Systems Scribing:

An Emerging Visual Practice

By Kelvy Bird and Jessica Riehl

What follows is an excerpt from the upcoming Routledge Handbook of Systems Thinking, edited by Derek Cabrera, Laura Cabrera, and Gerald Midgley, adapted for use during the Systems Scribing Lab, October 2019

Systems scribing is a visual practice that combines scribing—visually representing ideas while people talk—with systems thinking. This is a new, tangible approach to representing dynamics, occurring in the moment and over time, between the scribe and a social body. Learning experiments have been conducted in educational settings, workshops, and client programs. These experiments have demonstrated to the authors that this is a challenging practice because it is difficult to combine two unique specialties without a thorough knowledge of each. Yet the complexity of our times calls for individuals to, literally, see themselves in a common picture. Sitting at a juncture between art and science, systems scribing is uniquely poised to meet this need. The practice is in its infancy, though, and will need to gain traction in use to test its true potential.

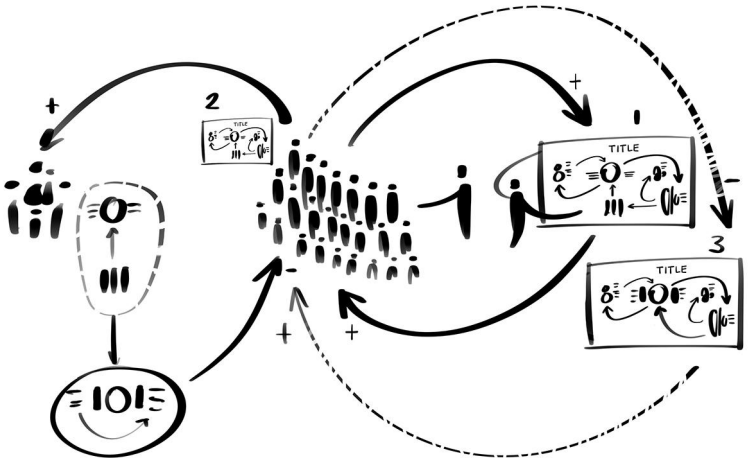
Scribing, also known as graphic recording or graphic facilitation, is a visual practice: an artist maps out ideas—draws—while people talk, and the speakers see a picture unfold in front of them (Bird, 2018a). Scribes work across all sectors, primarily in meetings, conferences, and educational settings. They draw on blackboards, dry–erase boards, paper, and other large surfaces. “Wall scribes listen to the conversation and draw what they hear, which is a form of instant feedback and visual translation for participants” (MG Taylor Corporation, 1991, pp. 37). *Systems thinking* is a conceptual framework to “make full patterns clearer . . . and to help us see how to change them effectively” (Senge, 1990, pp. 7). Thinking in systems connects us to the natural world, each other, and ourselves to help close the ecological, social and spiritual divides of our times (Scharmer, 2013, pp. 4).

Systems scribing is the joining of scribing with systems thinking; merging these two disciplines creates a practice of visualizing whole systems through live, in-person drawing (Bird, n.d.). Systems scribing can be done in the moment, similar to graphic recording; it can also be done over time to track iterative cycles of feedback between the scribe and those who are generating content. Systems scribing incorporates an understanding of systems theory and emphasizes systems thinking as a filter through which the scribe makes artistic and content choices. It differs from the straightforward recording of content, in that the systems scribe uses specific interpretive devices—such as defining

relationships, feedback loops, and mental models—in various combinations to help structure their interpretations. Essentially, systems scribing aims to reveal dynamics and interdependencies organically, in a manner that illuminates and clarifies the structure of group thinking.

The systems scribe listens to the content (as spoken by the participants in a meeting, for example), takes notes (mental or written), and makes marks when a connection or relationship becomes apparent. When drawing, the scribe moves back and forth across the surface, connecting information, paying attention to the underlying dynamics, and attempting to model what is being said (in the present) into what has been said (in the past), saving space for what might be said (in the future).

By drawing a picture, a systems scribe can effectively "help a system see itself" (Scharmer, 2016, pp. 35)—whether the "system" is a group of 20 people who work together or a subset of a global corporation or network. The picture of a system makes evident the choices, actions, relationships, and externalities of that system, as well as the consequences of the way the system operates. Where a graphic recording produces a fixed map of a conversation, the product of a systems scribe is more like a blueprint or diagram, intended to be changed and updated as a group gains insight and ideas evolve. The drawings produced in sequential sessions relate to one another, changing as the participants in a system reach a better understanding of their challenges and direction.



Mapping system engagement through iteration

The Evolution of Scribing

(Refer to Generative Scribing: An Art of the 21st Century: Introduction)

Levels of Scribing

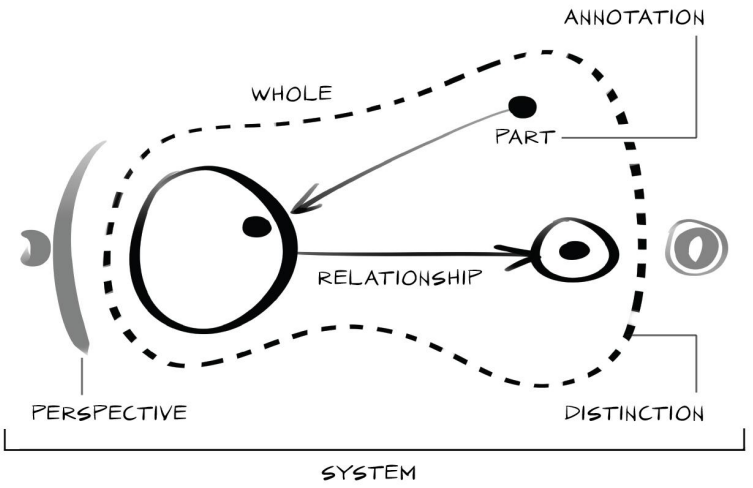
(Refer to Generative Scribing: An Art of the 21st Century: Levels of Scribing)

Systems scribing is an integrative approach that works on all levels of visual practice. Through sharing this framework in workshops and in conversation, it has become clear to us that most graphic recorders are functioning at levels 1 and 2, mainly because that is what most clients need or want. Scribes express great curiosity about how to shift into levels 3 and 4. We believe that systems scribing can help with this transition, as a gateway to a new kind of relational understanding and representation.

The Evolution of System Scribing

In the early 1990s, Bird started working with the MG Taylor Corporation, a company that had developed a collaborative methodology called DesignShops™, which employed “group genius” to find solutions to challenging problems. There she absorbed systems thinking by osmosis, working alongside those already familiar with the field, to design and deliver facilitated sessions for companies seeking change (Pergamit, Peterson, and Pergamit, 1997). The MG Taylor way was highly interactive; no individual role was isolated from the team’s creative objective to provide multi-stakeholder solutions in condensed periods of time.

As a novice scribe, though, she had difficulty drawing representational images, as was the standard with other graphic facilitators at that time. Working with Bryan Coffman, who was trained as a systems engineer, Bird embraced his visual modeling method—using elements of actors, frames, relationships, and annotations (Sente Corporation, n.d.)—that originated in the mid 1980’s and was further developed with Jay Smethurst in the late 1990’s (Coffman, 2016, p. 118). Bird and Riehl have since integrated Cabrera's DSRP framework (2000, 2006, 2012, 2018), into a potential systems scribing method, including the following elements *(to be explained in Module 2: Systems thinking)*:



Elements of systems scribing

In the late 1990s, Bird moved to Cambridge, Massachusetts, where she started working with William Isaacs and the company dia•logos. Here the merging of dialogue (Bohm, 1990, pp. 4-46) and scribing took root in her own practice, specifically around the principles of potential, participation, coherence, and awareness (Isaacs, 1999, pp. 29-69). The scribe became an integral player within the system, functioning to visibly reveal the meaning revealed through a conversation. In 2007, Bird joined the core team of the Presencing Institute, working closely with Otto Scharmer to create an action research platform situated at the intersection of science, consciousness, and profound social and organizational change (Presencing Institute, n.d.). Her scribing took on the role of anchoring cultural shifts over time; her images have translated key concepts, tracked the institute's growth, and helped share the narrative of its unfolding.

At the World Economic Forum's 2012 annual gathering in Davos, Switzerland, Bird mapped the "too big to fail" housing and financial crisis that was central to the "great recession" of the early 2000s while a presenter explained the scenario. Around this same time, Bird began supporting Executive Education programs at MIT's Sloan School of Management, scribing for courses in the System Dynamics Department. Another developmental thread was Bird's work from 2011 to 2014 with LeAnne Grillo at Camp Snowball (SoL Education Partnership Newsletter, 2015). This annual gathering, initiated by the Waters Foundation and what is now the Academy for Systems Change, brings systems thinking into classrooms, schools, and school districts through engagement with students, teachers, and administrators, and superintendents. In 2016, Bird began sharing the iceberg model in her visual practice workshops, and then in 2017 conceived the Systems Thinking Studio Sessions to explore and consolidate knowledge on the topic within the field of practice (Bird, n.d).

Jessica Riehl, meanwhile, had begun her graduate studies in 2013 in the MFA Collaborative Design program at the Pacific Northwest College of Art. The program was created by Zackery Denfeld, J. P. Reur, and Cathrine Kramer and was inspired by Denfeld's earlier research and his interdisciplinary study of complexity, systems thinking, design practice, architecture, and cybernetics. In particular, Denfeld wanted to "provide a bridge between seemingly insurmountable world views" (Denfeld, 2018). The program's foundational class in systems thinking, taught by Howard Silverman (Silverman, n.d.), was her formal introduction to systems thinking. She was simultaneously introduced to the work of David Grey (Grey, 2019), the founder of xPlane, a Portland, Oregon–based visual thinking consulting firm. She received training in visual thinking, design research, and business design, and used rich picturing in her presentations (Wilson, 2001, pp. 35-36). Like, Bird, Riehl realized that the convergence of her training in these two disciplines (visual thinking and systems thinking) offered a unique opportunity to illustrate and engage with complex problems. She began visually illustrating and working with systems thinking models when she met Bird in 2018. In 2019, she started training with the Human Systems Dynamics Institute in order to expand her understanding of systems thinking and models.

Since meeting in 2018, Riehl and Bird have initiated a more intentional exploration of systems scribing, now including this lab!

Future Directions for Systems Scribing

Our goal in this article was to document and share what we have learned about combining the two separate disciplines of systems thinking and scribing. Based on our experience, we believe that systems scribing can be an indispensable tool for accessing a more holistic understanding of our interconnected world. Systems scribing is in its infancy. Its evolution will also require the thought and contribution of non-visual practitioners, researchers, clients, and enthusiasts to reach maturity. The domain of knowledge will expand as the ideas presented here—and other journeys into this topic, still to be documented—are shared, tested, and improved upon. In order to grow, the practice will require dedicated platforms to track learning, clients who are ready to hire and experiment alongside scribes, and more scribes willing to cultivate their understanding and representation of systems.

Citations

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