms
<ul style="list-style-type: none">• Consistent and long-term focus on four high-leverage points• Theory of change and assumptions (revisited annually)• Expected outcomes (revisited annually)• Clear vision for a transformed system	<ul style="list-style-type: none">• Close relationships with grantees• Space for grantees to adapt their strategies• In-country “hot spot” partner informants• Deep-dive site visits• Commissioned research on focused topics• Quarterly implementation retreats• Twice-yearly systems sensing retreats• Annual assumption-testing session• Visually organized learning log• Learning processes led by program staff (not outsourced) with occasional facilitation support

learning practices and tools. It is also quite emergent with micro and larger adaptations. It is an excellent example of how the systems-dynamics model can help to make sense of a large, geographically dispersed system with hidden elements. (See Table 4.)

Systems-Emergence Mental Model: Liberatory Education in Brazil

By Nathalie Zogbi, Fabio Tran, Samuca Emilio, and Jewlya Lynn

Imaginable Future’s Brazil team, understanding education to be a practice of and for liberation, is working to help transform that system. It began in 2019 with a participatory systems-mapping exercise, identified points of leverage, and constructed a set of strategies. Within a year of implementation, however, the team reported that the greatest value from these actions was finding partners to help them discover how to best engage in the system.

The team convenes a monthly group of Black and Indigenous leaders and educators that talks through what is happening in the system and opportunities to act, and seeks out voices that often are not heard, including organizations led by Indigenous and Black Brazilians. They

developed a system-sensing script for these calls, while also allowing more free-flowing exploration to ensure it gathers information about how grantees can lead and contribute to systems change.

The team also supports a “systems-sensing table” where six grantees and the foundation work together. The table’s purpose is to make sense of the system, describe pathways for changing it, and discover how the work is developing agents of systems change across many communities. At this table, grantees explore the education system’s more organized and visible system dynamics and its hidden parts (norms, power dynamics, biases, and mental models).

Over time, the team has developed a regular learning practice that brings all these types of information together and looks at what is happening both within grantees’ sphere of influence and more broadly in the system. It uses a visual learning log to record and explore hypotheses about how change happens, ideas and insights, and other emerging questions. Program staff developed this learning process with support from a coach who introduced tools they might use (that they then adapted). They lead, implement, and use the results of their own learning

TABLE 5 Brazilian Education System Strategy and Learning Elements (Systems-Emergence Model)

Strategy Features	Learning Mechanisms
<ul style="list-style-type: none">• Hypotheses that are steadily developed, tested, and changed• Assumptions about the system, the context, and cause-and-effect relationships• Experimental interventions in subsystems within the larger education system• Support for strong partners who develop strategy alongside the team	<ul style="list-style-type: none">• Participatory systems mapping• Participatory system-sensing table (six grantees) that includes a grantee-led causal pathways evaluation focused on emergent outcomes• Advisory group including Black and Indigenous leaders and educators (meets monthly)• Community of practice of Black and Indigenous leaders• Visually organized learning log• Learning led by program staff (not outsourced) with periodic facilitation coaching and an evaluation team that provides technical support

processes without relying on separate learning and evaluation consultants or staff.

The team’s systems-sensing work has also gone deeper into exploring causal pathways, examining whether and how the team and its grantees are contributing to change and under what conditions. The team uses participatory evaluation to understand how programs that invest in community members (through leadership- and network-building models) are contributing to systems change. It is exploring the most proximate outcomes through an outcome harvesting process that team members conduct themselves with technical assistance from an evaluation team. The six participating grantees are setting the direction for this work, which includes describing the pathways by which they think the system will change, their own contributions, and their questions about how change is happening. While this work is more nascent, the foundation already is discovering places where its causal assumptions are being challenged. This is helping the foundation to consider where it is most needed as agents of change and to pay even deeper attention to the system’s historic and current patterns.

During its first year of work, the Brazil team learned from Black leaders about how leadership within the Black community emerges, the relevance of more formal leadership development

programs, and the ways in which the system is harming and could better support Black children. This learning was strengthened by a decision to support an ongoing community of practice with Black and Indigenous leaders who jointly produced a systems map identifying the patterns behind Brazil’s structurally racist education system.

As they developed their understanding of this part of the system, team members also began to hear more about the needs of Indigenous students. Their initial investments were exploratory, helping them to have greater proximity to the needs of the communities and see how education policies helpful for other marginalized children have been harmful in Indigenous communities.

The team is also discovering that the education system can be transformed from the learnings, practices, and cultures of the most marginalized and often hidden people and communities in the system. This aligns with an insight the team has been holding central to its decision-making — that education can be a practice of liberation — which leads team members to ask how education is supporting those most oppressed. As the team phrases it, “We understand that the Quilombola (Black) and Indigenous perspective, which many see as on the system’s borders, has

much to contribute to improving education as a whole.”

This strategy has never had a theory of change. Rather, the team surfaces hypotheses based on what it is seeing and then responds in new ways. Instead of always aiming for specific outcomes, it acts in light of what it is learning while remaining grounded in a set of underlying values.

The original systems map sought to organize and simplify Brazil's complex education system. But the process the team uses now actively uses a systems-emergence lens as it examines the system's less visible, less predictable, and more self-organized dynamics. (See Table 5.) Through experimentation (e.g., leadership programs), listening (e.g., the advisory group, systems sensing, and the participatory systems-sensing table), and learning from Black and Indigenous leaders, team members have found new opportunities to strengthen parts of the larger system.

Comparing the Models in Practice

Both strategies benefit from foundation cultures that give the teams room to explore new partnerships and practices and to adapt as they go. Their organizations also allow them to take risks, working outside their original plans and supporting new ideas from people who are often marginalized. The two strategies also benefit from staff who are natural systems leaders, pattern finders, and learners, and who take on roles that are often outsourced in philanthropy, such as convening their partners and leading their own learning practices.

Yet, these strategies differ in the stories of progress they can tell. The seafood supply chain strategy is better able to tell a story that follows a progressive pathway forward even as the team navigates twists and turns in its predefined high-leverage areas. While the reporting for that strategy no longer requires predefined metrics, the story builds on the previous year's work and has relatively predictable progress signals.

The Brazilian liberatory education strategy's story of progress and impact, with its multiple areas of experimentation, emergence, and steady

The Two Mental Models and Equity

All three examples of mismatched and aligned mental models are large-scale efforts designed to address deep inequities across broad geographies. All three integrate some form of power shifting and use inclusive or participatory practices. In our experience, neither model leads to strategies that are more or less likely to advance equity or create space for equitable change. Rather, equity is a value that must be brought to systems-change work, from the individual to the interpersonal and from the institutional to the system (Petty & Leach, 2020).

While the mental model itself may not determine a change effort's commitment to equity, whose mental models are centered in a systems-change strategy requires critical attention. When foundations center their own mental models (intentionally or not) and then fund system-change agents without listening to how they understand systemic change, they reinforce inequitable power dynamics and unintentionally impose their own orientation toward change.

flow of insights, looks less linear. Reporting will look like a pathway of discovery about how the team is building a network of actors within historically marginalized and under-resourced spaces, and how systems sensing and listening are being used to learn about parts of the system that are often hidden. A mix of outcomes will emerge from the team's experimentation based on what it is learning (e.g., cultural shifts within communities, leadership shifts within government, policy and practice shifts within the education system). Part of the story will be about experiments ended for various reasons (e.g., the desired impact occurred, new pathways opened, the experiment is advancing change). Other positive stories will also emerge from activities the team is supporting that may not change the system but that demonstrate positive results (e.g., more programmatic outcomes, such as shifts in education practices in a given classroom or outcomes for a set of students in a given school).

Conclusion

Neither of the systems-change mental models is inherently better. Our point is that if we do not make our models visible and align our practices to them, then unintentional disconnects will occur and our work will suffer. We suspect these two mental models are just a start. Philanthropy is likely using other models and variations of these two. We need to collectively begin to articulate and interrogate our mental models and to make more models visible.

Our parting calls to action are for five groups working on systems change in philanthropy:

- Foundations should strengthen how they respond to the mental models in use across different strategies, their alignment with the systems where work is occurring, how organizational practices align with mental models, and how leadership and implementation staff view change.
- Grantees should explore how their models fit systemic problems and make them visible to partners and funders to better navigate points of disconnect and maximize impact.
- Strategy and organizational change consultants should interrogate how they typically inhibit or enable the two mental models and identify how to more intentionally support philanthropic partners to identify their models.
- Evaluation and learning consultants should interrogate how their approaches align, make change visible, and risk inhibiting change for each mental model, and assess whether the intensity, frequency, and focus of learning practices matches the types of adaptation possible, recognizing that not all systems-change strategies will benefit from intense and frequent learning, but that some will fail without it.
- Systems conveners within nonprofits, philanthropy, and consulting should explore how the two models fit with the systems they are working in and the problems they are trying

to solve, seeking to understand how to leverage one or both models to support change.

Our final call to action is for all of us working on systems change in the philanthropic sector. We need to make what we are discovering about how change is really happening using these mental models visible beyond our own organizations. Our stories of systems-change efforts, including the mental models we brought to them and how change did or did not happen, need to be shared. Theorists have helped us to discover ways of thinking about systemic change, but as agents of change, we can refine our collective understanding, and even disrupt it, as we learn from our work to change the world for the better.

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Jewlya Lynn, Ph.D., is CEO of PolicySolve. Correspondence concerning this article should be addressed to Jewlya Lynn at jewlya@policysolve.com.

Julia Coffman, M.S., is director of the Center for Evaluation Innovation.