SYSTEMS THINKING FOR PEACEBUILDING AND RULE OF LAW

SUPPORTING COMPLEX REFORMS IN CONFLICT-AFFECTED ENVIRONMENTS

Philippe Leroux-Martin and Vivienne O'Connor

UNITED STATES
INSTITUTE OF PEACE

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ABOUT THE REPORT

This report invites peacebuilding practitioners to integrate principles of systems thinking and complexity theory into how they conceive, design, implement, and evaluate interventions. Based on research over the past ten years at USIP and drawing upon literature from other fields–such as organizational development, adaptive leadership, change management, and psychology–the authors argue for more adaptive and flexible approaches in peacebuilding and rule of law reform.

ABOUT THE AUTHORS

Philippe Leroux-Martin is the director of rule of law, justice, and security at USIP. Before joining USIP, Philippe was a fellow with the Future of Diplomacy Project at the Belfer Center for Science and International Affairs at the Harvard Kennedy School. He is the author of *Diplomatic Counterinsurgency: Lessons from Bosnia and Herzegovina* (Cambridge University Press, 2014). Vivienne O'Connor is a rule of law practitioner and academic with over fifteen years of experience in the field. She is currently working on research and training initiatives that integrate systems thinking and complexity theory with peacebuilding and rule of law. Vivienne is the author of several books and articles, including the *Model Codes for Postconflict Criminal Justice,* Volumes I and II (USIP Press, 2008).

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Foreword

In the material that follows, we explain why linear expertise, while indispensable, is not the only tool practitioners need. Along the same lines, we make the case for seeing some peacebuilding rule of law interventions as unpredictable processes. We also support integrating principles of systems thinking and complexity theory into how we conceive, design, implement, and evaluate interventions. While segments of this report can apply to several aspects of peacemaking and peacebuilding, we speak from the perspective of our own rule of law, justice, and security background. Our thoughts have been inspired by our own research over the past ten years and the innovative work done at the United States Institute of Peace (USIP) during this time.

After experiencing and witnessing many failed projects in the field, and intrigued by the nonlegal dynamics that seemed to be blocking many reform efforts, we began to look at peacebuilding and rule of law literature to find a better way. Not finding answers there, we delved into relevant literature in other fields, such as organizational development, adaptive leadership, change management, psychology, and even quantum physics. Over the past ten years, we also began immersing ourselves in the literature of complexity theory and systems thinking. It was in this field that we found theoretical and practical approaches that we thought were compelling enough to merit further exploration. The fruits of this exploration are presented in this report.[1]

At the same time, since 2006, USIP had been developing a new way to support rule of law, justice, and security reform. This new approach, which came to be known as Justice and Security Dialogue (JSD), was pioneered in Nepal. It was born out of a recognition that traditional ways of engaging in rule of law reform had not worked very well. New approaches were clearly needed, particularly in a society as complex as Nepal's, where mistrust between the local community and security forces was intense after ten years of civil war. USIP's Colette Rausch, who developed and led the project, intuitively used a systems thinking approach. Success in Nepal led USIP to introduce this approach in other conflict-affected environments, including Libya, Yemen, Tanzania, Iraq, Myanmar, Tunisia, Senegal, Mali, Burkina Faso, Niger, and Nigeria.

This report wrestles with a tension. On the one hand, it seeks to describe how systems thinking, including an embrace of complexity, can benefit rule of law interventions. On the other hand, complexity, by its very nature, can never be fully captured. In addition, part of the human mind prefers to seek refuge in illusions of certainty rather than having to cope with the anxiety and discomfort engendered by partial, imperfect diagnoses and solutions. Systems thinking requires us to grapple with this discomfort, not eliminate it.

For these reasons, we do not believe there is such a thing as an all-encompassing how-to guide to solving complex problems. Such a document would be impossible to put together in a credible fashion. This report, and the adaptive transformation processes we are developing at USIP, should not be understood as trying to control processes that are inherently nuanced and unpredictable. In the same way, this report is neither proposing a fundamental paradigm shift nor advocating a complete departure from conventional wisdom.

Instead, our objectives are more modest. Over the past decade, we have been researching and experimenting with new ways of doing things. This report is a collection of insights that have emerged from that process. In essence, we want to share insights gathered over years of experimentation and join forces with the many voices already arguing for more adaptive and

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flexible approaches to change in the development field.[2] Many people have been trying in recent years to find concrete ways to manage projects and interventions in more adaptive ways.[3]

While the human mind may sometimes seek refuge in certainty, it is also intuitively able to diagnose and respond to complexity. We believe this is a capacity many of us use every day. This report is simply trying to invite policymakers and practitioners to go back to solving problems in ways they are already familiar with. "Give me time to figure this out, and I will do it" is a natural response for many of us. Let us try to build more effective interventions based on this inclination.

Summary

- Our traditional approach to peacebuilding and rule of law reform seems sound: ambitious objectives, injection of resources, teams of experts working intensely. Yet, we seldom seem to create truly successful and sustainable reforms.

- Why do we get stuck? One possibility lies in how we view the systems we are working with. We tend to treat many peacebuilding and rule of law systems as if they were *clock* systems that are orderly, regular, and predictable. In reality, the environments in which we work are more like *cloud* systems in that they are disorderly, irregular, and unpredictable.

- Drawing on the field of systems thinking, this report invites peacebuilding practitioners to use more than one lens when examining the systems and problems they face. Sometimes we will need to look at problems through a technical clock lens. Other times, we will need to use a broader lens focused on the complexity of the larger system. And often we will need to use both lenses as we manage different components of a reform effort at the same time.

- Over the past decade, as many in the peacebuilding field have argued for more adaptive and flexible approaches to change, the authors have been researching new ways of doing things. While this report offers insights the authors have gained along the way, their conclusions do not try to account for and correct every constraint that hampers progress. Nor do the authors believe that systems thinking offers a magic formula for solving every problem. At its core, systems thinking requires a shift in power away from international actors and toward local agents who are feeling the need for change most acutely. If this shift can occur, our field can more effectively grapple with forces that either slow down or stall reform.

- How do we apply systems thinking in the real world of peacebuilding? Systems thinking does not provide a formula or a rigid how-to guide, because rulebooks and formulas are of little use when dealing with complex systems. Instead, it gives us a flexible structure that allows us to reframe familiar peacebuilding tools and use them in new ways.

- This reframing can be most effectively viewed as a set of interconnected challenges. We can explore these challenges by using different experiments and seeing how well they work. Rather than offering a step-by-step plan, this report invites the reader to consider which experiments might be most applicable to their own peacebuilding practices. The report includes a detailed list of experiments along with troubleshooting guidance and extensive research sources.

- Using systems thinking is not easy. It forces us to live with confusion and reversals. Yet sometimes systems thinking can help us convert seemingly permanent roadblocks into obstacles that can, with time and hard work, be overcome. As violent conflict spreads to new corners of the world, ravaging entire cities and displacing millions of people, the ability to enhance our margin of success can make an enormous difference. Stephen Hawking observed that the twenty-first century would be the century of complexity. If we want to change the world, we need to become more fluent at understanding and working with this central human condition.

- This report is the first in a series of publications and engagements that share what the authors have learned about systems thinking. An upcoming book will provide more information for helping practitioners design, implement, and evaluate interventions.

Introduction

How We Get Stuck

Both of us, Philippe and Vivienne, are practitioners with enough experience to know how much we still need to learn. While we have been engaged in designing rule of law reforms for many years, our work has not always translated into the results we expected. A story illustrates the problem.

It was midnight and Philippe was still at his office in Sarajevo. On his computer screen was the result of a year's work, a legislative proposal to unite the police forces of Bosnia and Herzegovina. The proposal was due in a week, and Philippe was putting the final touches on the text. His long day notwithstanding, Philippe was optimistic about the proposal's chances of being ratified by the Bosnian Parliament. As members of the Police Restructuring Commission of Bosnia and Herzegovina, he and his colleagues had traveled across Bosnia to talk with citizens, police officials, politicians, and journalists. Then the team had retreated to their offices to craft a proposal.

Philippe believed that his team had listened to all sides of the issue, and the draft on his desk seemed to be anchored in areas of common interest. Philippe and others on his team thought that if they worked hard and created a coherent technical proposal, the reform effort would ultimately succeed. Backing up this view were endorsements from most of the international actors involved in Bosnia's peace process. The European Union had made adoption of police reform a requirement for progress toward Bosnia's integration in the European Union. Philippe knew that certain factions might oppose the proposal.[4] But that night, it seemed as if momentum for the legislation could be temporarily slowed but not stopped. He would soon change this appraisal.

A few months later, representatives of a local government faction attacked the commission's proposal. While opposition to the proposal had been anticipated, many were surprised by its intensity. Instead of fading, this resistance grew. Parliamentary support for the measure dissipated, and police reform was dropped as a condition of Bosnia's European Union membership. In the end, the commission's proposal was rejected.

We could share many such stories. And from what we hear from other practitioners, this experience is a familiar one for those working on rule of law and peacebuilding reforms. Our approach seems sound: ambitious objectives, injection of resources, teams of experts working intensely. Yet, we seldom seem to create truly successful and sustainable reforms.

Anecdotal evidence appears to be reflected in documented global trends. A recent book published by researchers at the Harvard University Center for International Development encapsulates what many articles, evaluations, and media reports have described: there has been little improvement in the capacities of states to deliver services to their citizens despite the prodigious resources invested. Over the past decades, only 8 out of 102 historically developing countries have reached strong capabilities to deliver core services to their citizens. More damningly, the overwhelming majority of countries with weak or very weak capabilities have witnessed a *decrease* in their capacity to provide core services in recent decades.[5] Why is this such a common story? Why do we get stuck?

We also know that reforms do not unfold in isolation from conflict. Instead, peacebuilding occurs amid intense conflictual dynamics that are deeply emotional.

Why We Get Stuck

Most practitioners know that change is a confused process involving setbacks and adjustments. We also know that reforms do not unfold in isolation from conflict. Instead, peacebuilding occurs amid intense conflictual dynamics that are deeply emotional. We are keenly aware that the capacity and willingness of actors to come to a common understanding of problems and solutions are constrained by polarizing undercurrents.

Despite our knowledge of how peace processes actually work, we treat many reform efforts as linear mechanical processes: identify a problem, decide on an action, and expect the problem to be solved. When we take this view, we are using the wrong lens to analyze the challenges we face. This lens seeks to expunge difficulties, delays, emotions, failures, and adaptations rather than embrace them. Choosing to use this lens, either conveniently or unconsciously, leads us to distort the nature of the problems we want to address, as well as the conflict's broader context. It is not surprising, then, that so many of our projects do not succeed.

Overuse of the linear lens leads us to assume that with enough savvy and resources, we can solve most problems. We rarely start by asking ourselves difficult questions about the nature, configuration, or dynamics of these problems. Nor do we ask ourselves whether we have a role in addressing such problems and, if so, what our role should be.

Instead, we tend to do the opposite. We determine there is a problem, then decide we should do something about it. We look at tools, best practices, and resources, and we use them to design an intervention. We do not realize that we are putting ourselves at the center of the problem, thereby skewing our capacity to think and act from a more context-sensitive perspective. But we can use a different lens to examine the dynamics of a conflict, a lens that can help us see peacebuilding reform as an unpredictable process seeking to transform unpredictable systems.

What if this new lens helped us look at such challenges as problems for which there is no known answer from the outset, and for which there are no ways by which one can predict, with complete accuracy, the solution that may emerge? What if instead of viewing failures as something to be expunged or reframed, we interpreted them as signals through which deeply interconnected systems invite us to self-correct? What if we were not overly worried about getting stuck and found ways to effectively manage reform processes as messy journeys requiring many readjustments? These are the kinds of questions that systems thinking encourages us to ask.

If we are genuinely interested in tackling some of the constraints that hamper reform efforts, systems thinking tells us that we need more than one lens for examining the situations we face. Sometimes we will need to look at problems through a linear, technical lens. Other times we will need to use a broader lens focused on the complexity of the larger system. And often we will need to use both lenses as we manage different components of a reform effort at the same time.

Given the impact of violent conflict on people's lives, we cannot afford to complacently replicate more sophisticated versions of approaches that have led to unsatisfactory results. The stakes of violent conflict are too high, and the dividends of peace too crucial for us to ignore hard questions about the efficiency of our interventions. For these reasons, the two of us, Vivienne and Philippe, put together this report.

Section 1: Clocks and Clouds

What do we mean when we talk about linear versus systems thinking? How does one distinguish between the two? The twentieth-century thinker Karl Popper can help us make sense of these questions. He proposed the notion of a continuum that encompasses different types of systems. On one end of the continuum is a cloud, representing systems that are disorderly, irregular, and unpredictable.[6] On the other end of the continuum, Popper imagined a clock, which was his symbol for systems that are orderly, regular, and predictable (see figure 1). A car would be positioned close to the clock on Popper's continuum. A group of flies that holds together without any discernible structure would be positioned closer to the cloud.

The concept of cloud systems makes intuitive sense; we engage with these systems all the time: when raising children, monitoring an oncoming storm, or managing family dynamics at a wedding. In such situations, we do not just use linear checklists to measure progress. Instead, we operate in more flexible and intuitive ways, allowing shifts to occur organically and permitting ourselves to continually readjust.

In these fluid situations, we are navigating a complex cloud rather than monitoring a clock. We may use clock thinking to handle technical problems that arise—for example, if the bride's car has a flat tire on the way to the wedding ceremony. But we instinctively know that managing the wedding as a whole will demand more than mechanical skill. When we appreciate the difference between clocks and clouds, we are using systems thinking to discern the level of complexity in play. This discernment allows us to customize our response to different challenges.

Switching between clock and cloud systems is second nature to us; and for much of human history, scientists applied the cloud system lens to many natural phenomena. Then Sir Isaac Newton demonstrated that it was possible to use simple laws to accurately determine the movement of planets. Newton's discovery spurred physical scientists to believe that everything in the universe was as orderly and explainable as an intricate watch.

Physical determinism—a belief that everything is governed by universal laws—came into vogue.[7] Even cloud-like systems were, in the eyes of Enlightenment scientists, simply clock systems that had not yet been fully understood. This view took hold not just in science but in many

Figure 1. Characteristics of Clock Systems versus Cloud Systems

clock systems	cloud systems
orderly	disorderly
regular	irregular
predictable	unpredictable
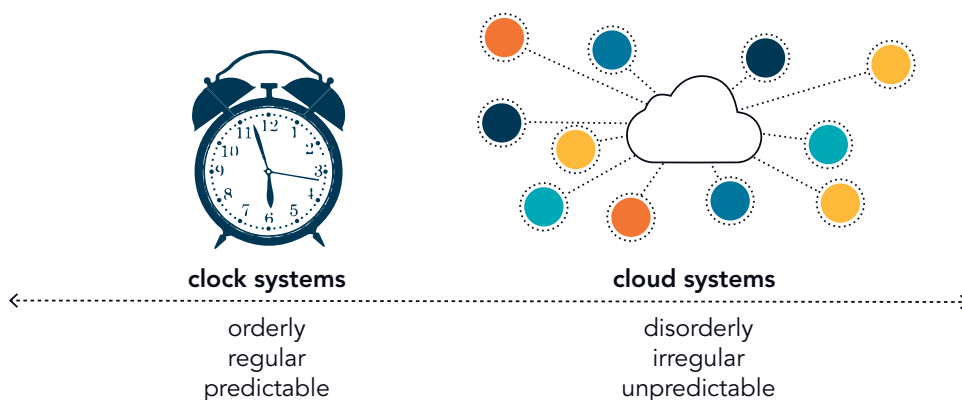
realms of Western culture. Indeed, seeing the world this way became synonymous with modern thinking and is still prevalent in many professional fields, including our own.

While Newton was right in assuming that some parts of the solar system do work like clocks, the scientific extrapolation that all clouds were clocks proved inaccurate. Discoveries in the field of quantum physics centuries later discredited physical determinism by demonstrating that some parts of the universe do not behave in a predictable, step-by-step fashion. Physical scientists have learned that not all clouds are clocks, and the same lesson applies to peacebuilding. For example, most people would agree that reestablishing peace in South Sudan cannot be achieved by strict adherence to a set of laws. Yet the pervasiveness of clock thinking has proved difficult to dislodge.

The Fish Cannon Syndrome

> We may wish for easier, all-purpose analyses, and for simpler, magical, all-purpose cures, but wishing cannot change these problems into simpler matters than organized complexity, no matter how much we try to evade the realities and to handle them as something different.
>
> (Jane Jacobs, *The Death and Life of Great American Cities*)

If you need to resort to a cannon to get a fish moving through the river system, maybe there is something more fundamentally wrong with the infrastructure along the river?

While writing this report, we came across a podcast[8] on fish cannons that piqued our attention. The story discussed the challenge of helping salmon survive when their migration routes are blocked by dams. A US company invented a small cannon that could transport salmon over a dam or other barrier, allowing the fish to resume their migration unharmed. While some scientists were excited about this discovery, one researcher asked a fundamental question: "If you need to resort to a cannon to get a fish moving through the river system, maybe there is something more fundamentally wrong with the infrastructure along the river?"[9]

This story offers an example of how human creativity can lead to exciting new solutions. It also highlights the tendency of the human mind to be excited by innovative solutions. But more importantly, it illustrates that our excitement can often lead us to curtail our own understanding of a given problem. In the heat of the moment, we may define problems in a way that conveniently fits a solution we know or like. In so doing, we may disregard the broader picture as well as crucial underpinnings that shape the problem from below.

Philosopher Abraham Kaplan traced such tendencies back to a human trait he called the "law of the instrument." Kaplan noted, "Give a small boy a hammer, and he will find that everything he encounters needs pounding. It comes as no particular surprise that a scientist formulates problems in a way which requires for their solution just those techniques in which he himself is especially skilled."[10]

The problem with retrofitting problems to solutions is that we lose something important along the way. As we simplify a problem, we dissociate and isolate some of its components from the more complex elements to which they are connected. In this scenario, we may be inadvertently focusing our minds on treating symptoms through quick solutions, which, in the long run, may make the initial problem even worse. Fish cannons may lead to less emphasis on salmon conservation and more reliance on dams. A policy that relies exclusively on providing humanitarian aid may prolong violent conflict; for example, when armed forces grant humanitarian workers access to populations only after taking a fraction of the aid to resupply themselves.[11]

A recent report demonstrated how putting solutions before problems is common in the development and business world.[12] According to the authors of the report, this practice can be partially explained by the tendency of many actors to harbor rigid perspectives on problems and

solutions. This rigidity tends to exclude more nuanced perspectives on the different dynamics that may characterize a given problem.

It may be time to question our attachment to our own expertise, norms, and values. Rather than simplifying problems to suit our own methods, it may be in our best interest to develop options that are more suited to the complex cloud problems we seek to solve. Insisting on using our own familiar tools in increasingly more intricate ways will likely lead us to develop more intricate reasons to explain why we continue to be stuck.

French writer François de La Rochefoucauld observed: "Denial is the most dangerous effect of pride. By nourishing our blindness, it prevents us from easing our miseries and healing our flaws."[13] It is common in all walks of life to pretend that complex problems can be simplified. This kind of denial may be prevalent in certain circles of peacebuilding and international assistance as well. Does our excitement about fish cannons lead us to overlook the broader set of problems engendered by dams? While busy with our strategic plans and priorities, we may sometimes run the risk of inadvertently suggesting that certain *clouds* are *clocks*.

The Closed-System Illusion

In earlier stages of our engagement with rule of law reform in conflict-affected environments, we assumed we were working with clocks. And we both admit to using metaphorical fish cannons to try to solve the problems we faced. Another way to describe our mindset is what we have termed the closed-system illusion. Looking back, we realized that when working on draft legislation establishing courts and police services, or when drafting model criminal codes, we subconsciously assumed we were designing closed systems that were inoculated from the surrounding society and capable of evolving autonomously. This assumption led us to simplify many problems by framing them as clock systems impervious to external dynamics. It also pushed us to design the equivalent of fish cannons to address problems we were trying to solve.

Only after recurring failures with our projects did we reexamine our assumptions. When we did, we often found that we had misjudged the impact of new laws or institutions. In our zeal for our work, we overlooked the impact we were having on the positions, interests, and emotions of people competing for power in the aftermath of armed conflict. Our mistakes led to reforms that either failed before being adopted or were neutralized by local actors soon after we left. We are learning that we cannot wall ourselves off from the conflict and the broader context if we hope to have a hand in resolving it.

Our assumption is that others have probably been prone to this illusion as well. Many lawyers and judges see their mandates as helping to act as checks on other institutions or powers. Once deployed to a conflict-affected area, these specialists may believe they need to keep their missions contained and protected from outside influence and corruption. This perspective is reinforced by peacekeeping objectives focused on consolidating the rule of law and establishing independent institutional safeguards to prevent conflict from turning violent. As reasonable as these assumptions sound, they may, under certain circumstances, work against the legal experts' effectiveness. Similar dynamics play out in other fields, such as engineering and infrastructure design.

Using Expertise

Technical skills are crucial to solving problems. Upgrading dysfunctional computer systems at border crossings may indeed contribute to better migration control. Establishing a court or a prison or reforming a legal system is hard work, done under time pressure, often with meager resources. Only a few experts can do this kind of technical work well, and we do not want to question its importance.

Our suggestion is more specific. We want to highlight the potential problems associated with interventions that are exclusively designed around linear clock thinking. We can go wrong when we apply only technical expertise to complex problems.[14]

An exclusive reliance on clock thinking can explain why some projects get stuck. First, it may invite some of us to define problems in ways that reduce challenges to fit our skills. Second, it may encourage us to explain our failures by focusing on technical elements: "If only we had more time, more money, and more fish cannons." Third, it may lead us to believe that reforms are merely technical endeavors disconnected from conflict and the broader environment.

Peacebuilding reforms rarely occur in isolation from conflict dynamics. Reforms become an integral part of political, administrative, and legal conflicts either after or between violent wars as each faction seeks to benefit or strengthen its position and power.[15]

Peacebuilders are often confronted with complex cloud problems for which appropriate solutions cannot be immediately identified, particularly amid the dynamics of conflicts. In these situations, the linear application of expertise can be immensely useful when technical needs organically emerge from local actors.

Project managers may be tempted to remedy implementation roadblocks by improving or diversifying the type of expertise they rely on. "Instead of hiring a police advisor with thirty years of experience, why don't we hire a police expert from the region with less expertise? Why don't we team our police experts with anthropologists fluent in the local language?" While this approach may help some project managers overcome certain obstacles, it may also amount to the use of more involved forms of clock thinking to address complex cloud problems. Project managers may also consider looking for experts with adaptive management skills who are willing and able to diagnose complex problems for what they are: unpredictable, confusing, and messy.

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The Marriage of Convenience

> *Although the research arms of aid may be slowly starting to engage with this way of thinking, the policy and operational sides are lagging. From an institutional perspective, aid agencies are problem tamers that build almost all of their work on the notion of reductionism and simple cause-and-effect relations.*
>
> (Ben Ramalingam, *Aid on the Edge of Chaos*)

Where does our dependence on clock thinking come from? Part of the answer lies in the marriage of convenience between two factors: the thirst for expediency felt by many peacebuilders and the human tendency to employ a centralized mindset.

Pressure to Demonstrate Results

Many interventions are designed by those working at international centers of aid or peacebuilding in Beijing, Brussels, New York, or Washington. Those crafting interventions are under intense pressure to demonstrate relevance and impact to parliaments, ministries, governing boards, and

donors. They are also expected to "keep things moving through the pipeline" so they can manage an ever-growing list of pressing tasks. Such considerations may often overtake the realities of the region where the organization seeks to intervene. This perspective also promotes risk aversion. As an official in the US State Department recently noted, "The Washington Post Test means that your innovative program needs to take into account the…potential risk of it showing up on the [newspaper's] front pages…This creates incentives for risk-aversion and inertia. The quip 'no one ever got fired for doing the same thing as last year' is at least half true."[16]

By the time a project designer has demonstrated impact and relevance to funders, managed risks, and navigated internal political conflicts, she may have little energy left for embracing complexity. Most project designers are not given the amount of resources and time required to design and implement longer term systemic interventions. It may therefore be particularly appealing, under such conditions, to conceive and design clock-type projects that can be linearly planned, monitored, and controlled to demonstrate success.

Centralized Mindset

This thirst for simplicity and expediency can invite our hypothetical project designer to assume that certain patterns in a conflict-affected area are generated by a simple central actor or factor. MIT researcher Mitchel Resnick calls this trait the "centralized mindset," namely, the human inclination to explain patterns by assuming the existence of a central controlling actor or factor.[17] According to Resnick, "When people see neat rows of corn in a field, they correctly assume that the corn was planted by a farmer."[18]

The problem, of course, is that not all patterns are generated by a single person or thing. In fact, we know that many natural phenomena occur organically, without direction from a lead agent. Many researchers seeking to explain the synchronized movements of flocks of birds assumed, for example, that such movements were coordinated by a lead bird. Yet, recent theories have suggested that the pattern of a bird flock is not linked to the actions of a lead bird. The synchronized pattern would, instead, emerge from a decentralized set of interactions of birds following simple rules.[19] The same is true with many patterns in conflict-affected areas.

And yet one could understand why our project designer, already juggling multiple demands, could be predisposed to believe that a given pattern originates in a single central actor rather than in an unpredictable set of interactions between many actors. Some may also want to believe that a young new minister can wave a magic wand and make reform occur in even the most difficult contexts. Why engage with the whole flock if it is possible to complete a difficult job by working with just the lead bird?

As authors, we are not suggesting bad faith on the part of people genuinely seeking to tackle crucial problems. Instead, we are pointing to the role of systemic pressures. Institutions and people may not only be wired to assume the existence of central control. Incentives may push them to be *particularly inclined* to live with that assumption. We know firsthand how easy it is to slide into the assumptions the marriage of convenience offers. Systems thinking offers a useful alternative.

What Is Systems Thinking?

Systems thinking is a way of viewing the world, not in discrete parts but as systems of relationships. It focuses on interactions, on links between parts or subsystems. Systems thinking

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Systems thinking does not in itself solve problems. It is, rather, a tool that informs strategy.

is a mental model. By mental model we mean an approximation of reality, or lens that we use to interpret what we encounter. Words, labels, maps, and mathematical formulas are all mental models.[20]

Among all the mental models that we use, systems thinking is particularly good at helping us reconcile the discrepancy between "the way real-world systems work and the way we think they work."[21] We can use systems thinking to simultaneously zoom out and see the big picture and zoom in to the deeply rooted patterns that animate many of the challenges we face. As we do this, we can more adequately connect the dots and understand what we are dealing with.[22]

The aim is not to build ever more precise mental models for their own sake, but to make sure that we are fully informed about our options so we can achieve better, more lasting outcomes. However, as with any venture in the real world, there are no certainties or guaranteed formulas. Systems thinking does not in itself solve problems. It is, rather, a tool that informs strategy.[23]

When applying systems thinking, we do not claim a premature sense of clarity about the problems we are facing, nor do we declare our intentions before we have had a chance to understand the situation. We also do not assume that progress will happen in the ways we expect or on a preset timetable. Working like this is not easy. It requires patience and humility.

This way of thinking is not new. According to some observers, it goes back thousands of years and was the most common form of thinking until the rise of Newtonian and Cartesian rationalism in the eighteenth century.[24] Its more modern iteration has been influenced by biology at the beginning of the twentieth century. Many fields, such as philosophy, mathematics, ecology, and engineering, continually contribute to systems thinking. It is applied in many practical fields of work. The U.S. military has applied elements of systems thinking since World War II and the Cold War, for example.[25]

Systems thinking is an umbrella term that covers a wide body of knowledge. More than ninety-seven approaches have been identified, along with thousands of concepts, methods, and frameworks.[26] A 2005 report presented four broad categories of systems thinking. This categorization provides a useful framework for understanding a many-layered body of knowledge:[27]

- **Complex adaptive systems**: Focuses on how networks are structured and how they function. Concentrates on notions such as control, change, and adaptation.
- **System dynamics:** Studies complex feedback systems. Looks underneath the surface to see how structures and patterns drive events.
- **Soft systems methodologies**: Pays particular attention to stakeholders and the processes by which they develop a common systemic understanding of problems to trigger positive change.
- **Chaos Theory:** Focuses on unpredictability of systems. Pays particular attention to the ability of small events to generate large systemic effects and the possibility that certain systems will shift rapidly.[28]

The idea of using systems thinking in peacebuilding has been circulating for many years. But systems thinking does challenge more conventional perspectives on programming, making it harder to put into practice. Misconceptions also affect donor perspectives. Those of us at USIP who have been applying and experimenting with new adaptive approaches to reform have encountered this problem firsthand. When the benchmarks of work are not deliverable in a clock-like fashion, it can be hard to track and convey exactly what is going on.

At USIP, the dialogue with colleagues and donors about systems thinking has been extremely productive. We have fielded reasonable and important inquiries, all of which have helped deepen our approach. In fact, we believe that having sound responses to these questions is a prerequisite for anyone wanting to credibly integrate systems thinking into peacebuilding work. To this end, we have begun to sketch out responses to the most common queries we receive:

- Accountability
    - We hear, "How can you expect donors to give significant financial resources to local actors, and then stay on the sidelines and simply hope something will be achieved?"
    - We say, "We stay firm about meeting the general objective, and flexible on how the objective is met. We agree with our donor on criteria we will use to self-correct, and we consult our donor as we make changes. We also keep our donors apprised of issues that could affect them."

- Rigor
    - We hear, "Is systems thinking an excuse to avoid rigorous design, implementation, monitoring, and evaluation?"
    - We say, "Projects that are rigorous at tackling the wrong problem may lead to resources that are rigorously misallocated. We seek to be more rigorous in our understanding of the nature and configuration of problems we address."

- Monitoring and Evaluation
    - We hear, "If problems and solutions are organically adapted as you go along, how do you know you are making progress toward your long-term goal?"
    - We say, "Monitoring nonlinear progress is possible. You need to have the right tools so that you can capture unpredictable developments when they arise."

- Reporting
    - We hear, "How do you measure and report on your progress? What kinds of compelling stories can you offer to Congress, Parliament, and other authorities?"
    - We say, "A successful project that overcame long-standing, seemingly intractable challenges is likely to be a more compelling story than that of a stalled or suspended project."

While we have made some progress in introducing systems thinking, we have a long way to go, not just with colleagues but with our own habit of overusing clock thinking. Someone recently asked Philippe, "What specific problems are you tackling in your latest project?" Philippe was tempted to reel off a crisp list of issues so he could give a straightforward answer. Instead, he replied, "We don't know. At least not yet."

Section 2: What Systems Do We Engage With?

Our lives take place within systems that are so familiar they can be hard to see. We obey rules set by legal systems, and we work for systems that we call organizations or businesses. Our families are systems. Even our bodies are systems containing multiple systems. Some of these systems are easier to understand and act on than others, but they each contain an interconnected set of parts organized to achieve something.[29]

David Snowden is a leading systems thinker who developed the Cynefin Framework to describe different kinds of systems. Snowden's framework uses four categories: *simple, complicated, complex*, and *chaotic*. In a *simple system*, such as a bicycle,[30] there is a set formula made up of sequential, linear steps. If followed, these steps produce a predictable outcome. The bicycle will move to a certain position if a certain amount of force is applied to its pedals. In addition, each step has cause-and-effect relationships. If the rider presses the brakes, the bicycle will slow down. Special expertise is not necessary to understand this kind of simple system*;* "best practices" exist,[31] and almost anyone can replicate the process.

According to Snowden, other systems, such as a car or a rocket ship, are more involved. In these *complicated systems*, cause-and-effect relationships among component parts are difficult for nonspecialists to identify. Solving problems in complicated systems thus requires special expertise.[32] With the right skills and knowledge, however, complicated systems can readily be managed. Within a complicated system, several right answers to a problem may exist, so systems thinkers talk about "good practice" as opposed to best practice in this domain.[33]
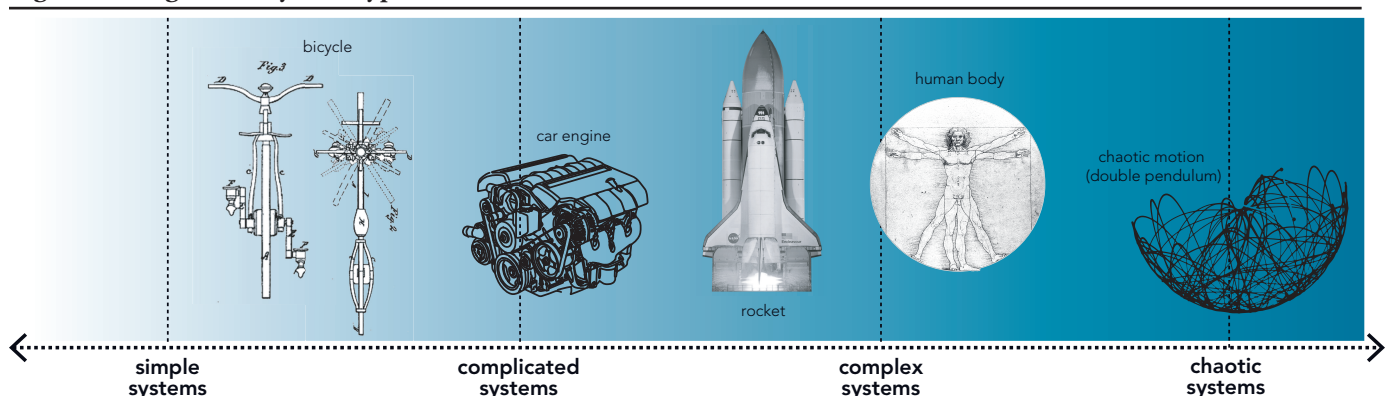
A third type of system is much more difficult to understand. *Complex systems,* which will be discussed in greater detail, cannot be fathomed simply by applying expertise. Instead, complex systems are distinguished by their ambiguity; people at all levels of knowledge will disagree about what makes such a system work and how to manage it. The human body is one such complex system. It is made of many different parts: cells, tissues, organs, and organ systems. These parts interact with each other and self-organize—often in unpredictable ways.

> *Our lives take place within systems that are so familiar they can be hard to see.*

Figure 2. Categories of System Types

bicycle · car engine · rocket · human body · chaotic motion (double pendulum)

simple systems · complicated systems · complex systems · chaotic systems

Chaotic systems take the level of ambiguity even further. In such systems, no clear cause-and-effect relationships exist among system parts. These relationships shift all the time; the only constant is turbulence.[34] According to Snowden, this is the realm of the unknowables,[35] where predictions and plans are almost impossible to make. Certain markets were chaotic systems during the 2008 global financial crisis. We could also say that violent conflict tips a societal system into chaos.

A chaotic system is like a profusely bleeding patient.[36] The first thing that needs to be done is to stop the bleeding, and rapid response is vital.[37] In the peacebuilding context, we could think about a ceasefire agreement put in place to quell violent conflict temporarily, pending a more complete peace agreement and postconflict reconstruction efforts. When a system is in chaos, there is no time for broad collaborative processes, and directive leadership is the order of the day.[38] At the same time, Snowden notes that innovation can accompany efforts at chaos management because in these situations people can be more open to new ways of doing things.[39] After the metaphorical bleeding has been stopped, those responding to the emergency can get a sense of where the system is stable and where it is not.[40] From there, responders can work to bring the system back from chaos and into the more workable complex system domain.[41]

Snowden's spectrum of systems is a useful aid to understanding conflict-affected countries. For example, a country in the midst of conflict is likely a chaotic system. A country emerging from conflict may have tipped from chaos back to being a complex system. At the same time, most systems cannot be so neatly categorized.[42] In most conflict-affected countries, different types of systems may coexist; the country as a whole may be a complex system, but parts of the country may be in chaos due to localized violent conflict. Such was the case with Northern Ireland up until the Good Friday Agreement of 1998.

Different systems may also be bundled into the same problem. For example, peacebuilders may deal with a chaotic context of widespread violent clashes between the police and student groups in a postconflict environment. To address this, the government may work to manage the police and military to address these clashes and build better relations between police and student groups. These projects involve complex systems and tasks. Peacebuilding actors may also advise local police about managing public demonstrations. While there are complex system dimensions to this challenge, the technical elements of crowd control would fall into the complicated system category.

As peacebuilders, we need to look at the problems we face in ways that increase our chances for success, knowing that the way to solve simple or complicated problems is very different from what is needed to address complex or chaotic problems. Simple or complicated systems are like machines in that they can be taken apart and reassembled to remedy a problem. But that does not work for complex systems, which can be fathomed only by appreciating the relationships among the parts. And, as we shall see, complex and chaotic systems cannot be managed by linear, strategic planning or by the application of technical best practices. Instead, complex systems respond to an approach of "probe, sense, and respond."[43] Chaotic systems, on the other hand, require us to "act to establish order."[44]

Given the range of challenges peacebuilders must address, we need multiple lenses for working with different conditions and contexts.[45] When dealing with the scenario described above, we would need a lens that helps us deal with immediate violence and loss of life. We would need a complicated systems lens that helps us identify appropriate standards for police

in a riot situation. We would also need a complex systems lens to help build better relationships between police and students.

Many of us in the peacebuilding and rule of law worlds are primarily trained to deal with "ordered environments,"[46] namely, simple and complicated systems. Moreover, as a field of bureaucrats and subject matter experts, we have been trained to see through single, specific lenses. Snowden suggests that bureaucrats tend to see all systems as *simple*, and problems as failures in the process, whereas subject matter experts tend to see all systems as *complicated* and needing knowledgeable analysis.[47]

Good process and expert analysis will always be crucial in our field. However, our training as peacebuilders may cause us to overlook the extent to which our efforts take place in complex systems, some of which are "at the edge of chaos."[48] Many of us have already developed strong lenses for handling simple or complicated systems. To complement this expertise, a deeper understanding of complex systems could give us more options for supporting the health of the environments in which we work.

Characteristics of Complex Systems

A distinguished tradition of scholarship has studied the science of complexity for decades. Fields as diverse as biology, engineering, human ecology, quantum physics, and organizational development have developed theoretical models, applied this theory, and analyzed the results. From this body of research, we have learned that complex systems share the following five characteristics.

The Whole Is Greater Than the Sum of Its Parts

Most of us have been taught to break apart problems, to fragment systems and indeed the world, in order to make them more manageable.[49] But we cannot understand a complex system simply by examining each of its parts in isolation. Certainly, each part is important, but the parts are intertwined and interdependent. How they connect and interact changes the parts themselves and the nature of the whole system. For example, we could seek to understand the human circulatory system by individually examining the heart, arteries, and veins. But that piecemeal analysis would not explain how blood flow keeps the body alive. To fully grasp what this system is all about, we would need to appreciate both the parts themselves and how they work together.

In addition to being in relationship with its parts, a system is also open to its environment, adapting and coevolving in relationship with it.[50] When the human body is at a high altitude, for example, the circulatory system adapts: the heart beats faster, arteries dilate, and it is harder for the blood to flow. If the body does not adjust to this new environment, it runs the risk of heart failure and possible death.

As peacebuilding practitioners, we often have trouble recognizing and honoring these connections. For example, when trying to understand a problem within the justice system, we focus on the police or the courts in isolation, rather than looking at their connection to and impact on other power structures. This may lead to situations where police are trained and equipped, while the prison system is ignored. People are then arrested by an efficient police service, but the prisons become too crowded to house new detainees. In the end, convicted criminals are released, and crime rates remain high.

Many of us in the peacebuilding and rule of law worlds are primarily trained to deal with "ordered environments," namely simple and complicated systems.

Relationships Between the Parts of Complex Systems Are Nonlinear and Therefore Unpredictable

A linear relationship between two agents in a system can be drawn with a straight line and is one of constant proportions:[51] A + B always equals C. For example, linear logic presupposes that if a little bit of development aid has a good effect, more aid will have an even greater effect.[52] In the same vein, peacebuilders use a common project management tool called logical framework analysis to develop and implement projects. The logic flows something like this: activity (conflict resolution training) equals output (enhanced abilities of stakeholders to resolve conflict) equals outcome or impact (increase in peaceful resolution of conflict). However, conflict resolution training could have unintended or disproportionate consequences. For example, unless the training is part of a larger effort aimed at more deeply understanding the relationships in play, it may not only fail to reduce conflict but could become a locus of conflict, subsumed in the very dynamic it was meant to solve.

A nonlinear relationship is one in which the cause does not produce the proportionate effect[53] that linear logic would predict. Using the aid example above, we may find when dealing with complex peacebuilding situations that more aid can be counterproductive because, in certain circumstances, it takes away the ability of the local system to self-organize, adapt, and ultimately transform in response to problems.[54] It can be a case of "too much of a good thing."[55]

The nonlinear relationships at the heart of complex systems create a high degree of uncertainty and unpredictability.[56] In other words, what you put into a situation where peacebuilding is called for is not necessarily what you get out of it. Big problems do not always need big solutions, and multiple, small-scale initiatives may produce big changes.

Nonlinearity also significantly delays how soon we see the results of change projects. Feedback loops affect project performance just as they do any other aspects of the system. These feedback loops are often hard to spot, and the more complex the system, the more feedback loops there can be.[57] When a systemic change is set in motion to rectify a problem, problems and solutions can be far apart in time and space, making it difficult to see results in the short term.

Given these flexible parameters, we would be wise to adjust our expectations about how and when our actions will manifest. Sometimes, despite our best efforts, it will seem as if nothing is happening. We may be tempted to give up, but it is important to remember that a transformative change can look like failure when we are in the middle of the process. Conversely, a solution may exhibit short-term gains but then make things worse in the long term. Either way, it is hard to predict what will happen. Suddenly, after months of effort, positive or negative effects will begin to cascade, with individual changes amplifying and counterbalancing each other in ways we could not have foreseen.[58]

Complex Systems "Self-Organize" in Response to Systemic Problems

Complex systems consist of elements that are webbed together in nonlinear, circular relationships. When a change happens to or within such a system, it sets off a chain reaction between the parts of the system and its environment. In order to survive and adapt to new conditions and changes, complex systems must self-organize, or they will head toward decline, dysfunction, and possibly death.

Many of us in the international peacebuilding community believe that positive systemic change requires strong leadership from the top. This bias arises easily, as described in Section 1. Practical concerns also influence our sense of how change occurs. For example, we may need permission from a high-level government official to operate in the country, and this initial contact might expand into a dominant working relationship.

However, we sometimes fall into the trap of working with an authority figure who responds to criteria that have little to do with reform. The person might speak the language of international peacebuilders. Or the person might have strong personal relationships with international peacebuilders. Usually the person's approach and perspectives align with the foreign policy goals of outside countries. This sense of mutual understanding can give us a false sense of what a single authority figure can actually accomplish.

Systems thinking challenges us to discard the fallacy that one change maker can single-handedly spearhead systemic change. Instead, change in a complex system begins when people self-organize, without prompting from a centralized authority. As the system mutates in this way, opportunities arise for positive and negative intervention.

Complex Systems Are "Emergent"; Local-Level Changes Can Produce Global Effects

Change in complex systems is emergent. This concept may be defined in a couple of ways; one is to see emergence as the development of new structures, patterns, and properties that occur during the process of self-organization outlined above.[59] Emergence can also be envisioned as system-wide patterns that flow from many local-level interactions, patterns that are not the result of a prior design or plan.[60]

These local interactions add up bit by bit until they create a critical mass. A series of actions can sometimes create a "tipping point,"[61] which eventually causes a person, business, or society to move to a new state of being. While keen observation can give us clues about what is to come, it is impossible to predict or minutely control this emergent change. Such changes can lead to unexpected outcomes because of the system's inherent qualities of nonlinearity, unpredictability, and self-organization.

Those of us in the peacebuilding community can be uncomfortable with the concept of emergence. Instead, we try to force and plan change. This is understandable to the extent that international peacebuilders are under immense pressure from their peacebuilding organizations or home governments and taxpayers to demonstrate short-term, measurable impacts from the money invested in peacebuilding projects. The idea that change cannot be fully controlled through strategic plans is at odds with how the peacebuilding and development communities have been operating for decades. Yet, time and again, we experience the limits of pushing for change and find that our efforts actually make things worse.

In many cases, what we are advocating is based on an incorrect appraisal of which system we are dealing with. So, for example, we may provide assistance to build roads, courthouses, or bridges thinking we must solve a complicated project rather than a complex one. Our strategic plans therefore omit reference to difficult power issues, such as local conflicts and politics. Only after the new infrastructure is built do we realize that community residents see it as an assertion of dominance foisted on them by the central government. A few months later, we may learn that residents have sabotaged the projects we so carefully built.

Change in a complex system begins when people self-organize, without prompting from a centralized authority.

Summary: Five Characteristics of Complex Systems

- The whole is greater than the sum of its parts.
- Relationships between the parts of complex systems are nonlinear and therefore unpredictable.
- Complex systems "self-organize" in response to systemic problems.
- Complex systems are "emergent"; local-level changes can produce global effects.
- There is no one objective reality of a system.

> *There is no objective system, just as there are no neutral observers of a system.*

There Is No One Objective Reality of a System

We may create summaries or visual maps to help us understand a system. While useful, it is important to keep in mind that our attempts at analysis are limited because our own perspectives are limited. There is no objective system, just as there are no neutral observers of a system. What we see will be determined by our unique viewpoints and experiences as well as the methods we use to examine the system.

For example, in many countries a rich male member of the majority class will have a more positive opinion of the justice system than will a poor female member of a minority group. Neither of these perspectives is wrong, but neither perspective has a monopoly on the truth. Furthermore, the act of observing the system changes the system.[62] So not only are peacebuilders' assessments necessarily subjective, but their attempts to analyze and fix the conflict create ripples that must also be observed and accounted for.

Implications for Peacebuilding and the Rule of Law

Knowing that our work predominantly involves working with complex systems can help us see more clearly and engage more effectively. Understanding how complex systems work also increases our opportunities for success. Many of us in the peacekeeping field have too often pursued low leverage points—expensive, large-scale actions that result in small or no positive change in the broader system. But once we have clarified which system we are dealing with, we can use the right lens to examine what is really going on. Then we can find the coveted high leverage points: opportunities where a relatively small action can cause a large and positive change.

Section 3: Experimentation with Systems Thinking in the Real World

Orientation

It is one thing to have a theoretical overview of complex systems. But knowing and doing are two different things. How do we go from understanding the theory of complex systems to applying systems thinking in the real world of peacebuilding? Systems thinking has been criticized for being overly theoretical and not providing enough guidance about how to move from holistic analysis of a situation to systemic intervention.[63] And it is true that if we are looking for a formula or a rigid how-to guide that tells us how to fix a complex peacebuilding or rule of law system, we will certainly be disappointed by what we find in the systems thinking literature.

Traditional peacebuilding and rule of law literature is equally vague in this regard, and for good reason. As we have learned, rulebooks and formulas are of little use when dealing with complex systems, whether the arena is peacebuilding or any other field. Instead of one-size-fits-all directions, we need the more flexible framework that systems thinking can provide.

The processes, challenges, and proposed experiments offered in this section are not new. Almost everyone in the peacebuilding community has been part of an assessment, a group process, a learning initiative, or an exercise in finding solutions to systemic problems in a conflict-affected country. So what does the systems thinking lens bring to these familiar tools?

First, it helps us use old tools in a new way. When we act with the assumption that our tools are all linked and mutually supportive, as systems thinking encourages us to do, we tend to focus less on achieving quick fixes. Instead, we become more alert to the ways in which the success of one activity amplifies the success of everything else we are trying to accomplish. This does not mean that we must perfectly fulfill each activity or risk undermining the whole. Rather than an all-or-nothing perspective, systems thinking emphasizes adaptation: trying one option that seems feasible, refining it as needed, and then learning from what happens. But as we proceed, systems thinking reminds us to act mindfully, knowing that each thing we try will have repercussions for the entire system. This blend of experimentation and careful attention allows us to go slow to go fast.

Second, systems thinking challenges us to put people first in a real and authentic way, rather than simply going through the motions of local ownership to satisfy the outreach portion of our mandated work plan. We are invited to engage with, rather than ignore, all the baggage that comes with people: their individual and group conflicts; their traumas, stress, and inner tension; their biases and worldviews; their inherent unpredictability; their highly charged emotional responses to change; and the power dynamics that come with group interactions. Accepting this and working creatively with it can reveal unexpected and sustainable solutions.

Third, systems thinking inverts typical assumptions about who is important in the change process. Instead of prioritizing the top-down views of external experts and high-level officials,

systems thinking seeks wisdom from the bottom up. Local people who interact with and use the system become integral, particularly those who are often left behind in peacebuilding processes. While inclusiveness is a good thing for its own sake, there are strategic and pragmatic reasons to include a broad array of stakeholders in peacebuilding processes. As we will see, an inclusive approach can increase the odds of surprising early victories, and it can help ensure that the gains we make endure.
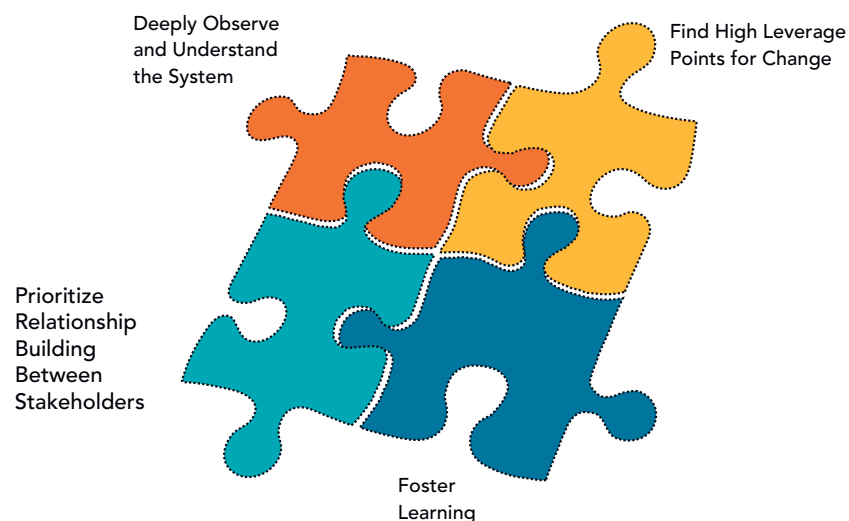
Finally, systems thinking challenges us to bring a "complexity mindset" to conventional peacebuilding tools. A peacebuilder who embodies this different mindset has a better understanding of, and higher tolerance for, the inevitable setbacks, failures, and midcourse adjustments. Those with a complexity mindset interpret obstacles differently than conventional wisdom prescribes. Instead of resisting what is, these practitioners can sit with the confusion and messiness of change processes and manage them intentionally with the tools outlined below.

Rather than providing a step-by-step plan, this section offers challenges that can be explored using specific experiments. And though they are listed in order, these experiments are nonlinear and interrelated (see figure 3). We have begun to use and study these approaches in our practice, and we invite other practitioners to see whether these experiments lead to increased success and improved common knowledge in the peacebuilding field.

As we work with these challenges, we are invited to bring the following orientation to our practice:

- a willingness to engage deeply with the system, its people, and its problems rather than superficially examining or acting on them;

- if we are external actors, a commitment to listening to the answers that stakeholders already have and helping them if they have not yet found answers;

- a willingness to support stakeholders as they deal with the emotional elements of change;

Figure 3. The Four Challenges Associated with Systems Thinking are Interrelated and Nonlinear

Deeply Observe and Understand the System

Find High Leverage Points for Change

Prioritize Relationship Building Between Stakeholders

Foster Learning

- an openness to "failing quickly, safely, and purposively" and to reorient responses to complex problems based on real-time events;[64] and

- an investment of time and resources that allows stakeholders to engage with the system's true complexity.

Challenge 1: Deeply Observe and Understand the System

> [An open system] does not look for information that makes it feel good…It is deliberately looking for information that might threaten its stability, knock it off balance, and open it to growth.
>
> (Margaret Wheatley, *Leadership and the New Science: Discovering Order in a Chaotic World*)

Peacebuilders rarely have time to observe and deeply understand the complex systems in which we work. This is understandable. When violence erupts and a country is in the chaotic domain, stopping to observe would be inappropriate. In this context peacebuilders are charged with stabilizing a country quickly, and this may take the form of quick, unilateral short-term actions. While there is no time for lengthy participatory systems analysis at this point (see Challenge 2), the stabilization process may provide data that help stakeholders later on.

Even if a country is not in chaos, it can be difficult to commit to in-depth observation of the system. The process takes significant time and resources, yet it rarely garners accolades. Instead, as we have seen, peacebuilders tend to be rewarded primarily for tangible outcomes: people trained, new laws implemented, and elections held. In addition, peacebuilders legitimately worry that a fragile, recently stabilized environment will fall back into violent conflict and chaos. This concern leads many of us to believe that we simply cannot afford to spend, for example, six months engaged in a system analysis process. As a result, we often rush in to fix all that we see as wrong in a conflict-affected country.

And yet, once the chaos has been stabilized and it is time for the next round of work, we have more than a binary choice between six months of doing nothing versus six months of successful project implementation. Instead, our choice could more often be framed as either six months of analysis, problem solving, and solution testing versus the premature implementation of a misdirected project that could very easily fail. Systems thinking tells us that to move toward action without deep analysis is to look for simplicity on the wrong side of complexity.[65] In other words, by superficially examining a system, we end up focusing on obvious symptoms rather than the more deep-seated dynamics that are the real source of problems.

The systems thinker's approach is to understand and clarify first before acting. By going through the complex mess, with all its different perspectives and uncertainties, we can come out the other side with a richer, yet simpler picture of the system. We can also gain a better understanding of what could transform the system in a positive and lasting way.[66] In addition, systems thinking urges us to stay in observer mode, gathering more information as we go, constantly reviewing our assumptions, and course correcting if necessary. New problems and issues will emerge over time, and our analysis should keep pace with this by going deeper and deeper, as if we were peeling the layers of an onion.

Making this exploration often involves a participatory group process where diverse groups of people are brought together to find their way toward a new understanding of the common challenges they face. Having a group working over the long term to deeply understand the system does not preclude short-term action to address systemic problems. In fact, both may happen si-

To move toward action without deep analysis is looking for simplicity on the wrong side of complexity.

multaneously. For example, during USIP's JSD Process in Iraq, which brought together police and citizens to work together to address rule of law problems, it quickly became clear that a factor in the negative relationship between the police and citizens was the placement of a police watchtower that looked directly into people's homes, leaving them feeling threatened and their privacy violated. The police took direct and immediate action to address this problem, which resulted in enhanced trust and cooperation from local people.

Given the many stakeholders, viewpoints, and agendas in a systems analysis, as well as the potential conflict that may exist between stakeholders, a professional and independent facilitator should support the process. This facilitator should also have a degree of independence from the system and be familiar with the systems thinking approach.

Practitioner Experiment: Consider the Concept of Stakeholders through the Systems Thinking Lens

In order to transform a system, systems thinking tells us that the process of change should be driven by stakeholders who are best placed to analyze problems and ultimately find solutions. The term *stakeholders* is often narrowly interpreted to prioritize political or government actors or those with significant power, such as rebel groups. Yet, in its truest sense, a stakeholder is anyone affected by a proposed reform, including those who can either assist with change or derail it.[67]
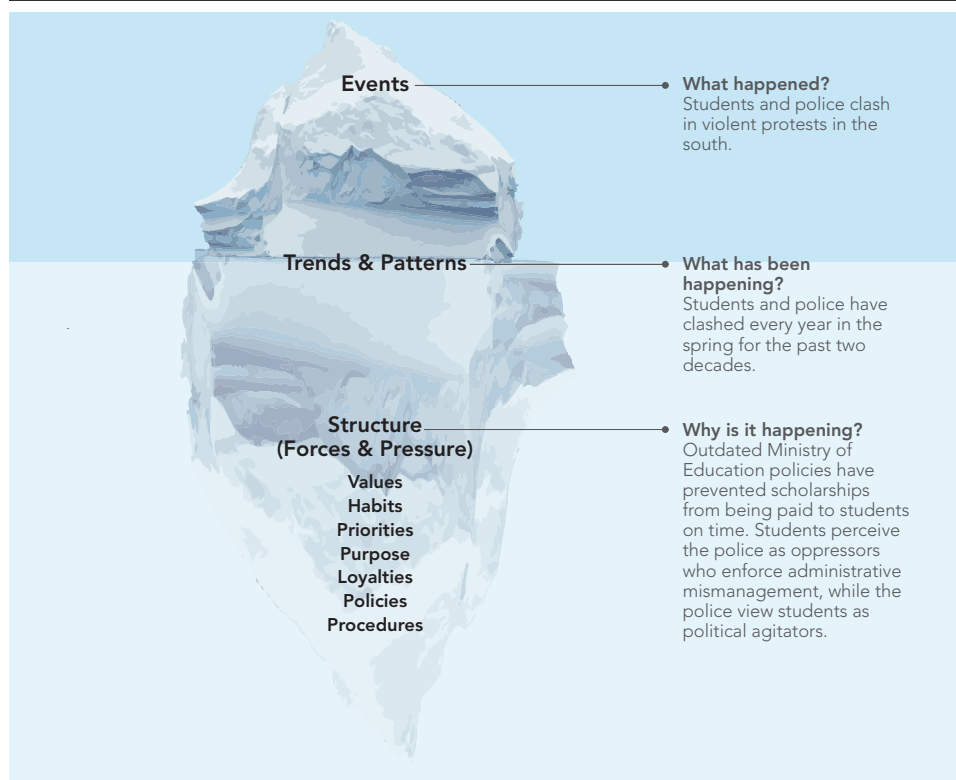
A stakeholder analysis is a formal process whereby a map or graphic is created to identify stakeholder names, their current levels of support for or opposition to reform, and their potential motivations for participating in a change process.[68] The analysis also includes strategies for how to engage with different groups initially, for example, through individual outreach or through group processes.[69]

If we are thinking about a stakeholder analysis for the justice system, for example, it is not only legislators or formal justice providers such as police, judges, and prison officials that we need to include. We also need to consider justice users (for example, ordinary people, prisoners, those who are being prosecuted) and alternative justice providers (for example, civil society groups, religious leaders, elders, tribal or community leaders, militias, private security groups, vigilante groups), among others. And because systems thinking prioritizes change at the local level, engaging stakeholders in the capital city or urban centers is not enough. Active engagement with those at the most local level of the system is crucial. Of course, where peacebuilders engage will depend on many factors, such as funding and the location of the particular problem they are trying to solve.

Practitioner Experiment: Focus the Inquiry and Look Deeply Into the Problem at Different Levels

Before any process begins, a circle will need to be drawn to define the parameters of the initial discussion. Systems thinkers use a tool called the focusing question to define the problem they will work on.[70] Using a focusing question means we do not take on all the problems in an entire sector at once but instead carve out one or more discrete challenges to work on. This allows members of the group to keep their work manageable even as it goes deep.

A focusing question always starts with "why?" because this leads people to uncover the deeper causes of problems.[71] For example, an analysis of violent clashes between students and the police could use the following focusing question: "Why, despite our best efforts, are police and students engaged in violent clashes?" Once the question has been articulated, we can examine it using three levels of scrutiny.

Figure 4. The Iceberg: How Events, Trends, and Structure Manifest in Different Ways

Events — What happened? Students and police clash in violent protests in the south.

Trends & Patterns — What has been happening? Students and police have clashed every year in the spring for the past two decades.

Structure (Forces & Pressure) — Why is it happening? Outdated Ministry of Education policies have prevented scholarships from being paid to students on time. Students perceive the police as oppressors who enforce administrative mismanagement, while the police view students as political agitators.

Values
Habits
Priorities
Purpose
Loyalties
Policies
Procedures

Source: Michael Goodman, adapted with permission.

Another systems thinking tool, called the iceberg theory, helps stakeholders analyze a problem at three levels (see figure 4). Analysis can often get stuck at the first level of examination: a focus on external events,[72] such as headlines or the latest trigger point in an ongoing conflict. Events are important. But once stakeholders have had the chance to tell their stories,[73] the second level of analysis involves looking at trends or patterns of behavior in the system over time.[74] For example, we can imagine the following media headline: "Students and Police Clash in Violent Protest in the South." To understand the roots of this problem, analysis would need to go beyond the specifics of that particular story. Perhaps after talking with stakeholders we learn that the clashes have happened every spring for the past two decades. We now have clues about the history and the depth of the problem.

The third level of analysis looks beyond events and trends to the so-called structure of the system, its hidden values, habits, priorities, purpose, loyalties, policies, and procedures.[75] The structure of the system drives behavior, particularly resistance to change, and so learning about it provides valuable information. In our example of police-student clashes, the stakeholder group could learn that outdated Ministry of Education policies have prevented scholarships from being paid to students on time. Stakeholders may also learn that the students perceive the police as oppressors who enforce administrative mismanagement, while the police view students as entitled political agitators. When we get to this level of learning about the system, we see the causes of problems and the outlines of possible solutions. At the structural level, we begin to answer the "why?" question.

This multilevel inquiry is not purely a theoretical or conceptual exercise but one that yields concrete dividends. First and foremost, this deep level of engagement with system problems can identify points of leverage that inform a change strategy. We, as peacebuilders, always strive to get to the root cause, the bottom of a problem. This three-tiered systems thinking inquiry is one concrete way to do it.

In the example of Figure 4, instead of focusing on events (one particular clash with the police) or even the trend (clashes historically occur in spring), the stakeholder group learns that the real source of the problem lies not only with the police but with the administrative structure of the Ministry of Education. The ministry would need to be brought into the process, and change efforts would need to be focused on ministry policies and procedures. In addition, stakeholders could come to see the need to repair the broken relationship between students and the police.

Practitioners Should Be Ready for…the Stress Induced by In-Depth Inquiries

Part of looking deeply into a system and its structural issues involves exposing the images, assumptions, and stories we carry in our minds,[76] often below conscious awareness.[77] Because these mental models drive the behavior of the system, greater understanding allows them to be examined and potentially transformed. But this can be a scary proposition for all involved. Many participants may be unaware of their own mental models, or they may not want their worldviews challenged. Part of the job of the facilitator will be to help participants process their emotional responses to this level of discussion. Applying this to the police-student example, a facilitator could help both students and police learn about each other's biases while simultaneously helping them adjust to the new mental model that may be needed following positive interactions with Ministry of Education officials.

Practitioners Should Be Ready for…Our Own Internal Resistance to the Time Commitment and Human Resources Needed

Helping stakeholders look at a system's structure requires a significant investment of time, money, and human resources. People need space to talk about events and trends before they can begin to grapple with the deeper issues of structure. The process also requires a high degree of intergroup trust and a familiarity with group processes, both of which build over time.

Weighed down by the urgency and enormity of the problems faced in a peacebuilding context, we are understandably driven to seek results. In this difficult situation, we could view a long process as something we cannot afford to invest in given the constant pressures on international peacebuilding organizations or donor governments to fix things quickly, "get things off their plates," and move on to newer policy objectives or organizational priorities. Unfortunately, there may be no shortcuts. Our collective experience in peacebuilding has shown us that shortcuts often backfire when applied to the wrong problem. In the end, our quick-win initiatives can end up taking longer than they would have if a fully fledged, participatory group process had been undertaken in the first place.

Practitioner Experiment: Consider Systems Thinking Tools for Mapping the System

Developing a systems map that depicts how the different parts of the system relate to the complex problem under scrutiny can be extremely helpful. The map should also capture the

circular, rather than the linear, relationships among the various facets of the problem. An array of mapping tools are available, from relatively simple diagrams showing relationships between components, to more complicated computer-based modeling approaches, to the diagramming of "system archetypes."[78] For our purposes, simpler may be better. An overly complicated tool may take stakeholders a long time to learn and may lengthen the systems analysis process more than is necessary. Such a delay can cause stakeholders to lose interest in the process.

Practitioners Should Be Ready for…the Messiness of Mapping

There is no objective truth about a complex system. Instead, as part of the mapping exercise, stakeholders will share their multiple, lived realities of it. This process not only results in more information about the problems and their potential solutions but also helps stakeholders face multiple realities and take responsibility for their part in creating problems.[79] At the same time, because of the contested nature of the system, dealing with these varying worldviews will feel confusing and uncomfortable at times. If it does not, key information or perspectives may be missing. In the same way, complex systems are fluid and ever changing, and the system map should reflect that. However much we might want to complete the task and create a definitive and permanent map, we have to expect mapping to be an ongoing work in progress.

Challenge 2: Prioritize Relationship Building Between Stakeholders

> The increased attention on relationships between the elements or agents of a system is perhaps the greatest contribution that complex systems science can make to peacebuilding.
>
> (Serge Loode, "Peacebuilding in Complex Social Systems")

In conflict-affected countries, relationships between state actors, between the state and the population, and between different groups in society are often either nonexistent or characterized by mistrust, hate, or fear. Even though government leadership may change after conflict, a wall of fear may linger between the governing bodies and the governed. This fear can make ordinary people too intimidated or suspicious to speak to those working in centers of government and the legal system. Groups within society may be fragmented, particularly as a result of ethnic or religious conflict.

Complex systems comprise intricate webs of circular relationships. Relationships are also the basis of conflict and its long-term solution.[80] So if we want to facilitate systems change in conflict-affected countries, the foundation lies in healing and strengthening existing relationships and building new ones. To do this, we need to bring people together.

Despite this reality, we, as peacebuilders, often focus instead on creating or strengthening formal state institutions, laws, and elections rather than on creating or restoring intracommunity relationships. This may be in part because it appears easier to fix institutions and laws, and that is what is often expected of us from home governments, taxpayers, and peacebuilding organizations. But as we have seen, without changes to relationships, achieving sustainable institutional or legal change is very difficult.

Practitioner Experiment: Connect Stakeholders

Systems thinking tells us that if we want to make a system stronger, we need to create stronger relationships. Put another way, to bring health to a system, we need to connect it to more

Relationships are the basis of conflict and its long-term solution.

of itself,[81] both vertically (between the government and the people) and horizontally (among people in various state institutions and among groups in society).

Systems thinking asks us to invest in group processes that bring stakeholders together to build, repair, or strengthen their relationships. In doing so, they can also work collectively to understand a system and its problems (Challenge 1), to encourage learning (Challenge 3), and ultimately to foster self-organization and emergence and identify high leverage points for change (Challenge 4).

Different options are available for working on both relationships and the substance of problems: dialogue, facilitation, informal or formal working groups, commissions, task forces, and contact groups. All have the potential to build or repair relationships. The choice of technique used is not important, and even less important is that people rigidly adopt a single approach. What counts is that the group embraces creativity and adaptation as it improves relationships within the system. For the purposes of this report, we refer to the range of techniques listed above as *adaptive transformation processes*.

Practitioners Should Be Ready for…the Challenge of Whom to Include

Diversity is a key tenet of an effective change network. We want to connect the "not-like-minded and not-like-situations."[82] We also want to include those who are typically excluded from such processes, such as women, minority and vulnerable groups, youth, and those on the losing side of conflict. Systems thinking tells us that if a group lacks diversity, it will not exhibit the full extent of its collective intelligence.[83] For this reason, diversity is a prerequisite for system innovation and adaptation.[84]

Yet not every member of society can participate in adaptive transformation processes. Too few people will make the process exclusive and exclusionary, while too many people could make it difficult to manage and ultimately ineffective. Starting small and increasing the size of the group over time can allow calibrations toward the right balance. Ultimately, whoever is involved in the system needs to be represented somehow in the process. Therefore, midstream adjustments may also need to be made to broaden the inclusiveness of initial efforts. Conversely, groups that are overrepresented in the process may need to streamline their engagement by nominating delegates.

Practitioners Should Be Ready for…Discord Among Groups

Bringing together government officials and local populations is not easy. The fear and mistrust between them may be such that it is difficult to secure their participation at the outset. In this case, a trusted third-party interlocutor, either local or international, may need to take on the role of convener.

It can also be useful to hold premeetings that bring together each constituency separately in order to prepare them for the larger group interaction. Trusted and competent facilitators should guide these premeetings as well as the eventual coming together of government officials and local people. People's fear of authority figures may dissipate as they meet face to face with government officials and begin to see their humanity and the challenges they too are facing. Prolonged, positive engagement may eventually build trust and lessen suspicion between these groups.

Practitioners Should Be Ready for…Intergroup Communication Challenges

Each group will need to cultivate the ability to suspend judgment[85] and be present with the perceived reality of the other, something that is never easy. This may be especially difficult in a first meeting where members of the local population may freeze and fail to share their viewpoint honestly. Conversely, some people may be so eager to convey their grievances to government officials that they do so in an overly aggressive or combative way. This is where a facilitator or trusted convener can assist the group by upholding agreed-on ground rules for respectful communication.

Practitioners Should Be Ready for…Participant Stress and Resistance

Adaptive transformation processes are extremely hard to manage. The closer a group is to conflict, either temporally or geographically, the more stress will manifest. People at the table will be carrying intense feelings and agendas that can affect how the group interacts. For example:

- A politician may be asked to consider disbanding an armed group for which her son fought and died.

- Representatives of specific groups in society may be under pressure to stick to the script and not make what their constituency views as concessions.

- Factions in ongoing disputes may use the process to stall for time, gain legitimacy, or stop momentum for change.

- Someone may begin to repair their own relationships within the group while worrying that their community back home will see any rapprochement as a betrayal.

The potent fears and calculations of those at the table can seem to dim the chances for mutual understanding. This is where the skilled guidance of facilitators and the strong boundaries of the convener's commitment to systems analysis can hold the tension. In our experience, when these conditions are present, the participants' deep feelings can begin to create mutual understanding and the foundation of solid relationships. If strong support is not available, however, stress may cause participants to abandon the process and go back to their old ways of being and doing.

A process whereby disconnected stakeholders are brought together can succeed only if participants engage authentically and with some hope that change can occur. To keep things on track, it may be necessary to identify individuals who appear, consciously or unconsciously, to be derailing the process. Simply excluding them would further undermine the group's work. Instead, the facilitator can create strategies that deepen the resistors' level of engagement and address their concerns.

Practitioners Should Be Ready for…a Lengthy Process
That Includes the Potential for Small, Early Victories

Given the messy nature of collaboration and the time delay inherent in changing complex systems, this process is often lengthy. Funding agencies and participants should know this ahead of time to ensure that they do not lose interest too early and withdraw support either before real change occurs[86] or when a project encounters initial failure or roadblocks. We should also be aware that, in some cases, the simple act of sitting together and listening to "the other" can generate easily implemented ideas that support small-scale change in the

short term. While such initiatives cannot be forced or engineered, their emergence can be supported. The convener or funder of the adaptive transformation process could consider setting aside funding for small-scale projects. It is equally important to celebrate small, early victories in order to keep the process energized.

Practitioners Should Be Ready for…Attempts at Top-Down Control

Adaptive transformation processes, especially those that engage primarily with local populations, may at first seem relatively harmless to those in power. Politicians may initially feign support, thinking that the simple act of talking and listening could have little impact. When real change starts to occur, those in power may seek to capture the process either to take credit for positive outcomes or to control shifts that threaten their interests. For example, an official could be threatened by attention brought to corruption and the need for better governance. One way to avoid top-down control under these circumstances is to formalize the process as community driven.

Practitioner Experiment:
Create Enabling Structures for Relationship Building

Efforts to support relationship building may start off informally, but as they build momentum, stakeholders who are supported by a convening organization may create more formalized "enabling infrastructures,"[87] coalitions,[88] or change networks. Such networks also broaden an effort's reach and allow relationships to strengthen at the national, regional, and local levels.

Through these networks, which are driven by communities for the most part, agents in the system can join together directly, whether they serve as connectors of people, suppliers of new ideas, or identifiers of problems. Change comes when all of these people interact in a supported fashion. When a convening organization helps establish a strong, independent structure that puts the community center stage, there is less risk of political capture from the top down.

For example, in Nepal and Iraq, USIP phased in enabling structures to support the Justice and Security Dialogue Process over a series of years.[89] The dialogues began with police representatives coming together to identify justice and security problems and potential solutions. Then civil society and the population were brought together to do the same thing. Finally, all participants joined a larger group and presented their findings to each other before working on common recommendations and presenting them to political leaders. The entire group then worked to create recommendations for policymakers at the national level.

Practitioners Should Be Ready for…the Pitfalls of Focusing
Too Much on Procedural Structure at the Expense of Relationship Building

While an enabling structure can be useful, the focus should stay firmly on building strong relationships with the stakeholders involved. Prioritizing the creation of strict rules or procedures to guide the enabling structure may stymie the relationship building that should be at the heart of the early stages of the process. For instance, from 2011 to 2013 USIP worked with minority members of the Iraqi Parliament to develop a parliamentary minority caucus. USIP began by developing rules of procedure for membership, working methods, and voting procedures. A certain degree of rule setting was necessary. But asking the members of parliament to create a

comprehensive set of rules at the outset proved difficult, especially because the various minority groups had never worked together before. The strong focus on rules created arguments over procedure that constrained the growth of the caucus. Time might have been better spent helping the members of parliament learn about each other's perspectives. This knowledge could then have helped the caucus grapple with urgent issues.

Challenge 3: Foster Learning

> We cannot jump into the future. We have to go there.
>
> (Igor Nicolik, "TedxRotterdam—Complex Adaptive Systems")

Information provides the seeds of innovation and system transformation. If a conflict-affected country is to transform itself, those involved in the change process must process and apply huge amounts of new information.[90] Learning is thus a crucial component of systems change, both at the individual level and within larger groups.[91]

Once violence has ceased and a conflict-affected country is no longer in chaos, peacebuilders are often ready to share information, models, and best practice solutions for reconstruction. These solutions are shared at the many workshops that are a fixture of conflict-affected countries.

We often expect that once shared, these solutions will be readily adopted by local stakeholders. This is not totally unreasonable given that we have seen our ideas work in other contexts. However, systems thinking tells us that we cannot fully control systems, nor can we force realities to fit our favorite strategies. Instead of seeking to transfer what worked in the past, we would gain by considering how our models might fit the unique circumstances of the country we are working in today.

Practitioner Experiment: Share Meaningful Information

Information-rich, ambiguous environments, such as conflict-affected countries, can be the source of surprising new births.[92] The unpredictable state that many postconflict countries live in, including the pain and dislocation people have gone through, produces a state of excruciating disorder. But from this disorder, the system can organize into a new form of being,[93] if it has access to new information that can feed the transformation. Without learning, a system at this juncture cannot demonstrate its intelligence and may collapse, causing even more distress to the people within it.

However urgent the need for learning, people will use and share only what they decide is meaningful,[94] and stakeholders themselves, not external actors, should decide whether a given set of information is worth using. When working on specific adaptive transformation processes in conflict-affected countries, individuals should also be free to submit information from many sources, and this information should circulate freely.[95] Case studies from other countries can be useful, but it is important not to frame them as models or best practices that should be applied wholesale.

Practitioners Should Be Ready for…Potential Information Overload

There are so many problems in conflict-affected countries and so much information that could be shared. Yet, we need to guard against overloading stakeholders with information to the point that they become paralyzed and unable to process it all. This is where peacebuilders

If a conflict-affected country is to transform itself, those involved in the change process must process and apply huge amounts of new information.

can think about aligning information sharing with the priority issues and high leverage points (see Challenge 4) identified by stakeholders. Not everything can or should be dealt with immediately and certainly not all at the same time.

Practitioners Should Be Ready for…Intense Debate

Disagreements may occur about which perspectives are correct, making the presence of a skilled facilitator vital to the information sharing process. If the facilitator keeps the stakeholders' ideas center stage and allows multiple viewpoints to collide in a way that is safely bounded, these disagreements can create a new and durable collective viewpoint. In this situation, participants in adaptive transformation processes can abandon some of their habitual mental models and come to a collective understanding of systemic problems and solutions.

Practitioner Experiment: Use a "Problem-Posing" Approach

Paulo Freire, one of the most influential education thinkers of the twentieth century, labels our typical approach to adult learning "the banking approach" because our methods tend to deposit standardized knowledge into students.[96] When we do this, we imply that students "are depositories who know nothing of value related to the topic."[97] By treating students as passive beneficiaries, the banking approach also eliminates their ideas from the system. This in turn removes opportunities for people and the larger whole to learn how to deal with problems on their own terms.[98] Systems thinking offers a different approach to learning, one that helps students self-organize. This in turn encourages homegrown solutions to emerge.

Freire proposes a "problem-posing approach to education,"[99] in which students are encouraged to critically examine their reality through group discussion and reflection. Under the problem-posing model, new knowledge should not automatically be accepted but should be questioned and, if necessary, modified or rejected. This model accords with systems thinking in that trainers act as facilitators engaged in a co-learning process. As part of this process, participants are encouraged to define their own problems and explore their own solutions as a group.

Practitioners Should Be Ready for…Evolving Expectations About Who Will Engage in Learning

Some argue that expecting all local stakeholders to be fully engaged in a process of continuous self-learning is unrealistic.[100] Expectations should definitely be well grounded in this regard. One approach may be to start small and aim for "good enough,"[101] meaning that initially a small subgroup of people could engage in intensive learning and then bring their findings back to the group. Progress will be incremental, and inclusivity can be increased as the momentum of the process grows.

Practitioner Experiment: Try Learning in Real Time

Learning is not a onetime event but an ongoing process. Transforming a complex system requires active, real-world learning[102] as well as adaptation in response to events within the system and its environment. Not only is failure an inherent part of the process, but it is impossible to know in advance which changes will succeed and which will not. In this fluid context, we can experiment with "fail[ing] quickly, safely and purposively."[103] For example,

Paolo Freire's Models of Education

The Banking Model

- Teachers deposit standardized information into students.
- Teachers treat students as depositories who can contribute little to the topic.
- This model removes opportunities for people and the larger whole to learn how to deal with problems on their own terms using their own wisdom and life experience.

vs.

The Problem-Posing Model

- Teachers act as facilitators who learn alongside students.
- Students question new knowledge in order to discern its value.
- Students modify new knowledge, or reject it if needed.
- This model draws on the inner resources of the learner and helps local solutions emerge.

initiatives can be framed as experiments rather than linear-style projects that are expected to succeed. If experiments do succeed, they should be amplified and used as stepping-stones for future progress. If experiments fail, they should be dampened,[104] meaning resources should be reduced and lessons learned.

When speaking about this kind of learning, we need to reflect on the current conditions governing peacebuilding. We know that the institutional setup for providing assistance does not always expressly support an experimental approach. As peacebuilders, we need to work within the confines of rigid planning systems that lock us into multiyear strategies and projects with detailed goals, outputs, and timelines. The international peacebuilding community does not formally acknowledge that some of these projects will fail or need to be regularly adapted. Yet, based on the JSD model run by USIP, we believe it is possible to bring learning and experimentation to projects while keeping accountability and rigor intact. We do this by setting defined yet flexible objectives; gaining donor input on evaluation criteria that helps us self-correct; and conducting detailed, nonlinear project monitoring and evaluation.

Another challenge to implementing learning is the lack of continuity and knowledge sharing both in peacebuilding organizations and in the institutions of conflict-affected countries. Learning can be personality driven and concentrated in a few people. If those people are peacebuilders who rotate out of their jobs every six months to two years, valuable learning can be lost. If the learners are residents of the conflict-affected country, they may have difficulty sharing their new ideas. Either way, hard-won knowledge leaves the system when it is not formalized. There is no easy way to address this challenge, but our field should consider ways to better capture knowledge gained on the ground.

Practitioners Should Be Ready for…Long-Term Commitments

The process of learning and failing is messy; "it will likely contain a good deal of redundancy, overlap and trial and error."[105] Patience and long-term investments will be required. Fortunately, donors are coming to see that they make more of an impact when they do not impose their own plans and timelines. Such donors see failures as opportunities to help all involved learn how the system works, thereby increasing chances for long-term success.[106]

Challenge 4: Find High Leverage Points for Change

> The term "social acupuncture" has been used as a metaphor to describe the process of finding high leverage points. Acupuncture, instead of looking at specific conditions, analyzes "dynamic flows." Acupuncture then designs a set of low-intensity interventions whose sole aim is to strengthen or disrupt these patterns.
>
> (Orit Gal, "Social Acupuncture")

As peacebuilders we are often told to take advantage of narrow windows of opportunity. Under pressure to deliver results, we look for quick wins. Sometimes we pursue quick wins for legitimate, tactical reasons such as gaining an entry point to the system or its stakeholders. However, in most cases, we look for quick wins because we mistakenly believe they will bring lasting change.

Many quick-win projects seek to remove obvious problems. But systems thinking tells us that "when you get rid of something you don't want, you don't necessarily get what you do want."[107] In Iraq, for example, the 2003 de-Baathification process removed approximately forty thousand public officials associated with the Saddam Hussein regime. What seemed like a win ended up leaving the government and justice system debilitated and unable to function. This lack of capacity was a factor in fueling a resurgence of conflict.[108]

Other types of quick-win projects may focus on addressing obvious symptoms rather than the deeper habits, mindsets, and values that create problems in a complex system. Systems thinking tells us that "changing surface level problems does not change the underlying system."[109] For example, one response to the excessive use of force against civilians at public protests could be to train police on crowd management. But if this action stresses only technical skills, it will overlook some important questions. Do the police see their job as exerting power over the people rather than serving the people? Do the police support the right to freedom of assembly and peaceful protest? If the police are not committed to these principles, it may be counterproductive to train and equip them with water cannons, K-9 units, and chemical munitions.

Quick-win projects end up targeting "low leverage points," or scenarios where a large amount of force or action creates only a small amount of change. The de-Baathification and police examples describe how the pursuit of low leverage projects can unfold. Systems thinkers compare low leverage points to pushing on the side of a ship to try and change its course. It is easier in the short term to simply start pushing, but the type of force we can bring to bear is not enough to accomplish our goal.

Sometimes quick-win projects produce no change or negative change. These projects may perpetuate or worsen a problem, even if things seemed to improve at first. By contrast, systems thinking proposes an approach whereby peacebuilders help local change agents find high leverage points, or places in the system where a small amount of force or action causes a large change in system behavior.[110] A high leverage point is analogous to using the rudder to change a ship's direction: a significant change is achieved with relatively little effort.

Practitioner Experiment: Find High Leverage Points

High leverage points "reroute important relationships"[111] between different elements in the system, not by replacing them[112] but by gradually[113] subverting them so the system eventually tips into a new state.[114] To illustrate this point, consider our earlier example of police-student clashes. A low leverage point for change in this situation could be training the police on crowd control techniques.

At first blush this idea sounds sensible given that the most recent clashes ought to be addressed. However, further reflection will show that such training is focused on addressing only the latest clash between students and police. Once we understand that the clashes are symptoms of a larger problem, we will realize that police training is not the only response needed. By contrast, high leverage points in this situation could be changing the Ministry of Education's inefficient internal procedures for scholarship allocation or bringing police and students together to develop a set of agreed-on behaviors for each side. These solutions address the history of the problem (for example, the problem has happened at the same time every year for twenty years) and the underlying structure of the system (for example, scholarship money is not disbursed on time, and police and students disrespect each other).

Sometimes high leverage points have already been identified in parts of the system and are being used to improve things at the local level. Systems thinkers therefore advise that we look for "positive deviance,"[115] meaning "individuals or groups whose uncommon behaviors and strategies enable them to find better solutions to problems than their peers, while having access to the same resources and facing similar or worse challenges."[116]

Individuals who are natural systems thinkers will spot high leverage points for change quite easily. Other peacebuilders may need to be more intentional and follow a more deliberate process to find these opportunities. When systems analysis, relationship building, and learning have been done properly, high leverage points become easier for local stakeholders to find because people have been involved in analyzing and seeing different perspectives of the system. In contrast, where time and resources have not been invested in these activities, low leverage points may be the only discernible options.

High leverage points "reroute important relationships" between different elements in the system, not by replacing them but by gradually subverting them so the system eventually tips into a new state.

Practitioners Should Be Ready for…the Reverse Logic of High Leverage Points

The literature is full of examples of how low leverage point projects provide disappointing returns. In theory, then, high leverage points are the obvious goal. But the theory can become difficult to act on. High leverage points are often neither obvious nor popular.[117] Sometimes they are actually counterintuitive[118] because they require changing deeply embedded patterns, values, power relations,[119] and social dynamics.[120] In short, transformation at this level challenges many of the stakeholders' deeply held assumptions.

Fortunately, high leverage points do not necessarily involve big changes. Small, cumulative, low-intensity actions[121] are often more effective because they do not force changes that the system is not ready to absorb. By not moving too quickly, we provide the system room to course correct,[122] particularly if surprises are encountered.[123] These small steps need not be directed at the site of the problem.[124] In fact, working "away from the core" of the problem[125] may increase the likelihood of success in part because small, nonconfrontational initiatives tend to garner less resistance from those within the system.

Practitioner Experiment:
Adopt a Portfolio Approach to Peacebuilding Projects

Big changes require system innovation, and innovation can come only through experimentation. As peacebuilders, we must increase our tolerance for the uncertainty of experimentation and the likelihood that some experiments will fail. This does not mean we adopt a fuzzy, anything-goes approach to project management. As peacebuilders we must be ruthlessly clear about the practical impact of our work. Such clarity can lead us to adopt what Ramalingam calls a "portfolio

Big changes require system innovation, and innovation can only come through experimentation. As peacebuilders, we must increase our tolerance for the uncertainty of experimentation and the likelihood that some experiments will fail.

approach," just like venture capitalists who accept that some projects may fail or die. These investors launch multiple interventions and learn in real time to achieve the appropriate sequence and mix of activities.[126] Sometimes initiatives may cooperate, and sometimes they may even compete.[127] The pragmatism of this outlook allows us to combine experimentation with a focus on results (see figure 5).

Practitioners Should Be Ready for…Untidy and Ongoing Progress

Complex systems usually "evolve through messes."[128] For this reason, Robert Ricigliano warns peacebuilders to "dump the terms 'success' and 'failure'" and instead think of peacebuilding as an ongoing process requiring constant review and adaptation.[129] The work of change is never really done. Even in nonconflict contexts, societal systems are constantly being refined based on shifting conditions. We peacebuilders will rarely be on hand to provide ongoing assistance to a conflict-affected country. Accepting that limitation means accepting that we cannot fix all of a country's problems before we leave. We can, however, help stakeholders learn about their own systems and offer assistance as they prepare to engage with their own challenges over the long term.

Figure 5. Experiments to Explore When Using Systems Thinking

Deeply Observe and Understand the System

Prioritize Relationship Building Between Stakeholders

Foster Learning

Find High Leverage Points for Change

Experiment:

Consider the Concept of Stakeholders Through the Systems Thinking Lens

Focus the Inquiry and Look Deeply Into the Problem at Different Levels

Consider Systems Thinking Tools for Mapping the System

Experiment:

Connect Stakeholders

Create Enabling Structures For Relationship Building

Experiment:

Share Meaningful Information

Use a "Problem-Posing" Approach

Try Learning in Real Time

Experiment:

Find High Leverage Points

Adopt a Portfolio Approach to Peacebuilding Projects

Outcomes

When we experiment with deeply understanding a complex system (Challenge 1), all of us—local and international actors—can learn about the reality of the system beyond events, superficial stories, or symptoms. In other words, we are able to more clearly see why a system is dysfunctional. When this awareness is coupled with building relationships between stakeholders (Challenge 2) and fostering new learning (Challenge 3), we all can stimulate self-organization, emergence, and the discovery of high leverage points (Challenge 4). It is these high leverage points that can transform a complex system for the better. If developed at the local level, viable high leverage points may be expanded to other locations. In other words, sustainable transformation can be "brought to scale."[130]

The inclusive and participatory process of engagement with stakeholders that systems thinking proposes can have other benefits. Stakeholders show up to the process as human beings and may come to see each other with more empathy and compassion. At this deep level of connection, systemic change toward peace and coexistence can become a shared possibility.[131] An internal vision for peace may have been absent from people's minds and hearts for a very long time in a conflict-affected country. Human connection allows that collective vision to be rekindled.

The process can also build trust, legitimacy, and confidence in the state. When citizens have positive contact with state officials, such as justice actors whom they perceive as fair, trust begins to return.[132] Relationships between citizens and state actors that are strengthened in this way enhance the legitimacy of the government. A positive cycle then ensues in which increased confidence in the government spurs better compliance with the law and greater accountability.[133]

When people, even former adversaries, sit around a table in a sustained and heartfelt dialogue, they can discover values they hold in common. Many peacebuilding practitioners have seen this occur, and it is a powerful experience for all involved. As we have learned, a group that can put these shared values at the center of their response to change will be more likely to rebuild their lives after a crisis. They will also be better prepared for the unknown but inevitable shocks and challenges that lie ahead for them and their country. The work is never done, and stability is never guaranteed. But our peacebuilding work gains traction and effectiveness when we support the system, and the web of relationships that animate it, to find the path toward healing and transformation.

Possible Outcomes from Experiments from Systems Thinking

The experiments in the section above are challenging, and they take time. But these experiments may hold great benefits for international and local peacebuilders, including

- the development of empathy, compassion, and connection with different sectors of society—a baseline requirement for making peace a shared possibility;
- the discovery of high leverage points where seemingly small actions can lead to large, positive effects;
- relationships that may slowly build greater trust, empathy, and confidence in society and the state, which have been shown to promote greater accountability and compliance with the law; and
- discovery of shared values that provide a basis for peace.

Conclusion: Looking Forward

This report makes the following points:

- Many peacebuilding interventions seeking to support rule of law get stuck. The reason they get stuck has little to do with the law and its technical dimensions. Instead, some reforms get stuck because we are looking at certain rule of law problems with an inadequate lens.

- Not all the systems in which we work are alike. Some may be orderly, regular, and predictable—like clocks. And others are disorderly, irregular, and unpredictable—like clouds.

- Pressure to demonstrate relevance and impact can push peacebuilding practitioners to view their work in a certain way. Sometimes disorderly cloud challenges are seen as orderly clock problems that can be fixed by well-known tools that have been continually applied elsewhere. This approach can render many interventions ineffective. In some cases, the solutions can even backfire and make the problem worse.

- Systems thinking allows us to develop a more rigorous and nuanced set of lenses for analyzing and responding to conflict. These lenses can help us identify which system we are dealing with and whether clock or cloud thinking is called for. When we know that systems can be simple, complicated, complex, or chaotic—or a combination of all four—we can better adapt our solutions to the situation at hand.

- While peacebuilders navigate environments in which several of these problems coexist, most situations involving conflict inevitably involve complex systems at some level. Improving our capacity to manage complex systems is therefore key to improving our impact.

- Systems thinking provides us with useful frameworks to work more effectively with complex problems. It invites us to be clearer and more efficient in how we observe, cultivate relationships, foster learning, and find high leverage points for change.

Over the past decade, we have been part of a group of practitioners at USIP that has tested new ways to support rule of law reform in conflict-affected areas. This group uses the principles of systems thinking to inspire its work in areas around the world. While experimentation always entails setbacks and readjustments, we have gathered important information about what seems to be working. This report is the first in a series of publications and engagements that share what we have learned so far. An upcoming book will provide more information for helping practitioners design, implement, and evaluate interventions.

As we work with this material, we must observe careful limits. Reforms get stuck for many reasons, and we are not trying to account for and correct every constraint. Nor do we believe that systems thinking offers a magic formula for circumventing every problem. However, from our years of direct experience with reforms in conflict areas, we believe that systems thinking can help remove some of the powerful constraining forces that either slow down or stall reform. At the same time, systems thinking should not become a new rubric that is rigorously dictated and enforced by donors. Systems thinking often requires donors to transfer the power of diagnosing and solving problems to local actors who are directly involved in the complex system needing change. This transfer of power is at the core of what makes systems thinking work.

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Using systems thinking is not easy. It forces us to live with confusion and reversals. Yet sometimes systems thinking can help us convert seemingly permanent roadblocks into obstacles that can, with time and hard work, be overcome. As violent conflict spreads to new corners of the world, ravaging entire cities and displacing millions of people, the ability to enhance our margin of success can make an enormous difference. Stephen Hawking observed that the twenty-first century would be the century of complexity. If we want to change the world, we need to become more fluent at understanding and working with this central human condition.

Acknowledgments

Notes

1. Philippe explored the concepts of complexity theory and systems thinking in his book *Diplomatic Counterinsurgency: Lessons from Bosnia and Herzegovina* (Cambridge: Cambridge University Press, 2014) while Vivienne tested the concepts in the USIP Rule of Law Practitioners course she taught.

2. See Ben Ramalingam, *Aid on the Edge of Chaos: Rethinking International Cooperation in a Complex World* (Oxford: Oxford University Press, 2013). See also Rachel Kleinfeld, "Improving Development Aid Design and Evaluation: Plan for Sailboats, Not Trains," *Carnegie Endowment for International Peace Report*, 2015, http://carnegieendowment.org/files/devt_design_implementation.pdf.

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4. Police Restructuring Commission of Bosnia and Herzegovina, *Final Report on the Work of the Police Restructuring Commission of Bosnia and Herzegovina* (Sarajevo: Office of the High Representative, December 2004), www.ohr.int/ohr-dept/presso/pressr/doc/final-prc-report-7feb05.pdf.

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6. Karl Popper, *Objective Knowledge: An Evolutionary Approach*, rev. ed. (Oxford: Oxford University Press, 1979), 207.

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10. Abraham Kaplan, *The Conduct of Inquiry: Methodology for Behavioral Science* (San Francisco: Chandler Publishing, 1964), 28.

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The traditional approach to peacebuilding and rule of law reform seems sound: ambitious objectives, injection of resources, teams of experts working intensely. Evidence suggests, however, that seldom are truly successful and sustainable reforms achieved. Based on research over the past ten years and the work done at the United States Institute of Peace (USIP), this report draws on the field of systems thinking to provide a flexible structure that allows for the reframing of familiar peacebuilding tools to use them in new, innovative ways, inviting policymakers and practitioners to go back to solving problems in ways they are already familiar with. The report is the first in a series of USIP publications and engagements on systems thinking and peacebuilding.

Other USIP Publications

- *Fighting Serious Crimes: Strategies and Tactics for Conflict-Affected Societies* edited by Colette Rausch (USIP Press, May 2017)

- *Engaging Religion and Religious Actors in Countering Violent Extremism* by Peter Mandaville and Melissa Nozell (Special Report, August 2017)

- *Conflict Management Training for Peacekeepers* by Alison Milofsky, Joseph Sany, Illana M. Lancaster, and Jeff Krentel (Special Report, August 2017)

- *Negotiating Civil Resistance* by Anthony Wanis-St. John and Noah Rosen (Peaceworks, July 2017)

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