



ANNOTATED TABLE OF CONTENTS

Multisolving: Creating Systems Change in a Fractured World

By Elizabeth Sawin

The Introduction explains how multisolving uses an investment of time, money, or political capital to solve multiple problems. In a time of converging crises, it is an exciting possibility. Could we solve problems in ways that solve other problems at the same time. The introduction also describes the teachers and experiences that moved the author from a monosolver to a multisolver. They include a Buddhist scholar, a computer modeler, a climate fueled hurricane, a leader of the movement for racial justice in the American South, and more.

Chapter One (Multisolving: Promises and Obstacles) opens, as do all the subsequent chapters, with a poem, written to express the overall message of the chapter, and to prepare the ground for the chapter to come. The first poem, “Web World”, invites the reader to imagine some of the invisible webs that tie us together with each other and the rest of life.

The chapter then shows the variety of multisolving, drawing on examples documented in the author’s work. The chapter establishes how multisolving is found at all scales and across sectors and names eight payoffs from multisolving. It invites the reader to imagine a world with more multisolving.

The chapter pivots to face an important fact: multisolving may be everywhere but it’s the exception not the rule. If multisolving shows such promise, why is it so rare? Chapter One shares eight obstacles to multisolving, including institutional silos, disciplinary boundaries, and a lack of tools for working with complex systems. It argues that we’ve broken our world into pieces, and we need systems tools to begin mending the fractures. This sets the stage for Chapters 2-8 which will help the reader understand complex systems as part of their journey towards multisolving.

Chapter One (and all the subsequent chapters) ends with a few questions for reflection. These help the individual reader who wants to solidify or challenge their understanding. The questions are also offered as questions for discussion for reading groups, teams, students, or community groups who are reading the book together.

Chapter Two (Stocks) helps the reader see and understand stocks, which are everywhere around us. Stocks are places where material accumulates. A pond is stock of water, a forest a stock of trees. The reader learns that not all stocks are physical, though. Trust is a stock, and so is fear, or good-will. Stocks change slowly, give systems stability, and are the most obvious parts of systems. Readers wanting to create rapid change learn that

they will need to overcome the inertia of stocks. Stocks also offer the first window into multisolving. Adjusting just a single stock can sometimes solve multiple problems.

Chapter Three (Flows) introduces a topic essential for understanding complex systems and for multisolving. Inflows fill stocks, and outflows drain them. Ponds fill from upstream and from rain. They drain from evaporation and via their outlets. A stock of trust is built from trustworthy interactions and drained by breeches of trust. The chapter explores rates of flow and how changing the speed of flows changes the behavior of systems. Readers come to see how changing a single flow, like the flow of dollars to the school budget or the flow of fish harvested from the ocean, can be a way to multisolve.

As the reader begins to see the flows that connect stocks, Chapter Three introduces a theme that pervades the whole book: we are less separate from one another and the Earth than the dominant culture has assumed. We ignore the flows that connect us at our peril.

Chapter Four (Reinforcing Feedback Loops) introduces the reader to a key concept for both systems thinking and for multisolving: the feedback loop. Linear causation is when a change in A causes a change in B. Circular causation (or feedback) is when the change in B feeds back to cause a change in A. The chapter shares a few examples of how stocks and flows can link together to form feedback loops. For instance, when you earn interest at a bank, your stock of savings generates a flow of interest income, which feeds back to increase the stock.

The remainder of Chapter Four focuses on one of the two kinds of circular causation in the world, the reinforcing feedback loop. The reader learns that reinforcing feedback is the driver of some of our most challenging problems. For instance, exponential growth in the use of resources and energy is driven by a reinforcing feedback loop, and threatens climate, biodiversity, water availability and more. Sometimes, multisolving projects must weaken dangerous reinforcing loops to accomplish their aims; the chapter outlines strategies to do so.

Reinforcing feedback isn't all bad, though. It's also the source of change and innovation and brings new ideas to scale. The boom in wind and solar is driven by reinforcing feedback. Movements for justice and sustainability grow by reinforcing feedback as well. Readers learn how they can design their strategies to take advantage of the power of reinforcing feedback to increase their membership, reputation, and funding and thus have bigger impact with their multisolving strategies.

Chapter Five (Balancing Feedback Loops) moves forward to explore a second type of feedback loop that is critical for multisolving, the balancing loop. Balancing loops create steadiness and stability and bring systems back to normal after shocks. They also hold problems stuck in place. Chapter Five gives the reader strategies for working with balancing loops in their multisolving. It shows them how policies that add or strengthen balancing feedback, like the Clean Air Act, can improve the health of systems, but it broadens the idea of balancing feedback beyond policy. When an artist shows the pain in a part of a system or a whistleblower or journalist reports on harm

being done in a way that causes change to happen, that's balancing feedback, and it is a potential multisolving strategy as well.

In reaching the end of Chapter Five the reader, now understands all the elements of systems and their behavior as isolated units. Chapter Five ends with the recognition that, in the real world, the elements of systems are interconnected in great complexity. Connected together, the parts form wholes with new, and sometimes surprising, behaviors. To really work well with systems, and to excel at multisolving, the reader learns, they will need to understand the behavior of whole systems, too.

Chapter Six (*The Behavior of Whole Systems*) recognizes that, if readers wish to multisolve, they will be intervening in whole systems. Chapter Six helps them see and begin to understand the complexity that arises when elements of systems are linked together. Feedback loops change their strength. New connections between elements create novel system behavior. Delays or distortions can prevent feedback loops from running smoothly. Momentum from a system's past can influence its current behavior despite everyone's efforts to create change. In Chapter Six readers learn to expect surprises. Some are terrible, like ecological disasters or failed interventions. Others are hopeful, like the emergence of solutions no one anticipated and no one individual generated on their own. Multisolving takes place within this messy, emergent, startling, and sometimes wonderful, terrain and Chapter Six helps orient readers to it.

Chapter Six also takes readers deeper into the underlying influences that shape systems: visions, values, simple rules, and worldviews. These are the least visible parts of systems, but not the least important! These subtle elements of systems touch many parts of a system at the same time. They are crucial for steering systems and creating change.

Chapter Seven (*Rising to the Challenge of Complex Systems*) acknowledges that systems are not predictable or controllable. Beyond the quest for control, there is still the possibility to navigate wisely within systems. Chapter Seven offers six "good systems bets." These are actions – like strengthening a system's coping capacity, increasing equity, or practicing solidarity with others – that tend to improve a system's performance and resilience, no matter what the future brings. The chapter explores why these good bets make particularly appealing targets for multisolving. For readers who are coming to grips with the magnitude of the crises we face, and the impossibility of knowing what will happen next, these good bets offer avenues for action and collaboration.

Chapter Eight (*Steering Systems*) explores the examples that show that, while we can't control systems, we *can* steer them. We can steer them towards multisolving. One example from Chapter Eight: Any Sulistyowati is a young mother and sustainability leader in Indonesia, who over more than a decade, steered towards her vision of an eco-village to create a village-based center for ecological teaching and learning in the hills above Bandung.

Chapter Eight also looks at how multisolving innovations spread across scales or sectors. The chapter draws on the principle of coherence in complex systems. Because of coherence, small changes in one part of a system can be replicated in other parts or at broader scales. The chapter looks at an example of the policies used

for bulk purchasing of clean electricity, a policy that enables 36 million Americans to access clean energy. Yet, it had tiny origins, being piloted by a few activists in a cluster of Massachusetts towns. Readers who are daunted by the challenges of our converging crises will find, in coherence, a concept that will help them better understand how their own actions matter and make a difference.

The chapter ends by exploring how worldviews change and how multisolving contributes to worldview change.

Chapter Nine (Multisolving in Action) acknowledges that multisolving is a complex process with multiple types of activities all happening at the same time. To give the reader a map to these activities, the chapter uses the analogy of a dandelion plant. The first thing people see are the impacts of multisolving: the warmer buildings, urban orchards, and restored coastlines. These are like the bright yellow flowers of the dandelion. A little less obvious but still visible above the surface is the ongoing work to create those impacts. The policy sessions, the sweat equity, the tree planting, and so on. These are like the roots and stalks of the dandelion. But that's not all there is to multisolving. There's also work happening beneath the surface – building relationships, seeking mutual understanding, grappling with issues like equity and justice. That's akin to the roots of the dandelion, critical to the leaves and flowers, but not as easy to spot. Multisolving also changes systems in more distant ways. That urban orchard might provide a good job to a single mother, who can thus afford more nutritious food for her family, and whose children then show better health outcomes. To really understand multisolving, the reader learns, you must look for these subtle changes, like dandelion seeds blown far and wide by the wind.

Chapter Ten (Multisolving and Equity) lays out three reasons why equity is especially important to multisolving. (1) Equity can be an *outcome* of an effective multisolving project. Imagine a renewable energy project that provides good jobs for groups who have been locked out of economic opportunity. (2) Boosting equity can also be an *intervention* that results in multisolving. Increased equity leads to other benefits like health, economic vitality, and wellbeing. (3) Attending to equity is part of the *process* of multisolving; without equitable, trusting relationships multisolving projects can't get off the ground. The chapter also offers practices for bringing equity into multisolving projects and questions project partners can use to bring equity issues to the surface where they can be discussed and addressed.

Chapter Eleven (Multisolving in Tumultuous Times) helps prepare readers for embarking on multisolving projects that might be impacted by shocks and upheaval. From climate change to supply chain disruptions to economic shocks, instability will likely be backdrop to many multisolving projects. Chapter Eleven examines strategies for shock-proofing multisolving projects. It shares systems-based strategies for preparing for shocks, planning for the unexpected, and caring for one another through tumultuous times.

Chapter Twelve (Going Forth) ends the book by inviting the reader to take all that they have learned by reading the book out into the beautiful, emergent, complex world of ours that needs so much tending, healing, and collaboration. The chapter reminds readers that multisolving is an adventure best undertaken with others,

with a sense of humility, an attention to justice and equity, and an openness to learning. With those ingredients, we can do our best to forge a more livable world, even amid uncertainty, disruption, and challenge.

With these twelve chapters behind them, readers will be prepared, if they haven't already started, to connect across silos, bundle problems together, and steer systems towards safety. As they do so, they will meet situations that challenge and confuse them. They will have the book to return to, with fresh eyes after experimenting with implementation.

Notes organizes references from the text by chapter.