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Possibilities and Practices of Systemic Design: Questions for the next decade of Relating Systems Thinking and Design

Sweeting, Ben and Sutherland, Sally

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Possibilities and Practices of Systemic Design: Questions for the next decade of Relating Systems Thinking and Design[1]

Ben Sweeting and Sally Sutherland

Radical Methodologies Research Group, School of Architecture, Technology and Engineering, University of Brighton | Radical Methodologies Research Group, School of Architecture, Technology and Engineering, University of Brighton

As Relating Systems Thinking and Design moves into its second decade, it is possible to question systemic design's emerging shape. RSD1 through RSD10 have established systemic design as a field with growing mainstream recognition. However, such successes carry the risk that those things that are valuable and different in systemic design can become lost, simplified, and conventionalised. Drawing on Birger Sevaldson's framing of systemic design as a field of possibilities, we draw attention to systemic design's own boundary judgements and their importance in maintaining and developing the field's pluralism and criticality. We conclude with questions that we see as crucial for systemic design: What are the possibilities and practices of systemic design? And what should they be?

KEYWORDS: Design, boundary critique, cybernetics, gigamapping, systems thinking, transdisciplinarity

RSD TOPIC(S): Methods & Methodology

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[1] This essay has been developed from the RSD11 call for papers and the welcome remarks given in the RSD11 opening plenary.

RSD11 takes place at an important moment in the development of systemic design. There are some choices to be made. RSD1 through RSD10 have established systemic design as a field. It is now even possible to introduce oneself as a systemic designer, and for this to be understood. This is a serious achievement, especially given that the various systems fields have historically struggled to achieve recognition and retain their coherency amidst conventional disciplinary distinctions. But when anything counter-conventional begins to become a mainstream endeavour, there are risks that need to be considered. There is a risk that those things that are valuable in systemic design can become lost or simplified. There is a risk that systemic design's own assumptions and shortcomings become embedded and harder to challenge. There is a risk that systemic design becomes co-opted by what it attempts to contest. Systemic designers might be concerned with systems, but they are not necessarily in favour of them. Systems are not inevitable; they are made and can be unmade and remade (Mathilda Tham in Sutherland, 2020, 1:08). Many systems *need* to be unmade. Many of the frameworks that make design decisions decidable need to be undecided so they can be decided again (Sweeting, 2021). While systemic design practices offer ways to do this, these practices are themselves systems that might need to be critiqued and reworked (Soriano, Vink & Prakash, 2022).

As Relating Systems Thinking and Design moves into its second decade, it is possible to question systemic design's emerging shape. What are the strengths and limits of joining systems thinking and design practice, and how do these compare to other frameworks? How can systemic designers learn from their growing bodies of practice? What does systemic design make possible, and what does it obfuscate? Is it sufficiently radical? Sufficiently pragmatic? Which conventions does systemic design contest? Which does it leave in place? Does systemic design entail particular assumptions about the world, and what might the consequences of these be? As it becomes a more mainstream endeavour, how will it address issues of power, complicity, and privilege?

These questions run deep—to the foundations of ideas about design and the systemic. As designers look to address systemic challenges, they must wrestle with tensions and conflicting requirements within their own practices as well as in those situations they seek to change. Systemic questions cannot be approached one at a time in isolation, yet

it is inevitable that design is partial in its engagements—to address everything is implausible or else uncritical to implicit boundary judgements and the privileges of dominant perspectives. Unpredictable interdependencies require a cautious approach, yet incremental strategies risk entrenching underlying errors and injustices by making the status quo more palatable. Deep, long-term changes are needed, but the urgency of the present also demands immediately achievable actions. Moreover, design brings its own entanglements and faulty assumptions—design has contributed to many aspects of systemic crises, yet there is no way forward that is not design in some sense.

Nothing about enacting systemic change implies an easy path. Difficulties such as these are to be expected when working across and between multiple contexts. But how can these and other potential impasses be navigated? To what extent is it possible to treat these challenges as any other set of conflicting design criteria? Are new modes of designing needed and how might these be enacted?

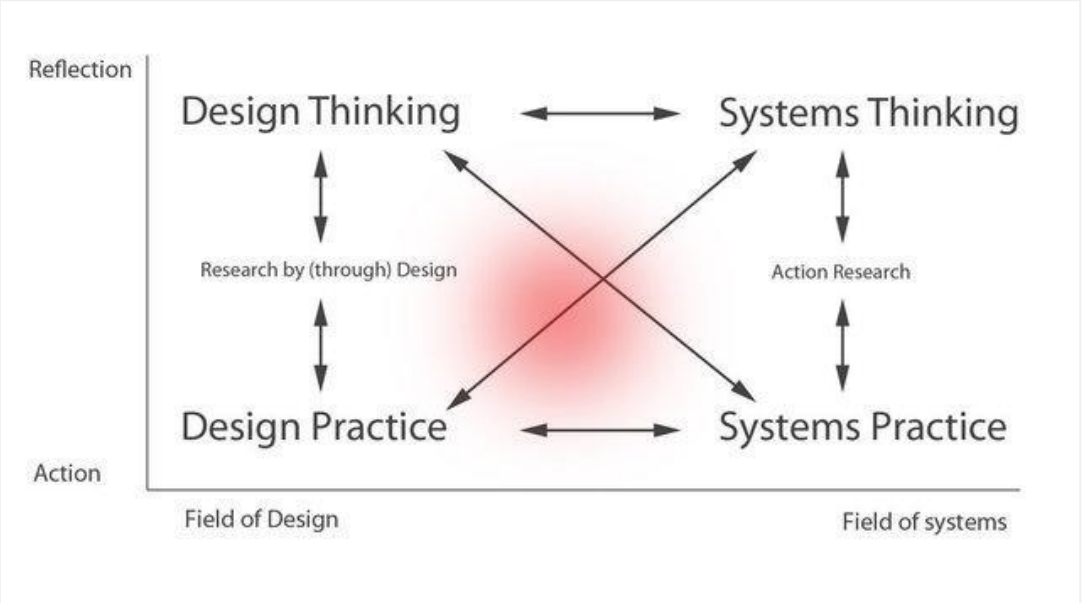

Figure 1: Birger's Sevaldson's (2017) "Field of Possibilities in Systemic Design" (p. 2). First presented at RSD2 without the red dot (Sevaldson, 2013a). Reproduced under Creative Commons — Attribution-NoDerivatives 4.0 International — CC BY-ND 4.0

Thinking about these questions, it is useful to return to what has been one of the key orienting artefacts in the development of systemic design, a diagram originally presented by Birger Sevaldson (2013a) at RSD2 (Figure 1). The diagram puts forward a set of relations, between the fields of design and systems and between the activities of action and reflection. While one might draw or label it differently, the diagram visualises how systemic design has come to be defined: "an interdiscipline that joins systems thinking to design methodology" (Systemic Design Association, n.d.).

In a later journal article, Sevaldson (2017) titled the diagram as "Field of possibilities in Systemic Design" (p. 2). The diagram positions systems-oriented design (SOD) (Sevaldson's own approach) as a "dialect or version of Systemic Design within a plurality of other dialects and versions" (p. 2), indicating SOD with a blurry red dot near the centre. In this way, Sevaldson uses the diagram to make spaces within systemic design for plural approaches—for ways of doing systemic design that are different to SOD and any other specific mode. The generosity and modesty in Sevaldson's act of *field making* is significant. It recalls the position adopted by Ranulph Glanville (2002) in discussing second-order cybernetics:

> To use a metaphor: my work is the creation of games fields: others create the games to play in these fields and still others play them. The point of an account that admits others is not that it is right, but that it is general (and generous). Cybernetics is often considered a meta-field. The Cybernetics of Cybernetics is, thus, a meta-meta-field. My work is, therefore, a meta-meta-meta-field. We will return to the recursions of Cybernetics… (Section 4.1)

While there are differences between the different modes of systemic design as they have developed through the RSD symposia, most do not deviate very far from Sevaldson's blurry red dot. The full extent of this field of possibilities has only just begun to be explored. And perhaps the edges of the field (the diagram) could be set even wider. We noted above that one might draw or label Sevaldson's diagram differently. Design, for instance, extends beyond "design thinking" and "design practice" with openings to the creative arts on one side, engineering on another, and all sorts of hybridisations with other discourses and positions. In much the same way, the "field of systems" (Sevaldson, 2018, p. 2) is not limited to the various systems thinking

frameworks and methodologies that have been the main point of reference within systemic design thus far. In the sense that systemic design's attempt to "move upstream" (Ryan, 2014, abstract) entails engaging with organisation, policy, and governance, then systems thinking makes sense as a starting point as it is already recognised within these contexts. But systems fields also afford connections to many other things—to countercultural movements, enactive cognition, ecology, ethics, leaky bodies (Sutherland, 2022), family therapy, feminist technoscience, interactive artwork, and much more—all of which have resonances with designing and design challenges. How might these connections further enrich and critique systemic design research and practice? The full potential of systemic design's transdisciplinarity exceeds what has so far been imagined.

One of the most prominent aspects of Sevaldson's own systemic design dialect has been gigamapping. The value of gigamapping is often characterised in terms of its capacity to handle complexity in visual terms. Underlying this ability is Sevaldson's careful integration of ideas from soft and critical systems thinking within a visual process. Perhaps the most important of these ideas is that of boundary critique (Midgley, Munlo, & Brown, 1998; Ulrich, 1983). A system is usually defined by drawing a boundary with respect to its environment. But as systems are interconnected, the boundary between system and environment can be distinguished in multiple ways and multiple places, with consequences for what and who is considered relevant. Boundary critique is a process of asking who and what is and should be included, a question that applies to both design processes and their outcomes. This process is laden with value commitments: Different boundary judgements entail and are entailed by different values. It is never possible to include everything, so there are decisions to make. Boundaries that exclude people who should be included can be oppressive; redrawing boundaries to include a wider spectrum of stakeholders and concerns can be liberatory. Drawing wider and wider boundaries is not always the answer, however. If a whole is different to the sum of its parts, then a part (which is itself a "whole in a role" [Glanville, 2015, p. 88]) will be different to a subtraction from a whole of which it is composed as a part. The concerns of the parts are not necessarily included in the concerns of the wholes of which the parts are part.

The standard presentation of boundary critique is not easily integrated into design practices. Sevaldson (2011) achieves this through the idea of mapping "beyond the horizon" (p. 6): "Only when one has mapped far beyond what seems relevant one can draw boundaries in a meaningful and informed way" (2013b, p. 1770). That is, gigamaps must map not just what is relevant but also what is not, so judgements can be made about what could be included and what possibilities these acts of inclusion lead to. The giga in gigamapping is not referring to "the number of entities and relations, which may range beyond a few hundred, but from the potential of myriads of connections, meanings, interpretations, and layerings that are implicit in the mapping" (Sevaldson, 2018, p. 254).

The logic of boundary critique and gigamapping can be applied to systemic design itself, and to RSD. In a similar way, Margaret Mead (1968) suggested to the inaugural conference of the American Society for Cybernetics that the society might apply its own ideas to itself, a move that motivated the cybernetics community to approach its own subject recursively and reflexively. While Sevaldson's diagram looks much simpler than a typical gigamap, they are both fields of possibilities about which critical boundary judgements need to be made. Who and what is included in systemic design? In RSD? Who and what should be? And (recursively) how should the previous 'should' be decided? Are there things that should not be included in systemic design in order to protect its identity, purpose, and criticality? Sevaldson suggested extending the horizon of consideration until one gets to things that you are sure are beyond one's scope, enabling critical judgement to be exercised. How might this be put into practice in systemic design's discourse? What are the possibilities and practices of systemic design? And what should they be?

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