

When Maps Become the World

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A street map guides you in your wanderings, but it also raises a series of questions. Who designed, produced, and paid for it? According to which techniques, conventions, and assumptions? In my forthcoming book, *When Maps Become the World*, I explore the map analogy: *scientific theory is a map of the world*. This pervasive analogy turns our attention to similarities between maps and scientific theories: both guide intelligent action and belief; both emerge out of representational practices involving abstraction and partitioning; and neither can fully capture the world it simultaneously mirrors and constructs. Imagining scientific theory as mapping permits us to develop tools such as “assumption archaeology” and “integration platforms” that help us overcome entrenched dichotomies: subjectivity vs. objectivity, technology vs. science, constructivism vs. realism, culture vs. nature, synthetic vs. analytic, and art vs. science. These tools also allow us to eschew the “pernicious reification” of single, unjustifiably powerful cartographic (e.g., Mercator’s projection) or scientific (e.g., Selfish Gene Theory) abstractions that are universalized (such that all phenomena are encompassed), narrowed (such that internal theoretical heterogeneity is diminished), and ontologized (such that abstraction and world are conflated). More mundanely, literal maps of the very small and the very large, via the middle scale, are ubiquitous across the sciences, from genetics to astrophysics, from psychology to economics. By turning to maps and to the cartography of science in a sustained manner, our image of science can be redrawn as a human practice that is humble, always situated, and ever-growing.