How Do We Work? Advancing the Practice of Design for Transition

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We have the impulse for change, but our tools were made for commerce

Others have written eloquently and convincingly about why it's necessary for us to evolve the practice of design, and why the next chapter of design needs to involve a long and systemic view[1]. This paper is written by someone who is living a practically and spiritually "bi-coastal" life, alternating between the academic world and the world of practice. My concern is the development and propagation of ways of working that are potent for generating resilient societal and environmental well-being.

Many people who identify as designers are responding to the widespread social challenges of our times. There is a tremendous grassroots effort to engage with these challenges, to "design for good." Most of these efforts involve taking the very same methods that we've been applying to business and technology questions — methods developed for the job of creating consumer products — and applying them to social challenges.

The impulse is mighty, but the tools are dull. We stand on the shoulders of people who, through decades of practice and study, improved the way we create goods and services that provide "solutions" to observed (or invented!) "needs," which are then to be delivered through institutions. We have relatively little to stand on when we are faced with the task of fostering healthy dynamics in a human community at any scale.

The point that "our tools are dull" — that the methods and approaches derived from industry practices are inadequate for nurturing societal transitions — may seem obvious to some, and others may see it as a matter of opinion. It is not a matter of opinion. It is an unavoidable consequence of the nature of social systems.

This paper will:

- summarize the ways in which social situations at any scale present complexities that are beyond current design practice
- describe the characteristics of the new approaches we need
- suggest examples of approaches that have some of those characteristics
- offer a few summary conclusions

[1] See other papers submitted to this symposium, as well as Alain Findeli, *Rethinking Design Education for the 21st Century,* Design Issues Vol. 17 No. 1, and Tsungjuang Wang, *A New Paradigm for Design Studio Education,* International Journal of Art and Design Education 29.2, 2010.

Report from the front lines #1: The farmhouse basement

My colleague Hannah[2] and I are in the basement of a 150 year-old farm house in central Pennsylvania. Folding tables, exactly like those from the church basements of my childhood, are lined up and covered with paper. Between the vertical pipes (how can one farm house require this many pipes?), the walls are covered with paper. And already, one hour into a four-day workshop, our clients have begun to cover those papers with notes.

They are not here to design something. They are not here to make decisions. They are here because they don't understand one another.

Four of the people in the basement are from the Sales division of a major food company. They are experienced, thoughtful, open and jolly. They have personal stories and inside knowledge of Target stores, grocery stores, and Walmarts all across the country. They have firm handshakes and smell like aftershave. The other eight are from the same company's Information Technology (IT) division. One of them is The Boss. The others, like the sales people, have long experience both in their craft and in the company they work for. These are the guys who make software to support the company's sprawling operations: sales, manufacturing, marketing, research, human resources, accounting, inventory.

Here's the first thing we heard from the IT guys, in the first four minutes of the phone call that eventually led to this workshop: "People don't like what we make."

Here's another important thing we learned in that first call: IT makes software for Sales (as well as all the other departments), but the IT people almost never talk to the Sales people, or to people from any other departments. Teams of smart, highly trained, creative people were showing up every day to work with people more or less just like themselves. They work hundreds of days a year and spend millions of dollars to produce software for other teams of smart, highly trained, creative people: software that those people don't like and don't use. Instead those people futz around with spreadsheets, like hunters sharpening sticks right outside the doors of Winchester Repeating Arms.

That is a picture of what Transition Design would call "The Current State of the System." Hannah and I are in the farmhouse basement with these folks. They're full of anticipation. They've said yes to being there, and set aside almost a week of their precious time. They're looking to us to help them move toward "The Preferred State of the System."

How do we work?

[2] Hannah du Plessis, of Fit Associates, Carnegie Mellon University, and The School of Visual Arts

Complexity explained?

In conversations about socially-conscious design, organizational change, and societal transition, the word "complexity" is often used. We need formal definitions. Because complexity has been studied and described from so many points of view (biology, computation, physics, economics, warfare, etc.), what someone means when they talk about complexity may depend on what they've been reading. As we work to develop ways of creating in social complexity in service to "transition design," we would benefit from a commonly-used and usefully precise definition of complexity.

Here is a summary description from Dave Snowden, whose constraint-based definitions of ordered and complex systems I would recommend as a starting point for conversations about "transition design."[3]

A complex system has the following characteristics:

- It involves large numbers of interacting elements.
- The interactions are nonlinear: minor changes can produce disproportionately major consequences.
- A complex system is dynamic, the whole is greater than the sum of its parts, and solutions can't be imposed; rather, they arise from the circumstances. This is frequently referred to as "emergence." The current behaviors and properties are emergent, and its future behaviors and properties will also be emergent.
- The system is a child of its own history. The past is integrated with the present; the elements evolve with one another and with the environment. This evolution is irreversible.
- Though a complex system may, in retrospect, appear to be ordered and predictable, hindsight does not lead to foresight because the external conditions and systems constantly change.
- Unlike ordered systems (where the system constrains the agents), or chaotic systems (where there are no constraints), in a complex system the agents and the system constrain one another, especially over time. This means that we cannot forecast or predict what will happen.

This description is terrifically useful. It has numerous points relevant to the claim that design's tools are dull for the task of intervening in complex systems, and shines a light on the qualities we need in any new approach.

But some may find this description to be too clinical or analytical, distant from the way in which we actually experience life. I'm thinking of the difference between Newton's use of a prism to analyze the properties of colored light and so develop a new explanation, in contrast to Goethe, who held the prism up to his eye to experience color personally, and so develop a new understanding.[4]

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[3] Bullet points on this page are paraphrased from David J. Snowden and Mary E. Boone, *A Leader's Framework for Decision-Making,* Harvard Business Review, November 2007.

[4] Henri Bortoft, *The Wholeness of Nature*, Chapter Two.

Report from the front lines #2: Population health

A hospital network in the Midwestern part of the U.S. is facing a challenge. The organization consists of a dozen hospitals, plus many more community and special care facilities, thousands of employees, and hundreds of services. It is a keystone of healthcare for nearly three million people. Hannah and I have an extended conversation with people who are responsible for the long view of the future of this organization. They are wonderful people — brilliant, open-minded, and soulfully committed to a career of care. And here's what they say.

"We serve a large number of low-income and elderly people across a wide territory. And they tend to use the emergency room as their only way of getting health care. That means they either wait until their condition is severe, or they come to the emergency room with the least cough or sneeze. This is not a good way for them to be cared for, to be healthy and well. And it is tremendously expensive for the hospital. Looking into a future with an aging population and growing poverty, the situation is unsustainable.

"We have worked with major design firms on service innovations, and have a number of prototypes now becoming operational. That helps, but it's just a bandage on the long-term trend. Our question is this: *How can we increase population health?* We are one institution, but our future depends on a systemically healthier population. This is not a service design challenge. It's bigger than that. We are willing to commit to an effort even if it takes a decade or two, but we need to know we are investing in an approach that will improve levels of health in the whole region.

The current state of the system is unsatisfactory, unsustainable, and infused with regional dependency on a single institution. The desired future state is unclear — the desirable outcomes are easy to name, but the system configuration is impossible to foresee.

How do we work?

Social complexity, felt and understood

The nature of complex systems, and in particular *socially* complex systems, is becoming a frequent topic of writing and discussion in design and management circles. Advancing our understanding of this complexity is key to progress in shaping our ways of working.

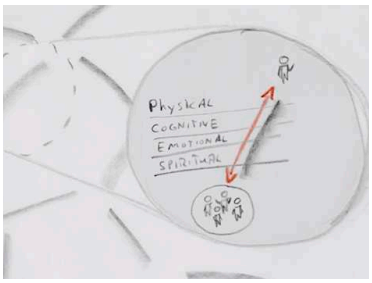
But too often in classrooms, businesses, and other settings where a practical view of social complexity would be helpful, an academic description too abstract to be useful. Yes we need analysis. But analytical descriptions provide Newton-style explanation, where often we need Goethe-style personal understanding — a felt experience of social complexity that contributes to a personal ah-ha of insight, a shedding of mechanistic worldview, and the experience of a new way of imagining the world. These experiences are key to advancing the practices of creating in social complexity, because they widen the pool of potential sponsors and collaborators, and help overcome resistance to unfamiliar methods.

Here is a progression of sketches I sometimes use as an invitation to feel social complexity.

The systems language in this section is largely based on living systems theory, and in particular it draws on the work of Fritjof Capra, which resulted in his book, *A Systems View of Life*.[5] Capra notes that a handful of qualities are consistently present in all living systems: structures of relationships (almost always some kind of network), the flow of information and material across those networks, and the processes of activity that operate across those networks.

We start by drawing only relationships. A social system is essentially a network of relationships. I start this way because shifting our focus from individuals to relationships is one of the foundational changes in point of view when learning to work with social systems.

But what is a relationship? What is it made of, and what are its characteristics? What does it mean for relationships to be healthy, what are the common disorders, and how can they be helped? Those are key questions for this work, and practitioners don't have very consistent or precise answers. We've only just begun sketching social complexity, and already we've encountered questions that deserve our future attention.



If we zoom in on a relationship to sketch what we think we know about it, we can identify at least three key ideas or components. The first is that a relationship has flow. Flow in human relationships mostly consists of conversation. If we expand our definition of "conversation" to include nonverbal speech acts (such as gestures or silence) and mediated speech acts such as edits to a document, we cover almost everything.

Secondly, relationships are layered. People describe these layers in many different ways, though there is a lot in common across those differences. Here I use a common four-layered notation.

There's a *physical layer*: what's said and done — all the stuff that our senses can detect.

There's a *cognitive layer*: the information content that moves across the relationship, the beliefs and explanations that are expressed.

There is an *emotional or intuitive layer*. Sometimes this is oversimplified as "subtext." Communications carry relational and emotional information that is not represented explicitly by what can be sensed in the physical layer of the conversation.

And finally, for lack of a better word, there is a *spiritual layer* that involves identity, care, sense of connection, stance toward one another. The simple sentence, "Please close the door" has an incredibly wide range of possible intentions and meanings, some of which can only be accurately described by including the "spiritual" layer in our understanding. For example, "Please shut the door" may actually express, "I believe I am better than you, and that I have power over you; it is your place in our relationship to be the one who does trivial tasks in service to my desires." That message is deeper than cognition or emotion.

A third key idea about relationships is that the flow across them and the nature of the layers are true at any scale. It is a useful hypothesis to posit that the same patterns appear at the scale of families, teams, organizations, or nations.

With a view toward the title of this paper, "How do we work?", it's worth noting two implications of what I've just described:

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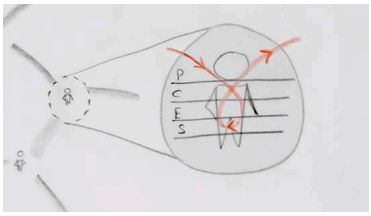
[5] Fritjof Capra, *The Systems View of Life*. For a good summary of his ideas, see his talk by the same title, presented at Schumacher College in 2014: www.youtube.com/watch?v=If2Fw0z6uxY

- Most of what happens in networks of human relationships is not directly observable.
- Human relationships are dynamic, resulting from the back-and-forth exchange that flows across them. Relationships changes as the people involved change, and the people change because of their relationships. As Snowden says, "…the agents and the system constrain one another." They are entangled.[6] Improving the quality of relationships improves the quality of the whole system. And improving the quality of the system improves the health of its participants.

That's already a lot to hold in our heads. Think of the dozen or so people gathered in the farmhouse basement. Imagine that the network of relationships present in that room is somehow visible to you, with all the flow and layers, with all its dynamics. Rich!

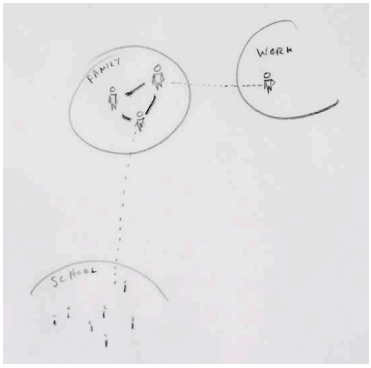


Let's make it even richer. Let's zoom in on the people.

We can say the same three things about people that we've said about their relationships. A person or group, like any living system, also has a kind of flow. "Sense, make sense, respond." We take in from the world through our senses. We internalize, process, feel, make sense. Then, often, we respond in some way back out into the world. This goes on constantly. And people have a depth of identity and experience which we can represent (at the risk of oversimplification) as four layers: physical, cognitive, emotional, spiritual.

Diagrams lie. We use lines in our diagrams, but a line too thin and static to represent the life of a person or relationship. We can put little symbols on everything to indicate that they are in motion, and as a reminder that the diagram is lying to us, but of course even those squiggles are "Newtonian." The humans are changing, the relationships are changing and dynamic, the flow between them is dynamic.

Social systems contain structures of relationships. If we looked further (and if I was better at drawing), we could see some relationships form larger structures. We have common names for many of those structures (but not for others). This sketch could represent a school, a team, or a corporation. Those are all terms for structures of relationships and patterns of behavior.



Here is a new sketch, showing a "family" structure. The family is in relationship with a school and a workplace.

When I discuss these ideas in person, this is the point at which I have to stop drawing and start using my hands. If this sketch represents a family, we have to stop looking at the diagram to imagine something much more dynamic: a wriggling weave of people and relationships. (Try tangling your fingers together, then wiggling them around together. Already that's a more accurate representation than this diagram!)

The life of this family moves in cycles. During the day, its members disperse out to their schools and jobs. Then they come back home at night. Out and back in, each day. Or from the school's point of view — another wriggling woven bundle of people, relationships, structures and patterns — everyone is gathering during the day, there is a tremendous amount of busy life and acting out of patterns. Then it quiets at night. The relationships are still there, still active, but the people are distant from one another.

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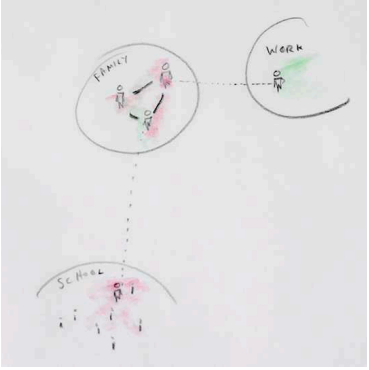
[6] See Luhman's concept of social autopoiesis:
www.zfog.bwl.uni-muenchen.de/files/mitarbeiter/paper2004_2.pdf



On longer time scales and with a view of human depth, we can see more. Dad goes to work, and there he feels understood and valued. But he comes home in the evenings and feels isolated, misunderstood, and under appreciated. If we were animating our sketch, perhaps we would represent that as a green feeling of growth and belonging at work, and a red feeling of isolation and unhappiness at home.

Of course he's in relationship with everyone in his family, so maybe his children get a little red, a little undervalued and under appreciated by him. They get a little red at home each night. The next day they take that to school. They shrink into insecurity, maybe. Or bully someone.

So these dynamics all spread and ripple, in the observable layers yes, but mostly and most importantly in the invisible layers of understanding, emotion, and human spirit.

This is quite a complex dance! It has vibrant rich life, and if we seek to understand that life, that wriggling dance, the best we can do is to practice seeing and experiencing that life for ourselves with new lenses.

We need ways to help people take off the lenses of individuality, labels-are-truth, and direct cause and effect, and try the lenses of relationship, human depth, and flow of conversation, emotion, and relational stance. This takes practice, and it will always be inadequate, but it is better than diagrams on their own.

Transition design for wriggling weaves of relationship?

Now consider the work of transition design, which aspires to have impact at societal scale. At large scale, and at all of the smaller scales it contains – the families, schools, corporations, and so on – there is a set of woven, wriggling patterns and structures that exhibits as emergent properties all those negative and unsustainable outcomes we would like to change. We want to consider how these systems can shift to a more positive future state that is more beneficial for everyone involved. The basic question is, "What is that state like, and how do we get there?"

There are of course many possible future states for those systems, at all levels. And here is a fundamental challenge, a fundamental Fact of Life in complex adaptive systems: the actual configuration of a desirable future state cannot be foreseen. The dynamics of the future state cannot be foretold, designed or planned. What's more, even if we could foresee them, we couldn't implement them. We can't order good relationships on Amazon. There is some path we can't determine that these systems will take to their future state.

The only way systems get to their future state is through a constant and steady process of becoming. They "grow into it." Starting from where it is now, a social system can only get to its future through a constant process of unfolding. Birds do it. Bees do it. Dad does it. Ecosystems do it. And so do schools and governments and pizza shops.

If we want to be intentional about this shift (which is the purpose and aspiration of the conversation about "design for transition") how can we guide this? How do we work intentionally in this kind of wriggling, mostly-invisible, high-consequence complexity. How do we make it more likely that we move toward positive states, and less likely that negative states emerge?

In short, our question is this: *How do we work?*

How do we work? Systemically, socially, and experimentally

As Dave Snowden succinctly puts it, "Complex adaptive systems don't have predictable cause-and-effect relationships, but they do have disposition."[7] We can't predict for certain what effect an intervention might have on the relationships, depth, and dynamics of the system. But perhaps we can create conditions that influence the system's disposition, making it more likely that it will grow toward a desirable state, and less likely that it will move toward something worse.

For the last six years, I have been scanning for approaches that have the qualities we need to work for the transformation of social systems. What are those qualities? What are the characteristics of a way of working that would be appropriate for the complexity I've just described?

The following is a synthesis of insights and experience from Dave Snowden, Adam Kahane, and Zaid Hassan[8] (and so draw most heavily from practice, with a seasoning of academic study).

We need approaches that are…

Systemic: Complex systems cannot be addressed piece by piece. We need ways to engage with the whole rather than an artificial slice or subset. As many systems are too large to address all at once or are otherwise difficult to access, our approach must help us be wise in choosing the systemic boundaries of our work. Furthermore, a systemic approach attends to matters deeper than visible symptoms, giving us ways to include the root dynamics of systems and the conditions that give rise to those dynamics.

Social, or participatory: Complex systems cannot be improved through expertise or authority alone. We need approaches that engage the people who actually live the dynamics of the system.

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[7] One summary of this view can be found in Snowden's keynote speech, *Combining Complexity Theory with Narrative Research,* www.youtube.com/watch?v=pHjeFFGug1Y

[8] Adam Kahane, *Power and Love,* and Zaid Hassan, *The Social Labs Revolution*.

Emergent, or experimental: Complex systems cannot be addressed by applying "best practice" solutions from the past. We need approaches that equip us to work with emerging dynamics as they unfold. Prototypes have their place, but typically that word is used for increasingly refined iterations of a preconceived "solution." We need something more like experiments. Based on a hypothesis about how we might positively impact system dynamics, an experiment is a bounded intervention, followed by attention to any resulting shifts in the system.

Examples of such approaches

In various corners of the world, people have been attempting to develop ways of working that share the three qualities listed above: systemic, social, and emergent. Here is a brief summary of the approaches we include in our courses, and which we draw upon during client work.

Positive Deviance

Positive deviance is an approach based on the insight that in any community, there are people who face similar challenges and circumstances as everyone else, but who have found ways to "succeed" — to overcome challenges — that others have not. These people are referred to as "positive deviants."[9]

This approach was first applied by Jerry and Monique Sternin, in a dramatically successful attempt to address child malnutrition in rural Vietnam in the 1990's.[10] It has since been applied in scores of efforts around the world, in public health, education, nutrition, and social equity. In practice, it strongly emphasizes systemic, participatory methods, and provides many practical examples of what it means to work in such a way. Identifying "positive deviants" gives a starting point for identifying the ingredients of a desirable future state for a community. Having done so, practitioners of the positive deviance approach are emphatically experimental and participatory in discovering ways that those successful behaviors can spread through the system to become the norm.

In the case of the work in Vietnam, community members found that families with healthy children were doing just a few things differently than others: they washed their children's hands before meals, they ate together more times a day, they added more greens to their dishes, they actively fed their children to make sure nothing was wasted, and they included tiny shrimp from the rice paddies in their diet. These behaviors spread at first through a single village and later throughout the country, through a program that involved mothers cooking and feeding their families together. Where government education programs had repeatedly failed, this behavioral and participatory approach led to an amazing 85 percent drop in childhood malnutrition nationwide over a few years.

Wikipedia summarizes the principles that underlie the Positive Deviance approach as follows:[11]

- Communities already have the solutions. They are the best experts to solve their problems.

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[9] Perhaps the best introduction to Positive Deviance, as well as a rich source of …

[10] Arvind Singhal, Jerry Sternin, and Lucia Dura, *Combating Malnutrition in the Land of A Thousand Rice Fields*

[11] "Positive Deviance" on Wikipedia, en.wikipedia.org/wiki/Positive_deviance

- Communities self-organize and have the human resources and social assets to solve an agreed-upon problem.
- Collective intelligence. Intelligence and know-how is not concentrated in the leadership of a community alone or in external experts but is distributed throughout the community. Thus the PD process's aim is to draw out the collective intelligence to apply it to a specific problem requiring behavior or social change.
- Sustainability as the cornerstone of the approach. The PD approach enables the community or organization to seek and discover sustainable solutions to a given problem because the demonstrably successful uncommon behaviors are already practiced in that community within the constraints and challenges of the current situation.
- It is easier to change behavior by practicing it rather than knowing about it. "It is easier to act your way into a new way of thinking than think your way into a new way of acting".

Dave Snowden, distributed ethnography, Cynefin, and SenseMaker
Dave Snowden is an academic, consultant, and researcher who, among many other things, started a firm called Cognitive Edge. He has developed a body of ideas and practices which together make up another systemic, social, emergent approach to shifting the patterns of a social system.

Snowden is explicit about his goal to advance the practice of working in complexity: "I want a body of method and capability that allows us to create a sustainable world that respects human needs considered as community not as atomistic individuals or based on individual self-interest."[12]

The approach that Cognitive Edge is developing and disseminating consists of three main contributions (as well as a supporting body of facilitation methods and good practices):

1. **The Cynefin Framework**[13], which is a tool for distinguishing between complex situations and those that are just very complicated. That distinction is based on collections of narratives — stories and story fragments — gathered from the people who are part of the situation in question. So the diagnosis of a system as being complex can be done without reliance on outside experts (famously subject to the bias of past experience). The purpose of making this distinction is so that a strategy for intervening in the system can be aligned with the nature of the system's dynamics. So, for example, the work of planning an electricity distribution grid may be extremely complicated, but the components and relationships in that system are relatively constrained and ordered. It does not share the dynamic, entangled, emergent complexity of say, a judicial system.[14]

2. **Practices of "distributed ethnography,"** which involve gathering stories from inside the life of a system, and giving the power of interpretation to the people who live its problems rather than relying on experts for interpretation. This provides not only a basis for insights into possibly fruitful interventions, but also a means of measuring impact and a tool for early detection of shifts in the system.[15] This is supported by software called *SenseMaker*, created by Cognitive Edge,

[12] Dave Snowden, "And Here I Stand," http://cognitive-edge.com/blog/entry/6368/and-here-i-stand/

[13] David J. Snowden and Mary E. Boone, *A Leader's Framework for Decision-Making,* Harvard Business Review, November 2007.

[14] Or, for that matter, the typical children's birthday party, which Snowden offers as a humorous but very clear example of working in social complexity. https://www.youtube.com/watch?v=Miwb92eZaJg

[15] Several examples are described in a speech by Snowden, available here: *Combining Complexity Theory with Narrative Research,* www.youtube.com/watch?v=pHjeFFGug1Y

which gathers the stories for easy access and produces a visualization of the ways people have assigned meaning to their stories.

3. **A body of methods and practices for managing and scaling interventions** in complex human situations. At the heart of these methods is the idea of a portfolio of safe-to-fail experiments, with some discipline around what makes a good portfolio and what makes experiments "safe to fail."

I refer you to the footnotes for references to case studies and examples. To summarize, the great value of these contributions is that they enable a way of working that is firmly based on the question, "How can we get more of this kind of story, and less of that kind of story?"

Theory U, or The U Process

Though most visibly popularized, refined, and promoted by Otto Scharmer of MIT, this approach has emerged through the last few decades through the combined (and sometimes distant) efforts of quite a number of people. Other originators include Joseph Jaworski (Generon International) and Brian Arthur (Santa Fe Institute). Its main institutional homes are the Society for Organizational Learning at MIT, Scharmer's Presencing Institute, Reos Partners, and Generon International. There are roots extending back to strategic planning activities in Shell Oil in the 1980's, as well as the body of work known as "organizational learning."

The 'U' in the name of this approach refers to the collective creative journey it prescribes for either the whole system (if small) or a representative microcosm of the system's diversity and power.

The descent on left side of the U is a process of facilitated co-sensing, in which people see the system from its many points of view, let go of their presuppositions, and move from strategic planning and debate to a state of collective openness to larger possibilities. Together they move "down" from current realities and assumptions to a deeper dialogue about possibility and purpose.

The right side of the U represents a facilitated process of co-creation, through which the group uses prototypes to experiment with new ideas for life in the system, while carefully grounding those efforts in the sense of purposeful possibility they found together at the bottom of the U. Prototypes are not attempts to "see if this idea works," but are rather attempts to "see if this idea brings to life the possibility we sensed for our future."

While the actual practices vary greatly, facilitated collective experiences and facilitated dialog are both hallmarks of working with Theory U. The approach has been applied in a tremendous variety of complex and difficult situations: [16]

- Post-apartheid South Africa
- Government - guerrilla conflict resolution in post-dictatorship Guatemala
- Governmental efforts toward a sustainable economy in China
- The future of Singapore's education system

[16] Numerous case stories involving Theory U and its cousins, "Change Labs" and "Transformative Scenario Planning" can be found on the Reos Partners web site: *www.reospartners.com.*

Helpful and important, but only a beginning

I do not claim that these approaches provide the keys to societal transition. Along with a few others[17], they have much to teach us, and they are important contributors to this amazing global era of developing new ways to work together. I offer them as examples of the most effective ways of working in social complexity that I have been able to identify, and as illustrations of what "Design for Transition" might actually look like. I imagine that, in our explorations for ways to advance the practice of design in service to transition, these approaches might inspire "process fiction" stories (as opposed to fictional visions for our eventual destination), process prototypes and real-world experiments.

New approaches require new methods and skills

Beyond exemplifying the current state of "systemic, social, and emergent," the approaches I've just listed have another important value. As people apply them in many different situations, we develop an informed sense of the skills required to apply these new ways of working. Transition design is not only a shift in worldview and approach, it requires methods and skills.

This topic merits a paper or book of its own. For now I'll simply list the broad categories of skills and methods we have found necessary to add to our own practice, and which we also include in our teaching. This is an incomplete list, but hopefully makes the point that skilling for the work of systemic emergence is different than skilling for product and communication design.

Systemic listening: interviewing and spending time inside a social system, listening deeply to people who experience it from many different points of view. This is different than typical design research, because the intention is not to inform strategy or solution. The purpose is to bootstrap systemic and participatory work: to build the understanding and trust needed to craft an invitation to participate.

Convening: assembling the sponsorship and participation necessary for the effort to have legitimacy, convened around a shared purpose or intention.

Facilitation basics: The essential skills and methods of good facilitation. This goes beyond "meeting facilitation," because the work requires not only effective communication, but successful balancing and inclusion of voices across boundaries, levels of power, and qualities of relationship.[18]

Facilitating co-sensing: Helping people see their own system through many points of view. Teaching and coordinating system sensing.

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[17] There are other approaches which I've omitted in an attempt to manage the length of this paper. These include the Berkana Institute's model for nurturing and supporting systemic shifts as they take place (berkana.org/about/our-theory-of-change), Seed-Scale (en.wikipedia.org/wiki/SEED-SCALE), transformative scenario planning, an approach for taking a systemic step despite systemic conflict (reospartners.com/service-view/224), and Social Labs, a model for installing long-term capacity in a system for systemic, participatory, emergent efforts toward transition (http://reospartners.com/service-view/223).

[18] One good source for this is Roger Schwarz, *The Skilled Facilitator* and its companion field book.

Dialog facilitation: Helping groups of people move past opinion-dumping and debate into collective inquiry and generative dialog.[19]

Facilitating co-creation: Not only iterative design, but experiments in systemic social dynamics.[20] This includes low-fidelity methods such as group "serious play" with table top models of systems, high-fidelity, deeply-felt methods drawn from theater,[21] and real-world experiments and prototypes at all levels of scale and fidelity.

New approaches require a new stance

Creating in social complexity is utterly, fundamentally different than creating with physical or digital materials, however large and complicated that challenge might be. Preparing to design and develop a manufacturing line or a stadium, or hospital emergency services are very complicated, yes. And they all have a social component, depending partly on people for their success. But all of those examples involve relationships that are sufficiently constrained and predictable that they can be addressed through outside expertise, application of good practices from the past, and iterative methods of design.

As this position paper has attempted to describe, shifting the dynamics of a socially complex system — even one as small as a family or a sports team — can not be addressed through the same approaches.

Before engaging with such challenges, someone who is trained to apply the methods of design, decision-making, planning and development must learn something more than new methods and skills: he or she must learn to adopt a shift in stance:

- From expert who works from outside the system, to facilitator-catalyst who works inside and alongside the system
- From "I can understand this" to "Understanding lives in gathering many insider points of view"
- From identifying needs and "actionable insights" to detecting systemic patterns
- From direct intervention to seeds around which positive attractors may indirectly emerge
- From focus on solutions to focus on the conditions required for more positive dynamics to emerge
- From quality of design to quality of life

This list could be longer, and each point deserves exposition and example. For now I simply point out that these are intellectual consequences we encounter when we come to understand the nature of social complexity, and they are the living necessities we encounter the moment we engage with this work.

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[19] The concepts and tools of dialogue facilitation stem from David Bohm's book, *On Dialogue,* which has spawned a great variety of methods. A key modern source for these practices: www.artofhosting.org.

[20] We know a lot about physical and digital prototypes, but not nearly enough about how to prototype the patterns and dynamics of human experience and relationship. Time to invent!

[21] Augusto Boal's Theater of the Oppressed is just one of many examples of theatrical methods that are powerful for working with social complexity and easily adopted to different domains.

Report from the front lines: How we worked

How did we work in the farmhouse basement? The first important step has already been described: we gathered people from the two disconnected parts of the system into the same room, including representation both up and down the management hierarchy. Over three days, we facilitated a series of activities and dialogs that were roughly based on Theory U. The first day was spent listening to each other, going far beyond typical business conversations. They used presentation, model-making, and dialogue to see and appreciate each other's worlds. And both departments came to understand how they were perceived by others. This formed a foundation for describing the possibilities that would be created if they were to fully collaborate, and imagine ways they could experiment with collaboration when they returned to their offices.

By the end of the days, they had created a mutual road-map for the IT department to move from an "order-taker" role to become a strategic partner of all the other departments in the company. For example, there were documents whose completion would require IT staff to leave their office and spend time in the world of Sales. There was a proposal for a "pop-up studio" made of foam core board, in which IT and Sales staff would collaborate to "ship one prototype every day for a week." The point wasn't to deliver good prototypes. The point was for them to practice working together in new ways. It was an oblique strategy.

The last time we checked, some of these experiments were underway. The future state of the organization is emerging through the experiments of the people involved.

What did we recommend for the hospital network? This is perhaps not an ideal case, because the work was never funded. I offer it in this position paper as an illustration of how the approaches I've just listed have changed the way we conduct our consulting practice when we engage with a complex social system.

The main program architecture for the hospital network consisted of a three-month effort to listen deeply to the community through story collection and harvesting, observation, and facilitated dialog, The first outcome of that effort was to convene a representation of the community, shifting the burden of innovation from the hospital itself to the whole community of which the hospital is a part. The second outcome was an initial portfolio of safe-to-fail experiments, and a plan for managing them throughout the following year. After repeated refinement, some of the experiments were expected to result in such clarity that they could be moved from an experimental approach to a design effort — the constraints and conditions would have become clear, and the new system configuration could become part of the normal innovation cycle.

During the one-year pilot to manage and evolve that set of experiments, a parallel effort of training and mentorship would equip the hospital-community team to continue these practices on their own. The goal is to put in place the conditions for the future state to emerge through the continued collaborative experiments of the people involved.

This way of working is a dramatic change for hospital executives — a part of the system that has the power to feed or starve the effort, to support or block emergence. Therefore, in parallel with the program of experiments and capacity-building, another effort based on Theory U would support the executive team in adding "emergence" to their management toolkit as a peer method with planning, decision-making, and design.

Summary and Implications

Whether you prefer the academic description of complex social systems or the more folksy sketched description, and even if the nature and mechanisms of such systems are still being worked out, it's hard to argue against the notion that working toward societal transitions confronts both academics and practitioners with challenges unlike those we face when we create physical or digital products and services.

In business, government, and development, in design and engineering, and even in the social sciences, we have a long history of dealing with complex dynamic systems through a kind of self-deception. We study them, and make diagrams of them. Eventually we have diagrams that seem powerful for explanation. We come to believe that they describe life's reality, which excites us because the diagram has made reality small enough for us to believe we can directly manipulate it for the better.

As a habit, we mistake "explanation" for "understanding."

When it comes to this thing we are calling "transition design" — the desire to purposefully, intentionally improve our societal shift to happier and more resilient patterns, we must not fall into our old pattern of analyzing and making representations of things until they are small enough for us to imagine we can work with them. This is bigger than all of us, and it is bigger than design.

Design is wonderful. It is powerful. We need design for all of the things for which it is powerful. But social complexity and societal shifts, even local and relatively small-scale ones, are more than design can take on by itself. We need a synthesis of design with other approaches and methods. It's not yet clear how much this will look like the work we currently call "design."

If this all seems overwhelming, that's just the right feeling. This is bigger than any of us. It is continental. It is generational. It's too big to see all at once. And the truth is, learning to walk creatively into circumstances that seem too big for our understanding and abilities is just the kind of apprenticeship we need if the transitions we desire are ever to become reality.

For all the reasons I have described in this paper, I believe that the work we have begun requires a coming together of disciplines, practices, ways of seeing and ways of working that is much more than an evolution of design theory and practice. It will be something new. The sprouts of that new something are already peeking above ground, a sign of a coming Spring of refreshed collective effort toward a future we will create by walking into it.