



Relating Systems Thinking and Design
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Redefining Stability

#NewMacy ACT II, Studios

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Adopting a structure of themed and design-led *Studios* as framings for conversations for action, #NewMacy aims at enabling deep participation through activities such as prototyping, play, exploration, enactment, and improvisation. At RSD11, six #NewMacy Studios created opportunities to engage with interdisciplinary approaches to systemic design through conversations for action: Radiant Circles — Cybernetic Musings on Resonant Forms; Pandemic of Today's AI; Art as Steersmanship; Panarchy as a Sensemaking Tool; Cultural Premises, Conscious Purpose, and Design; Prototyping Conversation.

KEYWORDS: Pandemics, wicked challenges, second-order cybernetics, systemic change, ontological security, conversation, ontogenetic resilience, recursive feedback.

RSD TOPIC(S): Methods & Methodology, Socioecological Design, Sociotechnical System

ACT II, Studios

Friday, 14 October and Saturday, 15 October 2022



#NewMacy emerged in March 2020 as the pandemic of COVID became the newest global wicked challenge (Pangaro 2021a). Since then, little has changed in the fights against pandemics of biology and technology, racism and structural inequities, environment, and economics. We embrace the timespan of RSD11 as “the long now” in recognition that these systemic challenges require new scales of effort and expectation across generations. We invoke the original Macy Meetings,

which arose from a recognition that understanding purposive systems would be essential for addressing the failures of WWII (Pias 2016). In the 21st century, #NewMacy catalyzes conversations for action across disciplines, geographies, and generations through systemic principles, processes, and communities. #NewMacy creates conditions for enacting productive responses among individuals and communities that bring about change in the near term while planning for and committing to the time span required to effect lasting change.

Our current focus is a new framing for *ontogenesis*, specifically, that of developing *new ways of becoming*. To survive in a changing world, we must embrace *resilience* in lieu of security, interpreted as constancy. Hence we substitute *ontogenetic resilience* as our framing intention — and cybernetics as key (Salvaggio 2022; Westermann 2022a).

How might we practice ontogenetic resilience? We begin by embracing the human as the basic unit of change. Conversation is the unifying process. We adopt a structure of

themed and design-led Studios that are explorations of ontogenetic principles. These Studios identify cultural sites where ontogenetic resilience is needed and where we may pursue inclusive and recursive modes of experimentation. The purpose of the #NewMacy Studio construct is to enable deep participation through activities such as prototyping, play, exploration, enactment, and improvisation. The following Studios enacted conversations for action across the middle days of the RSD11 symposium:

- Radiant Circles — Cybernetic Musings on Resonant Forms
- Pandemic of Today's AI
- Art as Steersmanship
- Panarchy as a Sensemaking Tool
- Cultural Premises, Conscious Purpose, and Design
- Prototyping Conversation

After the studio sessions, we all gathered in #NewMacy ACT III for a final conversation to consider the following questions: What's next? How do we grow into an increasingly inclusive ecosystem of Studios? What new, vital activities will we design? The dialogue, collaboration, and matchmaking performed in this session served as the means for a recursive process of integration and synthesis – directed toward ongoing, empathetic, intelligent, and sustainable action.

Studios

All participants in RSD11 were invited to attend any and all of the following Studios, occurring throughout Friday and Saturday. Participants conversed, prototyped, experimented, played, and improved. Some Studios were held entirely virtually, and some in a hybrid format.

Radiant Circles — Cybernetic Musings on Resonant Forms

Friday Oct 14, 2:00-3:30pm, *Virtual Studio*

Co-Leads: Eryk Salvaggio, Claudia Westermann

Through resonance, works of art and design are centering. In openness to expansion, they grant agency. They create closure and consummation but never stasis. They are circular.

In the Radiant Circles workshop, we explored how Gordon Pask's *conversation* (Pask 1975; Pask 1976) as aesthetic experience initiates ontogenetic resilience via processes that devalue established hierarchies of oppression and how, in the process, new ecological values are instigated and cultivated. Via an excursion to the Chinese classical gardens and an installation that involves mushrooms making electronic music, we introduced what could be called technologies for floating (Westermann 2020; Westermann 2022b; Bockowski and Salvaggio 2022; Salvaggio et al. 2022). Becoming comfortable with floating is what every embedded observer/agent needs to learn. It is essential for conversation in the Paskian sense. How could we conceive of technologies, so they assist us with learning to float? As we discussed in the workshop, the Chinese classical gardens and the mushroom installation perform as 'radiant circles.' Expanding, so you may seek the yet-unknown, they nevertheless provide orientation. In their expansion, they re-confirm their center. This process is the basis for floating. Its dynamics are circular and guide us in a cybernetic approach to ontogenetic resilience (Salvaggio 2022; Westermann 2022a).

The workshop encouraged participants to develop ideas for the design of 'technologies for floating' that are inherently circular and foster a sense of openness to the permutations of the systems we are embedded in.

Pandemic of Today's AI

Friday Oct 14, 7:00-8:30pm, *Virtual Studio*

Co-Leads: Carlos Castellanos, Xiao Zoey Fang, Paul Pangaro, Eryk Salvaggio

Premise — So much of today's technology manipulates and distorts the world we share. Yet "Today's AI" could swing back toward our biological roots by presenting analog interactional frameworks as countervailing examples. Novelty and choice, transparency and conversation can become new design patterns in a collection of concepts and working prototypes that inspire positive change. These exemplars in the form of interface designs and underlying algorithms will be offered to designers, students, teachers, and entrepreneurs as more humane and richly rewarding alternative to today's online experiences.

General Documentation (see [this PDF](#) for flow of the Studio as performed during RSD11): We began with an overview of today's global pandemics and the wicked problems they present. We invoked the historical effort of the original Macy Meetings from the 1940s-1950s to bring a transdisciplinary view as to how and why Cybernetics informs our 21st-century challenges. We justified calling "Today's AI" a genuine pandemic, pointing out the massive reach of the major platform companies (Facebook, Youtube, Twitter, TikTok, ...) and how they manipulate attention and sentiment, spread bias and steal privacy, and generally overpower human capacities in the face of digital ubiquity at scale.

Our premise is that "digital culture" — the specific way our digital infrastructure overwhelms our thinking and acting — comes from the code of digital programming, including that of AI and Machine Learning. The way that computers sense the physical world and codify their reactions via programming creates a deterministic view of interaction and intelligence that is not at all like our biological selves embodied in a social fabric of everyday living.

There is a way forward, to embrace an overarching alternative, that of "analog culture," which can be embraced and disseminated in an effort to counteract today's AI pandemic (Pangaro 2021b). The challenge becomes recognizing the differences

between digital and analog, not to reject one for other but to characterize the differences and emphasize the attributes of each that we wish to conserve: for example, to embrace the analog for its biological resonances and the digital for its scale and efficiency.

Following this overview, each of the Studio co-leads presented “Counter-Examples and Analog Alternatives.” Paul Pangaro used Gordon Pask’s seminal 1968 work, *Colloquy of Mobiles*, as an example of digital agents that are nonetheless autonomous, that converse and cooperate, and manifest a “bilingual sensibility” of both analog and digital embodiment (Pask [1968] 1970; Pangaro and McLeish 2018; Rosen 2021). It is a demonstration of how intelligence resides in the interaction, not in stand-alone agents in the interaction, whether human or machine. Eryk Salvaggio explored questions of analog and digital methods of generativity for music production. Sharing experiments with purely digital AI-generative music systems, as well as analog experiments with voltage signals of mushrooms and analog synthesizers, reveals a layer of situational responsiveness and adaptation within fungi which, he argues, is missing even from today’s most advanced computational systems (Bockowski and Salvaggio 2022; Salvaggio et al. 2022).

Subsequent to these individual presentations, the participants entered a co-creation session used to explore the concepts, meanings, and possible directions of the Studio, planning for a future process to:

1. Identify classes of algorithms and contexts where AI is now influential
2. Engage in conversations for action across domains and communities
3. Establish a new paradigm of analog interactional systems in contrast to AI’s dominance
4. Collect existing systems and code new ones, across art and tech
5. Disseminate the insights and collection to designers, students, teachers, entrepreneurs.

Art as Steersmanship

Friday Oct 14, 9:00-10:30pm, *Virtual Studio*

Co-Leads: [Mark Sullivan](#), [Fred Steier](#)

We looked at Maxine Greene's idea of making and responding to art as the practice of democracy, and talked about the ideas related to ways art looks at openings to alternative realities, makes the petrified world speak, sing, and dance, and creates places for perceiving the unexplored, and thinking of things as if they could be otherwise (Greene 1995). One of our participants related this line of thought to some ideas and articulations from the work of Mary Catherine Bateson (M. C. Bateson 1994). We also talked about forms of participation, and ways to transcend existing constituencies, particularly across generations. Questions were raised, and we discussed whether cybernetics could find a way to avoid some of the pitfalls of exclusions and marginalizations found across other disciplines.

Building on Maxine Greene's invitation to all who embrace bringing the arts and imagination to learning to "look at things as if they could be otherwise" (Greene 1995, p. 19), our session brought forth ways of imagining design, both of process and content, in different contexts. Challenges and opportunities of designing with, compared to designing for, in cybernetic ways in settings ranging from science centers to communities for learning, that valued bringing multiple perspectives to the table, were discussed- including design aspects of our very session. Our discussion also spoke of the need for new metaphors at the heart of seeing things as they might be otherwise.

Panarchy as a Sensemaking Tool

Saturday Oct 15, 11:30am-1:00pm, *Hybrid Studio*

Lead: [Mikal Giancola](#)

With the added complexity of the results of the Anthropocene, models like the Adaptive Cycle can be used to orient discussion and action on the intersection of ecosystems and

social systems. The Studio will include the application of real-world scenarios. A special thanks to Pille Bunnell for coaching on how to frame and facilitate using the Adaptive Cycle (Bunnell 2017).

This studio was facilitated as a “workshop” within the RSD11 program. To frame the workshop, I provided a brief background on the Adaptive Cycle for those unfamiliar. Then I used the Adaptive Cycle to make sense of my own story as a New Orleanian during and after Major Hurricane Ida in August of 2021. The workshop was built out of Gunderson and Holling’s explanation that “[T]he goal [of the Adaptive Cycle] is to develop a framework for adaptive change that has generality. Such a framework is hardly a theory, therefore. Rather it is a metaphor to help interpret events and their gross causes” (Gunderson and Holling 2002, p. 33). Next, I provided a series of questions to help guide workshop participants through the cycle. The participants assembled in groups of 3-5 and selected one individual’s real-life scenario for sensemaking. Group members used the slides I prepared as guiding questions for each phase of the Adaptive Cycle and mapped their scenarios on large sheets of paper. Participants reported that working in a group was helpful because most had members who had never seen the Adaptive Cycle and members who had used it as a sensemaking tool- they could help each other. Most groups successfully used the tool to gain insights about their scenario. Common themes from the workshops included the following: COVID-19 was a common starting point for recognizing the transition between conservation and release; the release phase tends to happen relatively fast; it is important to recognize emergence (the unexpected) during the reorganization phase; the transition from the exploitation to the conservation phase appears to happen slowly; and workgroups began noticing that nested Adaptive Cycles were occurring within larger cycles. Finally, as part of #NewMacy, I hope that this use of the Adaptive Cycle helps provide a structure with questions that others can use to make sense of complexity. As such, each group was asked to develop and share takeaway questions after using the Adaptive Cycle.

The workshop slides [are available in PDF format](#).

Cultural Premises, Conscious Purposes, and Design: Conversing with the legacies of Gregory Bateson and Vern Carroll (Part II)

Saturday Oct 15, 2:00-3:30pm, *Hybrid Studio*

Co-Leads: [Tim Gasperak](#), [Michael Lieber](#), [Eve Pinsker](#), [Fred Steier](#), [Daniel Wolk](#)

Organizer/Contact: [Eve Pinsker](#)

Our discussion in this New Macy studio continued from discussion in an earlier session at the conference scheduled as part of the Bateson focus area. Analytically identifying "cultural premises" (which Carroll developed from Bateson's "epistemological premises") is a way of stating what goes without saying, the shared assumptions or ways of parsing the world and construing context that are socially learned, usually unconscious, embedded in stories as well as embodied in interaction, and shared in varying degrees in wider communities (G. Bateson [1972] 1987; Carroll 1977). In this studio discussion, we shared cases from the intersection of ethnography and design practice to discuss the relationship between identifying cultural premises and dialogic explorations of *sense-making* (Dervin 1998) and, furthermore, whether incorporating cultural analysis in innovation research methods can serve the larger purpose of designing beneficial social interventions, bearing in mind Bateson's warnings against narrow notions of conscious purpose (G. Bateson [1968] 1987; G. Bateson [1968] 1987; Guddemi 2021).

In recognizing the relationship between ethnography and design practice, we stressed the importance of good ethnographic observation in design practice, particularly the importance of designing with others in community settings. We also reflected on challenges from Bateson to the ways in which design is commonly understood, aligned with conscious purpose: design as intentionally "fixing" things. We converged on a more fluid, systemic approach to design: design as the emergent outcome of iterative interactions and reflections. We opened the question of whether making explicit unconscious premises or associations underlying interactions, whether between people or between people and their environment, can help to strengthen the effectiveness of designed interventions. We discussed clarifying the relationship between cultural

premises and epistemological premises and recognized a need to continue the conversation. Anyone interested in joining the conversation is welcome to contact us.

Prototyping Conversation

Saturday Oct 15, 4:00-5:30pm, *Hybrid Studio*

Co-Leads: Damian Chapman, Kate Doyle, TJ McLeish

This studio was a workshop during which participants explored new modes of constructing conversation. Our (adaptable) goal was to provide participants with vocabularies and processes of prototyping — experimenting, improvising, and playing with expressive forms as means of interaction, observation, and feedback. Participants journeyed toward a destination that was determined only by their continuous adaptation of traces marked in sound, gesture, and image. We proposed that, by prototyping new modes of conversation, participants would become aware of the *experience* of navigating “wicked challenges” (Rittel 1972; Sweeting 2018)—thus allowing a greater variety of identities and ideas to emerge.

The workshop was hybrid; participants divided into remote and in-person teams, with an interface (ideally) between them. The remote teams used the Mural application as a mechanism for their conversing, while the in-person teams used pencils and markers on paper. Different results emerged from teams; the in-person teams quickly expanded their approach to incorporate new domains of space (hanging fragments of drawings on windows and walls, etc.), while remote teams experienced some challenges with learning a new technology. These differences produced friction, both in a productive/generative and restrictive sense. Other challenges included co-leads’ documentation of images—intended to provide opportunities for participant feedback—within the time constraints of the workshop.

Continuously (rather than “ultimately”), any “failures” of the workshop were also its successes; the possibility of this contradiction is intended as the structure of the workshop, as means of enacting a cybernetic framework of acting-to-know (Foerster

[1973] 2003; Dubberly and Pangaro 2019). Ongoing iterations of this workshop build on the insights gained at RSD11 to suggest and test ways of prototyping conversation and documenting these attempts.

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