

Integrating Systemic Thinking and Storytelling

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No problem space is new. All that is encountered has formed with layers of history, (in)act in, failure, and insight. Understanding complex problem spaces linearly has become irrelevant, if not impossible as the human situation is hopelessly entangled and complicated.

Environmental degradation, economic recession, socio-political fragmentation, and rapid population growth have created a complexity that must balance burdened pasts alongside shifting nonlinear uncertainties. In a time when revolutions are started in the digital world and local tensions are broadcast globally with exceeding speed, design should not remain stagnant. It must evolve alongside the pace of development to prove its relevance within complex problem spaces.

In order to situate itself within complexity and differentiate itself from the other disciplines already staking a claim in complexity, design must provide alternatives. By offering structure and tools within complexity to drive analysis, design can guide a process of insight discovery within the most stuck and stagnant problem spaces. And these insights can lead to action. In other words, design should find understanding, clarity, and insights that lead to action. But how does this happen? Admittedly, designing within complexity is unprecedented. Yet, tools and methods have already begun to be developed in other fields to guide a depth of understanding to rival the complexity of the present.

Explored since World War 2, systems thinking is a methodology that comprehends how individual parts fold into the whole. It supersedes previous methods of understanding through "analysis (to gain knowledge of the system by understanding its parts) with synthesis (explaining the role of the system in the larger system of which it is a part). Analysis is useful for revealing how a system works but synthesis reveals why a system works the way it does."¹ The term synthesis, however, should not be mistaken as a simple coming together or fluid process of understanding. Rather, systems thinking should be respected as a tool to complicate. It is a way to diagnose or understand at the greatest scale, while examining the 'what is' in nuanced detail. And this is in no way simple or clarifying.

To make no attempt to discover why a system works the way it does creates superficial designs. This is where design must begin in order to be able to design in complexity. Indeed, when systems thinking is applied to spaces of design the intricate layers and subtle moments within complex problems are exposed. The unknown is acknowledged and not ignored, and the details are pertinent and not besides the point. With this large scope of cognition, design can respectfully enter conversations about the so-called 'wicked problems' as first named by Horst Rittel and Melvin Webber. Defined in their nominal article, wicked problems are those most malignant, tricky, and unsolvable.² As opposed to tame problems, wicked problems are formed through multiple intertwined elements lacking clarity or distinction that test the capacity and possibilities of design. When the relationship between systems thinking and design is activated, wicked problems can be tackled with creativity, design thinking, structures to map changing contexts, the organization to locate counter-intuitive solutions, and the potential to identify unintended consequences.

Perhaps the need for systemic understanding and innovative insights, as well as the frustration that can result, is never felt more readily than it is in complex conflict, where the most wicked of problem spaces can be found. In conflict mediation, conflict is defined as an interaction of interconnected people pursuing multiple opposing goals.³ Specific to systems thinking, conflict can be understood as a lack of alignment or consciousness of the system, whether this be an individual not understanding her position in the larger context or the system not responsive to the needs of the individual. The idea to be amplified is that conflict is multi-layered and forms from perception, action, and feeling. These individual characteristics are compounded within complex conflict that is a combination of the tensions of multiple people or perspectives and often overshadow any single individual.

Systems thinking

has been introduced to sort through the complexity of differing actions, feelings, and perceptions in conflict.

But, isolating systems thinking in complexity conflict leaves an absence. It remains too large-scale and does not incorporate individual sentiments, reactions, and empathies; the very means through which persons - the individual parts of the system - identify with conflict. To counter this a focus on the individual and subjective within conflict is necessary, along with the inclusion of the connection between multiple perspectives that form the

collective subjective. This was tested through several recent case studies with different organizational structures, including conflict in hierarchical organizations, conflict in grassroots organizations, citywide conflict and even the conflict of identity surrounding Lebanon. What was found is that without the capacity to include individual subjectivities, systems thinking loses the ability to find a complete diagnosis of a problem space and therefore the design of viable, substantial solutions. Even more, as shown through the case studies when individual subjectivities are located with the broader system, previously overlooked insights are found. Even more, deriving systems thinking directly from subjectivities strengthens and encourages systems mapping or diagrams and enables a more complete, but still political and biased understanding of the problem space. In other words, the whole is greater than the sum of its parts, but neglecting the parts cannot create a whole. Only in this way can problem space (even of the most complex conflict) reach a consequential level of diagnosis that forms from a comprehension of the present that can be reframed with concrete insights to reveal emerging design potential.

For systems thinking to work within design praxis, holistic viewpoints need to be connected to subjective perspectives and individual stories. Without this connection, the most integral piece of conflict is missing; the stories that create the system of conflict. A story, at its most basic, is a moment in time. Through the collection of many moments or stories the larger narrative can be found and then be analyzed through systems thinking to lead to thoughtful, necessary diagnosis that needs to be the basis for thoughtful design praxis. As Rittel and Webber concluded, "the formulation of a wicked problem is the problem! The process of formulating the problem and of conceiving a solution (or re-solution) are identical, since every specification of the problem is a specification of the direction in which a treatment is considered."⁴ Focusing on the connection between systems thinking and individual stories is a methodology of problem formulation. It is design for diagnosis, not solution.

The placement of design in complex conflict necessarily requires the overlap between methods of several incompatible processes: systems thinking and stories. Acknowledging the need for this overlap introduces the need for design within conflict; design has the capacity to balance the incommensurable within a designed artefact. In fact, "reconciling incommensurate requirements is an essential aspect of design." Design must be introduced to explore and negotiate the connection between systems thinking and storytelling. With its hopeless complications the world no longer needs design to solve problems. A more pressing need is design's ability to function as the interpreter and translator of the chaos of complex conflict, but only through the integration of systems approaches and individual

subjectivities. By respecting that problem spaces are inherently multi-layered, complex twists of ever changing systemic thought and subjective stories, design praxis needs to evolve into a cognitive and dialogic field that is reshaped through integrated praxis. Embracing the subjective, the individual, the whole, the systemic, the political, and the empathetic, design can be the means to understand first and act second.

1. R.L. Ackoff, *Re-Creating the Corporation: a design of organizations for the 21st Century*, (New York City: Oxford University Press, 1999), 12.
2. Horst W.J. Rittel, and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences*, no. 4 (1973): 161.
3. Barki, Henri, and Jon Hartwick. 2004. "Conceptualizing the Construct of Interpersonal Conflict." *International Journal Of Conflict Management* 15, no. 3: 216-244.
4. Horst W.J. Rittel, and Melvin M. Webber, "Dilemmas in a General Theory of Planning," *Policy Sciences*, no. 4 (1973): 161.