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**Relating Systems Thinking and Design
(RSD12) Symposium | October 6–20, 2023**

Counter-Mapping Systems: Gesturing towards decoloniality in systems mapping

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Map-making is a central practice within systemic design. Systemic design projects routinely involve creating visual depictions of systems that are used to make sense of a systemic challenge and guide interventions. Systems maps, like most mainstream approaches to cartography, hold inherent and often unquestioned power. They foreground some narratives while obscuring others, they shape our understanding of systems and frame courses of action.

In our presentation, we draw on discourses from critical cartography and decolonial theory to begin sketching the outlines of a systems mapping practice that grapples with the power relations in which maps are entangled. We advocate for a critical approach to systems mapping that would “gesture towards decoloniality” (Andreotti, 2021) while acknowledging that 1) maps construct knowledge; 2) maps privilege some narratives over others; and 3) maps open possibilities for alternative futures. We have already been exploring critical systems mapping practices in our work with a social finance program funded by the Government of Canada. Through these explorations, we have come to a few departure points from traditional systems mapping: explicit authorship and information sources; plural and participatory narratives; purpose and audience statements; making “ugly” maps; mapping “what ought to/could be”, and more. We will expand on these departure points and their link to critical cartography and decolonial frameworks in our presentation. We hope that these may serve as initial provocations for systemic designers to draw

inspiration from and critique as we, as a field, continue to develop decolonial approaches in order to further *critical systems mapping* practices and methods.

KEYWORDS: critical systems mapping, counter-mapping, critical cartography

RSD TOPIC(S): Mapping & Modelling, Methods & Methodology

Presentation summary

Systemic design has a rich and diverse tradition of map-making. From causal loop diagrams (Goodman, 1975) and rich pictures (Lewis, 1992) to more heterogeneous and expansive synthesis maps (Jones & Bowes, 2017) and gigamaps (Sevaldson, 2018), map-making is central to systemic design's practices of understanding systems and designing systems interventions. The maps that we produce often hold unquestioned power; they exert narratives of what a system is, what its boundaries are, how it works, and how it might change. At the same time, maps can also obscure certain narratives and perspectives (Kim, 2015). Our aim in this paper is to begin troubling this power by bringing discourses around decolonial theory, counter-mapping and critical cartography into conversation with systems mapping. We will provide an introduction to critical cartography and counter-mapping and where they stand in relation to decolonial approaches. We will then discuss the implications of this framing for systemic design and explore how we are experimenting with these perspectives in a systems mapping project of the social finance ecosystem in Canada. We hope to make the case for the importance of a decolonial approach to systems mapping, what we are calling *critical systems mapping*.

A critical systems mapping approach

Critical cartography, counter-mapping and the spectrum of modernity|coloniality

Critical cartography "situates maps within specific relations of power and not as neutral scientific documents" (Crampton & Krygier, 2018). *Counter-mapping* is a strain of critical cartography that sees maps not just as tools of domination but as tools of resistance. As Peluso (1995) explains, counter-maps can be used to "increase the power of people living in a mapped area to control representations of themselves", to contest boundary

constructions, and point to potential and existing strategies of resistance. For example, a map by Pearce (2017) contests the settler colonial depiction of the place known as Canada through the counter-representation of Indigenous place names (Figure 1).

Juxtaposing the key tenets of critical cartography and counter-mapping with decolonial theory makes for an interesting study. In this, Quijano's (2000) proposal for a "socialization of power" as opposed to a "state nationalization of production" is crucial for our motivation. Therefore, more specifically, as part of our sensemaking, we ask: how does the purpose of an ecosystem map shift in relation to its context? What parts of our colonial history are replicated in systems mapping in the case of the Canadian Social Finance ecosystem? To aid us in this process, we look to Stein et al. (2020) and Andreotti et al.'s (2021) social map (*ironic!*) of modernity | coloniality in relation to approaches to reform (Figure 2).

In line with Stein, Andreotti et al.'s (2020, 2021) framing, we locate mainstream approaches to systems mapping in the soft-reform space, where it is assumed that once problems are identified, they can be addressed through 'institutional change' and 'personal transformation'. We can also notice the alignment between existing trends in critical cartography and the radical reform space. Here, there is a clear identification of the epistemological hegemony of coloniality/modernity - and clear moves against it, as noted by Crampton and Krygier (2006) in explication of the history of critical cartography. Annette Kim's (2015) workaround "Critical Cartography 2.0" starts moving us in the direction of the "beyond reform" space and starts hacking away and trying to find alternatives.

In our own approach to mapping the Canadian SF ecosystem, we are attempting to integrate the claims of critical cartography and counter-mapping, a critical systems mapping approach that gestures towards decoloniality. This venturing acknowledges the following observations..

Maps construct knowledge

A critical approach to map-making questions how the information to create the map was obtained and synthesized and inquires into how those processes shape the map and its impacts.

Maps privilege some narratives over others

A critical approach asks whose perspective is on display and who stands to benefit from the chosen narrative. A critical map may “challenge our understanding of what is the status quo through re-presenting situations” (Kim, 2015).

Maps open possibilities for alternative futures

As Kim (2015) explains: “visionary maps present alternatives of what could be instead of what current institutions presently support.” In systemic design, we create maps that point to desired futures as well as key leverage points and transition pathways. A critical approach to visionary systems maps asks what kind of future the map is in service of and who that future benefits and disadvantages.

Exploring critical systems mapping in practice

We are currently conducting a systems mapping project as part of the Investment Readiness Program (IRP), a program funded by the Government of Canada. The IRP aims to support social purpose organizations to develop and prepare to take on social finance investments. As a research team, we have been tasked with mapping the IRP and broader Canadian social finance ecosystem to better understand the program and identify how it might be improved. We took this as an opportunity to bring decolonial and critical lenses to our mapping methodology and experiment with what critical systems mapping could look like. Our explorations indicate some departure points from traditional systems mapping methods. Acknowledging that this is just a starting point, we hope that these may serve as initial provocations for systemic designers to draw inspiration from and critique as we, as a field, continue to develop critical systems mapping practices and methods.

Starting with humility: explicit authorship and context

When we share our systems maps more publicly, we intend to include authorship information (including our positionality) and context as to where we have sourced our information. As Kim (2015) stresses: “criticality by definition requires a greater reflexivity on the part of new cartographers or orchestrators of cartography projects about their own power positions in society and therefore how they influence the critical map

project.” This is part of a general approach grounded in humbleness that we bring to this project.

Producing plural & participatory narratives: Dozens of mini-maps

Instead of trying to create a singular map of the Canadian social finance ecosystem, we have chosen to create many “mini-maps” - smaller maps that try to illustrate some aspect of a system. We have done this as a small mapping team and with contributions from ecosystem stakeholders. Some maps represent hybrid perspectives, others might come from someone’s specific perspective.

Acknowledging choices: Purpose & audience statements

We are including purpose statements for each of our mini-maps that speak to our choices around why we put it together and what we hope to accomplish with it. We hope that this will allow audiences to understand the maps’ inherent intentionality and view them with a critical eye.

Always-in-process: Making “ugly” maps

To communicate to our audience that our maps represent imperfect narratives, we are intentionally leaving our maps looking somewhat imperfect; they are open to ongoing change and development.

Exploring desires for other worlds: Mapping “what ought to be”

Systems maps often point to system futures. This might be done from a seemingly neutral scan of trends and systems dynamics or, more explicitly, from its author’s desire to present an alternative. In our mapping, we will be intentionally mapping our own desires for different systems, at the same time recognizing the kinds of futures that are opened up and closed through that transition.

Further research

We plan to expand on these departure points with pictures and examples while also clearly linking them to a critical systems mapping practice. We intend to further ground these initial provocations within current systemic design theory and practice and the larger decolonial turn in design (e.g., Schultz et al., 2018; Tlostanova, 2017).

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Appendix: Figures 1–3

Following pages.



Figure 1: “Coming Home to Indigenous Place Names in Canada” (Pearce, 2017)—[full version](#).

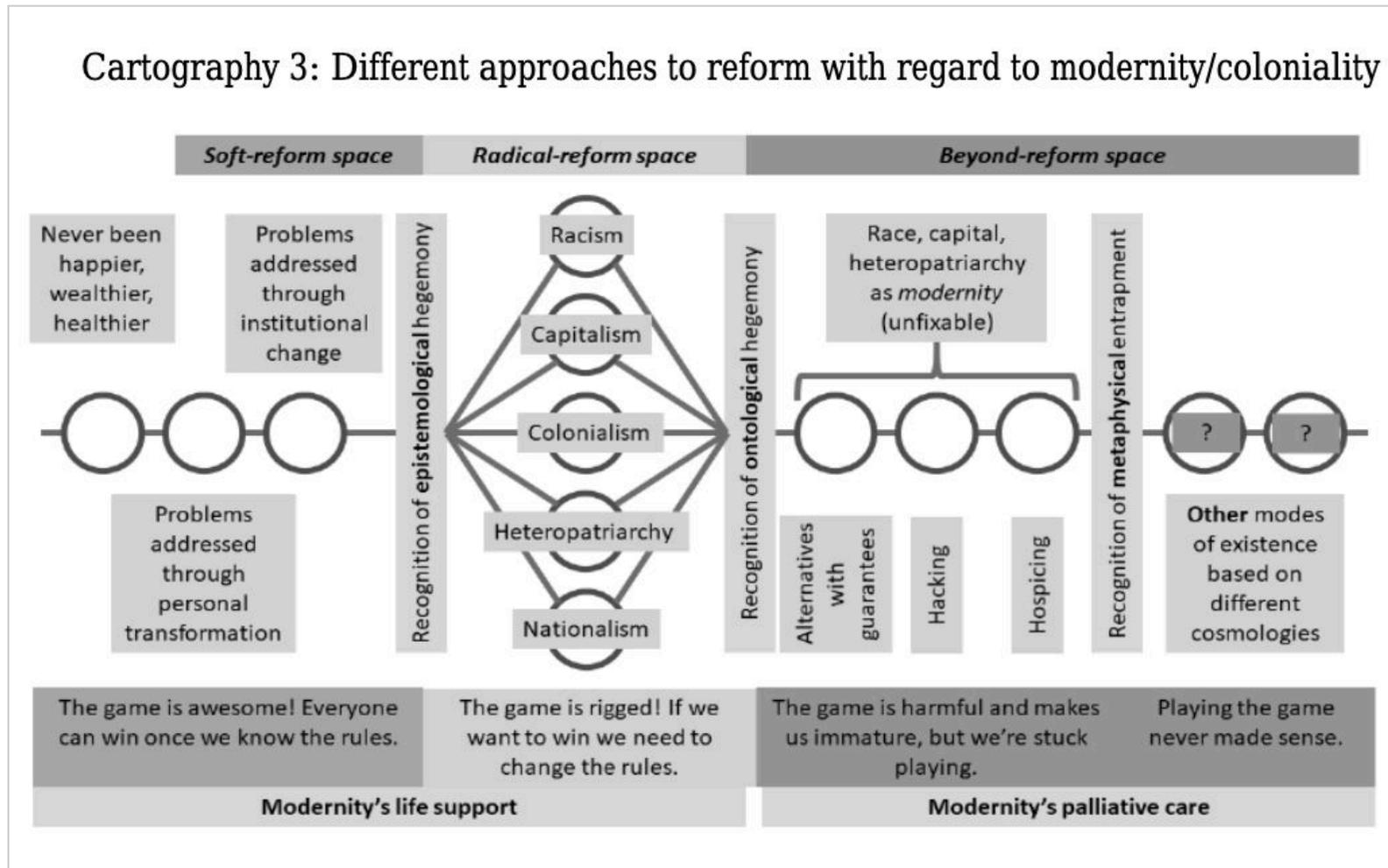


Figure 2: Stein et al. (2020) and Andreotti et al.'s (2021) social map (ironic!) of modernity|coloniality in relation to approaches to reform.

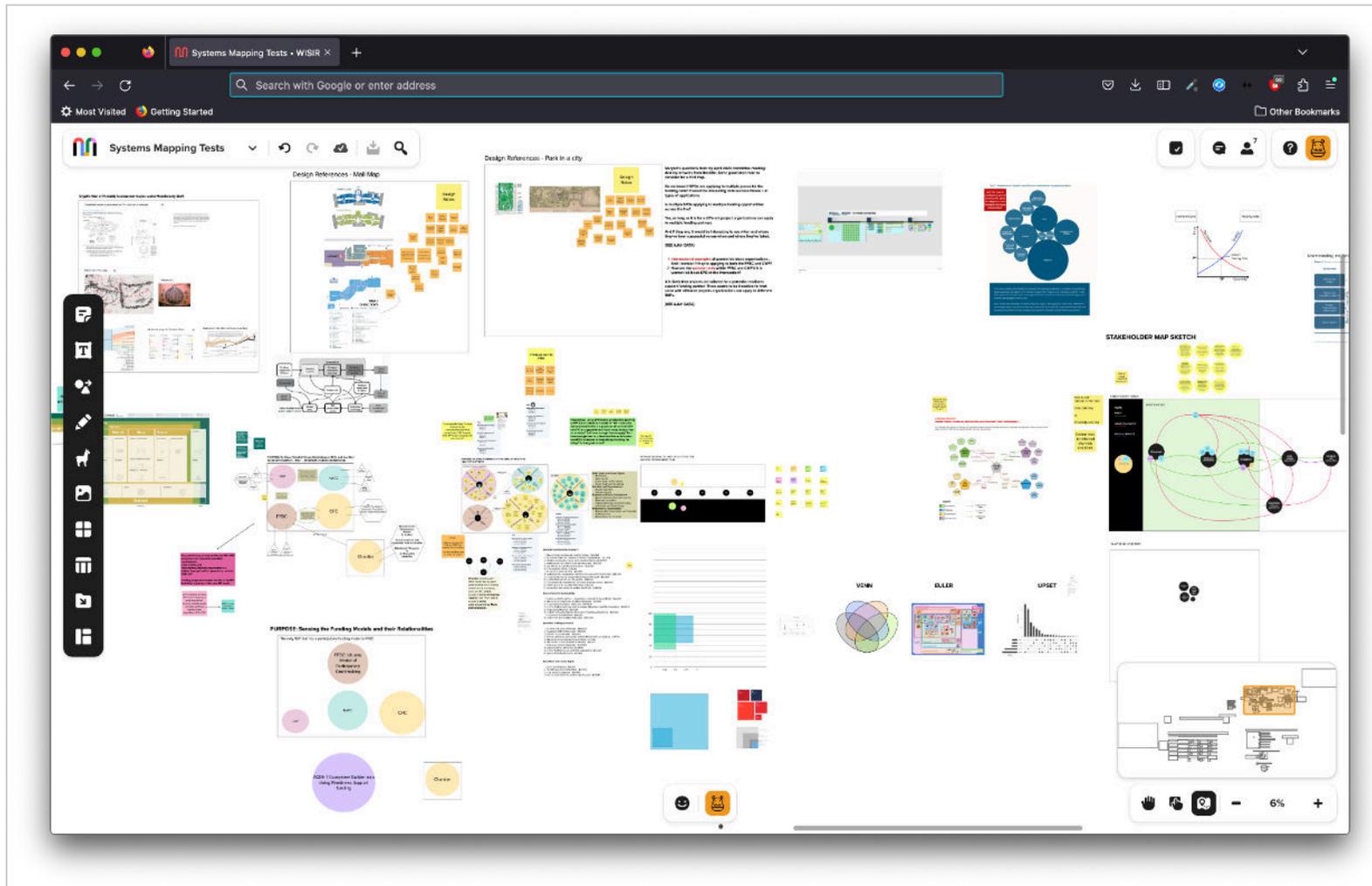


Figure 3: Mini maps under construction in an online whiteboard platform.

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