POLITECNICO DI TORINO
Repository ISTITUZIONALE

Engaged Design Scholarship in Contexts

(Article begins on next page)

22 February 2024

CONTEXTS

Engaged Design Scholarship in Contexts: A journal of applied complexity

Peter Jones, OCAD University, Editor in Chief
pjones@ocadu.ca
Silvia Barbero, Politecnico di Torino, Deputy Editor

Editorial to the first volume

Designing communications for emergent scholarship

In the 10th year of the Relating Systems Thinking and Design (RSD) Symposium, the Systemic Design Association (SDA) board decided to bring a new journal into being for the scholarly community forming in systemic design. As board members, RSD hosts, and editors, we are delighted to announce the availability of a community-driven journal for the field. We hope this will inspire a vigorous epistemic culture and drive additional publications that emerge from an engaged knowledge community. The articles that follow in Volume 1 are the first collection of reviewed contributions from 2022, with five papers reflecting a diversity of studies, themes, and views.

At the close of RSD10, October 2021, we announced plans for a society-published journal, initially named the Journal of the Systemic Design Association. A working group developed a publishing strategy and assessed the options for a publishing platform. We investigated options to determine the best overall "system" for our needs, with a decision to self-publish on the SDA website. This is a small operation - we formed a publishing team as a small editorial board with several experienced colleagues. The journal platform was built within the SDA WordPress website as part of a comprehensive publishing concept. The startup goal was to publish a small number of articles, with high quality and reflecting a variety of issues and ideas. During the curation and review process, hundreds of decisions and trade-offs were necessary for the inaugural collection, resulting in a longer period to launch than hoped. *Contexts - The Systemic Design Journal* is the resulting platform for systemic design studies. The journal will publish articles continuously, in annual volumes (not issues), allowing collections to expand or adapt as necessary.

Systemic design as a field will benefit from a new journal where discourses raised within research and advanced practice communities can exchange and debate over long periods of time. Systemic design has developed as an expansive learning ecosystem of practices and collaborative research, to address complex concerns that cross disciplines, knowledge, and as

Engaged Design Scholarship in Contexts

(Article begins on next page)

Program leaders and teachers among these institutions discovered one another over the period of field-building through the RSD symposia. The RSD community became a vital arena where academics and practitioners meet and recognize their research and practice as part of a broader community that approaches design through complexity. The design discourse emerged as an exploration in response to the significant social complexity of large design problems and contexts that named design fields did not address well through methods or in practice. As in McLuhan's observation of new media formation, a new medium emerges when our current media channels can no longer absorb the total increase of information in the old media. A scientific field is a medium for communication among scholars and, as a field of practice, a medium and environment for the application of knowledge and techniques in real organizations and places. The systemic design field was formed to accommodate the complexity of multiple disciplines, products, formats, knowledge forms, methods, and applications that did not fit within the neatly categorized departments of design schools, to better address the challenges of complex systems and social and societal change problems.

Anticipation from all the early thinkers, and practitioners as well, suggested the necessity for design education to spawn a vital, distinct practice informed by systems thinking and theory. As a new medium for design collaboration was demanded, a discourse, or style of communication and argument, evolved among scholars in the academic communities primarily, and in practices as the discourse led to valuable tools and methods.

Among those leading scholars were Harold Nelson and Erik Stolterman, whose seminal book *The Design Way* (2003, 2012) influenced a broad audience to expand the trend of design toward increasing complexity. Harold was one of the originating founders of the RSD symposia in 2012, and fittingly, our first author in the inaugural volume of *Contexts*.

Contexts: The intention of the journal

From the first small RSD symposium, the systemic design community grew quickly, and many scholars started to recognize their niche within the approaches shared by leading designers/researchers. In 2018, during RSD7 at Politecnico di Torino, the SDA was founded to establish a membership community. The association creates a democratic context for people to freely join a scholarly community, but it also enables recognition by and partnerships with other academic societies and communities. In the first decade, we presented the idea of a "publishing ladder" to participants to encourage scholarly engagement with the discourse community. In effect, this encouraged publishing the peer-reviewed article at the top of the ladder. Interested scholars with continuing work presented at RSD were typically invited to join special issue projects in established journals, with *Formakademisk, She Ji,* and the *Strategic Design Research Journal* as publishing options. This fruitful partnership provided a scaffolding for the systemic design community to reach a wider audience and to hear its own voice. As the SDA took more responsibility for growing

the community, the publishing ladder evolved into the Scholar's Spiral[3] as an author-centred approach to progressive development in research communication, enabled by conferences and different publishing formats. *Contexts* now provides a peer-reviewed, continuing means through which people in the field can communicate with each other through a variety of languages, tools, methods, and experiences.

Contexts—The Systemic Design Journal

We chose *Contexts* as a title that reflects the common ground of complexity that many design scholars share as a common grand challenge, as we can also see suggested in these first published articles. Complexity is a complicated term, as there are incommensurable definitions and preconceptions of its meaning, yet it might be the most indicative context shared across systemic design studies. For the many different contexts of complex design – whether for social systems, social change, creative policy and planning, or socioecological systems – the idea and placement of context forge a nexus of units of analysis, making our subjects quite complicated. These units are typically revealed as systems (as constructed by stakeholders), design actions (as interventions by design researchers), and the observed and lived human experience as the focus of relevance.

Designing for engagement in an emerging discourse

With the launch of the journal in the systemic design community, several immediate aims are met, even if not fully at first. It's important to develop a distinct identity for systemic design in the scientific and design literatures., as an interdisciplinary exploration of design for complexity informed by systems theory. Otherwise, the allocation of studies to either design or systems literatures leads to a fragmented and compromised dialogue, with risk of loss of knowledge and momentum with the significant potential in design for complex systems contexts. The journal provides an attractor for publication in the discourse and a position for the society to coproduce with disciplinary growth. SDA also desires the ability to design better publications and increase publishing in the field. These commitments will help with the nurturing of new scholars from among the membership, as well as contribute to the evolution of the field.

Three components of the SDA publishing strategy, as well as primary purposes of scholarly publishing, are intended to:

- Disseminate and validate communications in a field of discourse
- Develop and certify scholars in the field
- Develop an archive of contributions documenting the growth and changes in a discourse or discipline.

---

[3] The Scholar's Spiral is proposed as a cyclic, non-hierarchical approach to advance scholarship through individual progression across multiple communication opportunities model https://rsdsymposium.org/systemic-design-publishing/

Contexts aims to provide a validated space for scholars to facilitate growth of a unique discourse that could not occur by distributing contributions across the many other design (or systems) publishing outlets for academics, not to mention for advanced practitioners. One quality of all the first studies published is that they are examples of engaged scholarship, a collaborative approach of knowledge coproduction that advances theory and practice. Engaged scholarship (Van de Ven & Johnson, 2006) provides a perspective to guide the continuing innovation of *Contexts* and the developing field. Engaged scholarship was originally envisioned for business and other professional fields, and as such, it applies meaningfully to design, and encourages problem-oriented contributions and conceptual development from academic and practitioner scholars. Engaged scholarship can be seen as a pluralistic methodology for advancing knowledge, where the collaborations necessary in systemic design with stakeholders involve multiple perspectives of knowledge from different epistemic cultures.

Engaged scholarship promotes research into realistic, real-world outcomes in case studies and research through design. It also supports research through community and social engagement of researchers in fields of social change as action research. It reduces the distance between academic researchers and advanced practitioners, and often combines them in studies, which is quite typical in systemic design. Van de Ven (2018) develops a cyclic 'diamond' model of the different intents of engaged scholarship, including theory building, problem finding, and problem solving, a model useful for when "the goal is to understand a problem or issue that is too complex for any party to study alone" (p. 40). The research goal is to frame a complex problem as an instance of more general cases, informing theory-building and application to specific contexts of practice.

Certification of scholarship

Contexts opens up a new platform within and across the field(s) that touch on systemic design, providing a touchpoint of current issues and a shared container for knowledge transfer at a stronger level of certification than symposia or field-peripheral journals. A primary purpose for sustaining a journal within a growing discipline is the certification of what the field accepts as "excellent scholarship," and this conveys such to published scholars who express a commitment to the field. While *Contexts* is still very new, our philosophy is to become as author-centred as possible, consistent with the DORA[4] declaration for the movement toward author-focused publishing and quality assessment.

In a field where two broad, interdisciplinary knowledge domains (design and systems science) are merging for methods and applications, we expect a flex of boundaries, within and between all the fields in this pluriverse. We believe the majority of *Contexts* publications will be particular, applied studies based on cases or social research, and theory that advances new methods, design, or systems behavior. Similar to the framework in Shneiderman's proposal (2020) we might extend the interdisciplinary approach of ABC research (Applied and Basic, Combined) with method, theory, and construction (prototypes and products) combined.

---

4 DORA is the Declaration on Research Assessment from 2012 that led to the formation of principles for author-centered publishing metrics https://sfdora.org/

Design studies are often practice-based research, informed by social science. As a design-led discipline, systemic design is an applied science with no expectation to advance basic research. As in systems science, a basic research equivalent might be theoretical work or scientific studies of methods. Clinical research can also be considered, or studies that advance practice from case studies. According to Herbert Simon (1976), in business and professional schools, scholars are expected to pursue research that both advances a discipline and informs practice in the professional domain. As such this ought to move the field toward the following values:

- Gaining alignment → finding points of agreement
- Seeing what emerges → makes progress possible
- Integration across disciplines → identity works horizontally and vertically
- Biased towards participation → bold and affirmative invitation
- Building common vocabulary → awareness and shared values

The inspirations of Contexts Volume One

We are encouraged by the variety found in the first five articles in Volume 1 (submitted during the latter half of 2022). Expecting readers of an editorial to also read the articles, we focus on contextualizing the contributions made by these articles. The first collection includes new essays and develops work previously presented at an RSD symposium. These five papers represent several distinctive categories and schools of systems theory and practice, even if not yet comprehensive of the worldwide panorama.

Volume 1 includes histories and futures, and ranges from new theory to real-world cases. Systemic design typically, and necessarily engages multiple disciplines and stakeholders. It's helpful to recognize the role and style of scholarship may differ in the field from other fields, and their discourses and publishing.

Systemic design as born from the Berkeley Bubble matrix

Harold Nelson leads the collection with an invited essay, our first article, that helps place the footers and foundation into the field that has grown from design for complex scale. Harold shares a deep history of design issues in complexity from the first and second generations of systems thinking, from the fertile ground of the centre of the 1960's consciousness revolution, University of California at Berkeley. Harold refers to the context of the Berkeley milieu as the Berkeley Bubble (which we find is meant more as an expanding bubble around a group of people with profound creativity, and not like a financial bubble that pops). Harold was a PhD student in a field that was growing with extraordinary potential, and seemingly no limits to the impact on design change that could result from the new systems sciences. At the centre of the Bubble were thinkers we have all read or known - C. West Churchman and Horst Rittel - and some on Harold's committee who we should know, such as Len Duhl and Joseph Esherick. His full list of the sage thinkers at this time and place must be read to be believed - perhaps only the Bauhaus has a similar "bubble" of impact.

The confluence of seminal thinkers all in one place would be almost unimaginable today. It revitalizes our own more distributed culture of systemic design to recognize how the formation of many of our core influences drew from this formative context. The conversations were understood to be unending. The binding focus for all was on how to best turn deep thought into prudent action.

Professor Nelson speaks of the various trajectories of field development that were "highly influenced by the initial conditions at an inception point." While he points to the Berkeley Bubble as the inception point that led to today's systemic design, we would miss our own historical inception to not acknowledge Harold's contribution to the inception at Oslo School of Architecture and Design, upon Birger Sevaldson's invitation, which drew together Peter Jones and others around the AHO Bubble, leading to the RSD Symposium.

By comparison with the opportunity for considerable impact at that time, Harold further presses into what's missing in our contemporary design culture. The culture of the Bubble was to inspire deep thought that led to "prudent action;" a context of creative intention, and a community where "conversations were understood to be unending." Harold finds we do not mentor or train designers today to formulate consequential concepts, or the "great mark" of bounding a system with this intentionality. Reading the essay more than once will reveal more, and reading between the lines of Nelson's essay may reward the reader with unexpected insights.

Contra-innovation

Dulmini Perera and Tony Fry present a powerful approach to enable systemic critique of innovation propositions and their potential outcomes. The subtitle of the article is "Expanding the innovation imperative in the context of futuring, defuturing and fictioning" a phrase that outlines a social purpose. In contra-innovation, a perspective is advanced to assess the futuring (life-sustaining) and defuturing (future-denying) prospects for innovation. Beyond only considering the systemic effects of modernist innovations, the authors go further to inspire a critical grasp of the meaning of innovation in cultures, where agendas of acceleration and "development" inscript neocolonial values and power relations.

The paper takes the form of presenting three "historico-fictions" from the US, China, and Cuba to distinguish these value frames within selected histories of dominant systems. Three stories allow us to learn from alternative findings of cultural-historical contexts of domination, cultural recovery, and societal survival futures. These narratives are true to history, yet selective, revealing in their expression the contra-technique, as well as demonstrating how we might critique design fictions expressed in techno-optimist futures discourses.

We hope to see this article become the source of thoughtful argumentation in continuing discussion. Perera and Fry will have us reconsider the uses and claims of not only design fictioning, but the strategies of futures production in design that fail to account for sociopolitical histories, innovation culture, and neocolonial narratives in development. They propose not to avoid or dismiss these techniques, but to elevate consciousness of the effects of design-as-usual that can serve business-as-usual. They suggest a "second order design

fiction" in contra-innovation to bring forth pluralistic expansions of meaning, to enable participants in design conversations to recognize many possible positions that might challenge acceleration, defuturing, or that might lead toward sustainment.

Systemic spatial design

Elena Porqueddu presents a spatial-architectural theory based on complexity theory and complex adaptation, with multi-level scales across territories and mapping. She advances a systemic approach to mixed-discipline spatial design in urban planning, as systemic spatial design. Furthermore, she proposes a multi-scale atlas as a navigation method to explore the cross-scale relationships in which specific spatial configurations are immersed, frame them as parts of complex social-spatial systems which include human actions and which evolve in a non-linear manner through processes of self-organization and adaptive cycles. The paper proposes a new approach to spatial design, bottom-up and emergent, with the intent to enable solutions to flourish rather than to over-control the formal outcomes.

The presentation of systemic spatial design as an emergent discipline within the systemic design risks generating a fragmented panorama of many sub-fields that don't contribute to clarifying the boundaries and positioning it. The desire to include this paper in the first volume of this journal denotes the need to encompass the different perspectives of systemic design to restore its inherent complexity and still blurred boundaries.

One of the aspects that we appreciate most is how different contexts are considered in the process. The designer can intervene in the context, but the approach is adaptive and self-organizational, with no claim to control. "Systems thinking is contextual thinking", so how you act to change the future vision is affected by the place where you are working.

Finding a (theory) of leverage

Ryan Murphy extends a body of work with an analysis of the function of intervention points that we understand as leverage. First, a brief overview of the systemic change or systems transformation is needed to underscore why the search for leverage is so important. Finding leverage points is crucial to trigger systemic changes. However, our current understanding of leverage is insufficient. Meadows's typology (1997) continues to be the only framing commonly referenced, but the author also reviews five recent contributions that have revisited and revitalized this conversation. The paper concludes by outlining three key reasons why Meadows's piece should not be the only root of leverage theory and the signals of possible modern ideas about leverage. This paper is, therefore, both a critique of "Leverage Points" and an echo of Meadows's original call to arms on using leverage points as a theory to amplify systemic change.

One of the constants in systemic design is to provide answers to wicked problems, so the issues addressed are complex, urgent and real, not for sure induced by market distortions. In that situation, there are no right or wrong solutions when they come to balancing conflicting values and contexts, but only better or worse ones, and for sure, not a one-fit-all answer.

Another important aspect is related to the fact that systems are dynamic and systemic designers can surf the change but cannot build and harness it. In that sense, the (theory of) leverage is crucial to understanding how to approach systems' complexity and accelerate one future vision more than another.

Participatory strategies for scaling

Danielle Lake and her Elon University team's action case study of an urban social lab interrogates the issues of scaling effective change in social design, which we find very relevant to the previous Murphy article. In Murphy, there is a critique of theories with a deductive approach; in this action case, there is a practice context with an inductive approach. An analysis of the Collaborative's dynamic processes, activities, and relationships provides a case study on the possibility of imagining, creating, and sustaining community partnerships that scale meaningful change at multiple levels and in diverse contexts. Then, strategies for intentionally designing systems of change are reviewed to understand the posture of intervention by the systemic designer. The paper shows how participatory design processes can support more inclusive, collaborative problem-solving and greater empathy across diverse communities.

In that sense, scale plays a crucial role in creating, developing and assessing systemic change across complex systems. The authors reconsider the different forms of scaling to contrast the popular notions of scale, which have largely emerged from colonial and capitalist commitments to consumption and growth. This is a perspective coherent with a previous contribution by Barbero and Bicocca (2018), where systemic design's scalability was also connected with the replicability of systems.

This article is valuable for the practical instruction on how to achieve diverse forms of scale via more participatory systemic design practices with a real paradigm-shift. It offers a conceptualization of scaling as a meshy, stretchy place of emergence.

A future platform for scholarly communications

The editors are inspired by these first articles, as they embrace a range of perspectives in systemic design and high quality, innovative scholarship. While in our first collection, we cannot describe anything like a typical "Contexts article," but these all fit our mission, and seem more at home in the systemic design discourse than in other places. Even so, we might speak to the future of envisioned scholarship in the field.

Contexts promises a critical and pluriversal perspective in a discourse community, serving to curate high-quality, relevant studies and space for presentation and dialogue for emerging, important, and controversial work to stimulate. The journal becomes part of the SDA platform and extends the SDA into future possibilities of other publications, such as design case reports, system maps, and member blogs. We foresee continuing innovation of the RSD symposium and other partnerships, such as the online courses in systemic design areas many are creating and participating in. We see this leading in a few years to a multi-sided platform concept, with many entry points to publishing and scholar-learner development.

The future of the field is not for us to claim and frame in this prospectus, as that's developed and envisioned together in the collaborations of research partnerships, innovative practices, and new institutional development. We might start with a suggestive list of contexts, themes and issues, extending into the foreseeable future, that might include:

- Case studies and lessons from engaged systemic design in mixed practice-research in organizational social systems, including public sector, companies and workplaces, and quadruple helix contexts
- Sociotechnical systems design for flourishing, circularity, or regeneration
- Societal crises and problematiques as context for systemic design intervention
- Systematic reviews across the fields of systems theory and design studies
- Systemic design methodology, supported by practice or implementation research
- Design research applying systemic or cybernetics theory for transdisciplinary studies of ecological or environmental interventions
- Systemic design approaches to transformative systems change in complex sociotechnical contexts
- Second-order cybernetics and systemic design, involving reflexive dialogue, language structures, or cultural construction

Initiating a journal for a developing discipline must be seen as an optimistic act of good faith. A thriving field can sustain a journal for many decades. While it's difficult to imagine now how systemic design might evolve and publish communications through 2050, or as needed by the field, we must imagine that it's possible and desirable. A true vision for a productive future should be confident to propose such a prospect. It is not possible to guarantee the direction of the field, but rather we might invite all to join us in holding the vision that systemic design will evolve into this sustaining future field.

References

1. Aulisio, A., Pereno, A., Rovera, F., & Barbero, S. (2021). Systemic design education in interdisciplinary environments: Enhancing a co-disciplinary approach towards circular economy. In Bohemia, E., Nielsen, L.M., Pan, L., Börekçi, Nagz, Zhang, Y. (Eds.), *Learn X Design 2021: Engaging with challenges in design education*, 24-26 Sept, Shandong University of Art & Design, Jinan, China. http://doi.org/10.21606/drs_lxd2021.05.250

2. Barbero, S. & Bicocca, M. (2018). Scalability in Systemic Design Approach for Rural Development. In Leal Filho, W. (Ed.), *Handbook of Sustainability Sciences* (pp. 647-662). Berlin: Springer AG. http://doi.org/10.1007/978-3-319-63007-6

3. Blanchard-Laville, C. (2000). De la co-disciplinarité en sciences de l'éducation. Revue française de pédagogie. *Evaluation, suivi pédagogique et portfolio*, vol. 132, 55-66. http://doi.org/10.3406/rfp.2000.103

4. Celaschi, F. (2008). Design as a mediation between areas of knowledge. In C. Germak (Ed.), *Man at the Center of the Project* (pp. 19–31). Turin, Italy: Allemandi & C.Jones, P.H. (2020). Systemic Design: Design for complex, social, and sociotechnical systems. In G. Metcalf, K. Kijima, & H. Deguchi (Eds.), *Handbook of Systems Sciences*. Tokyo: Springer Japan. http://doi.org/10.1007/978-981-13-0370-8_60-1

5. Meadows, D. (1997). Leverage points: Places to intervene in a system. *Whole Earth, 91*(1).

6. Nelson, H.G. & Stolterman, E. (2012). *The design way: Intentional change in an unpredictable world.* Cambridge, MA: MIT Press.

7. Shneiderman, B. (2016). *The new ABCs of research: Achieving breakthrough collaborations.* Oxford, UK: Oxford University Press.

8. Simon, H. A. (1976). The business school: A problem in organizational design. In H. A. Simon (Ed.). *Administrative behavior: A study of decision-making processes in administrative organization* (pp. 335–356). New York: Free Press.

9. Van de Ven, A. H., & Johnson, P. E. (2006). Knowledge for theory and practice. *Academy of Management Review, 31*(4), 802-821.

10. Van de Ven, A. H. (2018). Academic-practitioner engaged scholarship. *Information and Organization, 28*(1), 37-4

Publishers Statement

Contexts—The Journal of Systemic Design is an open access, peer-reviewed research journal of the Systemic Design Association, the first journal dedicated to scholarly reporting and research communications in the interdisciplinary field of systemic design.

Contexts welcomes original scholarly contributions from the growing research community across all institutions and locations in the world pursuing design-led studies and action research in complex social and sociotechnical systems. The types of studies and articles of interest include the following:

- Primary research that contributes to the development of scientific knowledge in the field, including field ethnographies, social science-informed design research, and interdisciplinary research drawing on multiple fields.
- Organizational and social systems studies
- Qualitative research that adheres to appropriate study design and reporting guidelines.
- Systematic reviews across the fields of systems theory and design studies that demonstrate a comprehensive and unbiased sampling of existing literature.
- Systemic design methods developed and validated by high-quality fieldwork or practice evaluations.
- Case studies, case reports and interpretive essays on systemic design projects.