

Practical cartographies in material-semiotic assemblages

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Abstract

In the 11th episode of the second season of the television series *Whale Wars*, the MV *Steve Irwin*, captained by founder Paul Watson of the American/Australian nonprofit Sea Shepherd Conservation Society, is shown colliding with the Japanese harpoon ship *Yushin Maru No. 2* as the crew of the *Yushin* attempts to transfer the corpse of a harpooned whale to the factory ship *Nisshin Maru*. In the action, Watson attempts to use the hull of the *Steve Irwin* to cut the ‘transfer line’—the rope hauling the corpse—as it is passed from the harpoon ship to the factory ship. Had he been successful, the corpse—and the hundreds of thousands of dollars in revenue obtained through the sale of the processed meat—would have been lost, lowering nontrivially the whaling fleet’s net operating revenues [16].

The Sea Shepherd conservationists’ stated goal is to end whaling in the Southern Ocean. In this paper we do not weigh the merits of this goal; rather, we take it as given in order to articulate the ‘design problem’—that is, the set of constraints, objectives, and opportunities for situated intervention—and explore the position that in the “space of flows” (e.g., [7])—one ‘designerly’ model for apprehending the increasingly ‘complex’ and “full world” [5]—the boundary between design and activism appears increasingly blurred. This claim will come as no surprise to observers who have noted the proliferation of the terms ‘action’ and ‘intervention’ (and, perhaps to a lesser extent, ‘practice’) in design and activist discourses over the last decade or so, and the simultaneous uptake of ‘context’ and ‘situation’ as analytical objects of central concern in design. Our intention here is not to construct a taxonomy with which to re-establish a distinction between design and activism but rather to deploy a hybrid taxonomy drawing from systems theory and science and technology studies which facilitates strategic analysis for designers, activists, and socially and/or politically ‘engaged’ artists. We take the primary objective of design and activist practice to be the situated *reconfiguration* of relations and flows in complex networks. From this reading we begin to develop a taxonomy and cartography of complex networks to aid in purposive ‘reconfiguring’ action, based on three case studies. Two of these revolve around what might be termed the ‘cetacean slaughter problem’: the Sea Shepherds’ attempts to end whaling

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in the Southern Ocean, as documented in *Whale Wars*; and the efforts by the Oceanic Preservation Society to end dolphin capture and slaughter in Taiji, Japan, as documented in the film *The Cove*. The third examines the representation of what has been termed the ‘industrial food system’ in the United States in the documentary/activist film *Food, Inc.*, directed by Robert Kenner in collaboration with Eric Schlosser and Michael Pollan.

We begin each case with a ‘reading’ of the documentary in question, highlighting in particular the ways in which the representations of complex systems perform (or fail to perform) the design tactics diSalvo refers to as “projection” and “tracing” [15] and examining the ways in which the films themselves act as discursive artifacts, circulating through and constituting anew in their circulation discursive “publics”. (diSalvo examines this term through Dewey [1], and we highlight briefly what we perceive to be important differences between diSalvo’s reading of Dewey’s “public” and Warner’s also-widely-popular notion of “publics” [8].) In particular, we ask: does the film identify an “issue” (Dewey’s term, which diSalvo takes up), ‘objective’ (a term from systems and complexity theory, and economic analysis) or articulate a ‘problem’ (a term from engineering-inflected strains of design) or ‘problematic’ (a term from humanities scholarship; see e.g., [11])? If so, does it articulate a coherent ‘strategy’ or set of ‘tactics’¹ that offers a plausible way to understand the issue, realize the objective, solve the problem, or [begin to] apprehend the problematic? If so, to what extent is agency presumed to inhere in the films’ subjects or ‘protagonists’, and to what extent in the intended audience? To what extent are the strategies and/or tactics offered *credible*? What alternative approaches are ignored, and why? (What makes an approach unpalatable, unacceptable, or even ‘unthinkable’?)

Next, following systems dynamics practitioner and environmental activist Donella Meadows’ famous articulation of “leverage points” as “places to intervene in a system” [6] we develop a taxonomy and ‘cartography’ of the complex material-semiotic assemblages relevant to each film, and discuss ontological, epistemological, and ‘topological’ considerations relevant to this ‘mapping’ practice. In particular, following analyses in science and technology studies, we submit that ‘agents’ or ‘subjects’ cannot be taken as given entities with inherent capabilities; on the contrary, as Barad [10] (p. 818) tells us (and Suchman [12] reminds us), “agency is not an attribute but the ongoing reconfigurings of the world.” (For ‘network’ theorists, this implies—among other things—that we might think twice before taking ‘nodes’ as given and the proliferation and disappearance of ‘edges’ as the fundamental characteristic of a network’s ‘evolution’ over time; in this framing, edges and nodes co-constitute one another.) Similarly, our position as researchers constrains our ability to understand completely the constraints and possibilities afforded by configurations ‘on the ground’, and thus limits the utility of our analyses and of disembodied, abstract, static representations of particular, concrete, dynamic situations generally. Following work in feminist epistemology (perhaps most famously, Haraway’s work on “situated knowledges” [4]) and important subsequent

¹The distinction between ‘strategies’ and ‘tactics’ was famously articulated by de Certeau in *The Practice of Everyday Life* [3], and diSalvo draws on this distinction in his discussion of the role of design in the construction of publics [15]. We develop a brief reexamination of this distinction in light of what military analyst John Robb calls the “superempowerment” of individuals and small groups (e.g., [13]).

work in feminist geographic information systems (e.g., [9]), we do not view this as a weakness; rather, we read the panoptic urge as generally undesirable and, building on the approach referred to by cultural theorists Kavita Philip and Ackbar Abbas as “poor theory” [14], we refer to our cartographic approach as “poor systems theory.” It is, as Philip and Abbas write, “less a theory than a way of proceeding...through appropriations and improvisations” in a complex and dynamic context where the origins of issues and implications of action (including analytic, discursive, and representative action) exceed the vision of mortals and even of their cybernetic apparatus of seeing. It is a way of coping with what systems analyst and operations researcher Russell Ackoff referred to as “messes” (e.g., [2]). Such an approach is by necessity “not a lever, a toolbox or a key” but rather “an open set of engagements” [14].

References

- [1] Dewey, J., 1927: *The Public and Its Problems*. Swallow Press Books.
- [2] Ackoff, R. L., 1981: The art and science of mess management. *Interfaces* **11**, 1: 20-26.
- [3] De Certeau, M., 1984: *The Practice of Everyday Life*. University
- [4] Haraway, D., 1988: Situated knowledges: the science question in feminism and the privilege of partial perspective. *Feminist Studies* **14**, 3: 575-599.
- [5] Costanza, R., J. Cumberland, H. Daly, R. Goodland, and R. Norgaard, 1997: *An Introduction to Ecological Economics*. St. Lucie Press.
- [6] Meadows, D. H., 1999: Leverage points: places to intervene in a system.
- [7] Thackara, J.: Welcome to the space of flows. Keynote address to *Doors of Perception 7*, Amsterdam, 14-16 November 2002.
- [8] Warner, M., 2002: Publics and counterpublics. *Public Culture* **14**, 1: 49-90.
- [9] Kwan, M.-P., 2002: Feminist visualization: re-envisioning GIS as a method in feminist geographic research. *Annals of the Association of American Geographers* **92**, 645-661.
- [10] Barad, K., 2003: Posthumanist performativity: toward an understanding of how matter comes to matter. *Signs: Journal of Women in Culture and Society* **28**: 801-831.
- [11] Galloway, A. R., 2003: Protocol. *Theory, Culture, & Society* **23**: 317-320.
- [12] Suchman, L. A., 2006: *Human-Machine Reconfigurations: Plans and Situated Actions, 2nd. Edition*. Cambridge University Press.
- [13] Robb, J., 2007: *Brave New War*. John Wiley & Sons.

- [14] Philip, K. and A. Abbas, 2008: Poor theory: notes toward a manifesto.
[www.humanities.uci.edu/critical/html/Projects%20+%20Events/
Poor%20Theory/poortheorymanifesto.html](http://www.humanities.uci.edu/critical/html/Projects%20+%20Events/Poor%20Theory/poortheorymanifesto.html). Accessed 12 July 2009.
- [15] diSalvo, C., 2009: Design and the construction of publics. *Design Issues* **25**, 1: 48-63.
- [16] “Overlooking a forlorn shore.” *Whale Wars* **2**, 11. Animal Planet. Aired 21 August 2009.