



Terra nullius - moving from mapping to modelling

Concluding thoughts

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It is only fair that we conduct our own reflexivity in presenting these tools, analysis, and insights. In the same way that McLuhan suggested that “the medium is the message”, maps as a technology shape meaning (1964). They describe the way the world is structured and convey a particular perspective of the world as true and correct. As we map, we build and shape the world. This is true of roads, Graphical User Interfaces, and decentralised technologies. The subjective goals that we set and how we translate our view of the world into models requires explicit attention and constant revisiting.

Here, we have employed a socio-technical constructivist approach to information infrastructure. This approach views social and technical elements of infrastructure as relational and co-constructive of one-another (Bijker & Pinch, 1984). By describing various stakeholders, projects, and layers of different systems, we have begun to map the actors and networks in information infrastructure ecologies as they are emerging.

As in the analogy of the Ship of Theseus, we are rebuilding the ship as it sails. The iterative human-machine process of designing, implementing, and integrating in decentralised systems is multistakeholder. In many ways, participating in decentralised technologies is a ‘Simultaneous Mapping and Path Planning’ exercise’ (Durrant-Whyte & Bailey, 2006). This means discovering where we are, defining where we want to go, and mapping a path to get there while creating the map itself.

We have argued that decentralised technologies are socio-technical infrastructures, inseparable from the subjective social, political, and cultural contexts in which they are created and maintained. By highlighting the social processes and governance requirements encoded into infrastructures, we have responded to the questions of how we can engage more deeply with the social and technical aspects of decentralised technologies, as well as with our own goals in building them. We have highlighted some of key characteristics and attributes of these systems, as well as the underlying functional dynamics. In exploring the various layers of these complex, multi-scale systems we have constantly related the technical, such as algorithms, to the human, such as policies. Furthermore, we have demonstrated the role of people in the processes that govern these systems and offered examples of community-based system governance in action.

Our goal in this work has been engineering safer systems (Leveson, 2012). The engineering ethic of this goal is that decentralised technologies are cyber-physical people systems. The articles shared in this collection convey an emphasis on the importance of people as the referent object and goal of systems.

These models are for the practices of both designing, observing , and maintaining information infrastructure. These actions are algorithmic and human. They are inseparable and essential to engineering feedback loops into a system. This work offers contributions to a map for others seeking to navigate this space; a tool to help you navigate complex cyberspacial territories to build safer institutional infrastructure in cyber and physical space.

End.

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