Chapter 22

Philosophical cartography

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Introduction

In *When Maps Become the World* (Winther 2020a) I showed how: (i) mapping is a strategy—ubiquitous across the sciences—for representing, imagining, and controlling space; (ii) mapping and the map analogy ("a scientific theory is a map of the world") deserve—and have received—sustained philosophical attention; and (iii) the cartographic impulse to map and interact with our worlds spatially lies deep in human cognition, and in our history, across all cultures.

In this contribution, I focus especially on (ii) and (iii), among the various aims I had in my 2020 book. Different philosophical cultures have drawn on the map analogy: analytic philosophy, continental European philosophy, and pragmatic philosophy. In order to further the charge of this edited volume, and highlight some of my other work, I also discuss case studies of the cartographic impulse across the globe.

Analytic philosophy

Analytic philosophers emphasize clarity and identify conceptual assumptions in everyday language. In this methodological practice, they tend to analogize any propositional attitude (i.e., beliefs, desires, and intentions) to a map. For instance, the philosopher Frank P. Ramsey (1990, 146) defined "belief" as a "map of neighbouring space by which we steer," The philosopher Gilbert Ryle moved beyond mental content as analogical referent, instead generalizing in a different way: he sees the philosopher's practices and goals as analogous to the cartographer's (Ryle 1949, 7). In one essay, he analogizes the relationship between a philosopher and a competent speaker of a language to that between a mapmaker and a village inhabitant (Ryle 1971, 440–445): the second of each pair engages in concrete pursuits, while the former studies the activity abstractly. For Ryle, the philosopher is a mapper of language. Other analytic philosophers also employ map analogies, for varied purposes (Armstrong 1968; Godfrey-Smith 1996; Ismael 1999, 2007; Millikan 1984; Sellars 1981; Stich 1990).

While challenging to categorize, Ludwig Wittgenstein's philosophy has influenced analytic philosophy. Wittgenstein's preface to *Philosophical Investigations* describes philosophical reflection as incomplete mapping:

> The best that I could write would never be more than philosophical remarks; my thoughts soon grew feeble if I tried to force them along a single track against their natural inclination.—And this was, of course, connected with the very nature of the investigation. For it compels us to travel criss-cross in every direction over a wide field of thought.—The philosophical remarks in this book are, as it were, a number of sketches of landscapes which were made in the course of these long and meandering journeys.[1]

His *Yellow Book* begins with the assertion that in philosophy "we lack a synoptic view," the same challenge that travelers face in exploring "the geography of a country for which we [have] no map, or else a map of isolated bits" (Wittgenstein 2001, 43).

Continental European philosophy

Continental European philosophy analogizes language, knowledge, and social practices to maps, investigating the misleading and seductive nature of representation. As in René Magritte's *The Treachery of Images* (*La trahison des images*, 1929), showing a pipe with the words "Ceci n'est pas une pipe" ("this is not a pipe") under it, critical continental philosophers play with paradoxes equating maps (or theories or stories or social practices) with the world. How are the drawings and thoughts of anthropological reflections on courtship practices in a given culture like the world they represent, and how are they *not* like that very territory they aim to represent? Should we worry about all the ways a representation *fails* to (fully?) capture the objects, processes, and features it promises to depict and explain?

For Alfred Korzybski (and, later, Gregory Bateson[2]), we must not confuse abstract and concrete, theory and world, or map and territory. For Jean Baudrillard (1994, 1) there is no exit out of this conflation. For him, the entire social thought system is an immense and variegated map that becomes—or *is*—the world. His *Simulacra and Simulation* opens with a basic lesson, motivated by a brief cartographic reflection by Argentinian writer Jorge Luis Borges: "Today abstraction is no longer that of the map, the double, the mirror, or the concept. Simulation is no longer that of a territory, a referential being, or a substance. It is the generation by models of a real without origin or reality: a hyperreal." Contemporary mass-market globalized society constructs reality, as we increasingly witness with social media and "fake news"—where online avatars and media-spun biased stories take on a reality that not even reality can compete against.

Pragmatic philosophy

American pragmatists Charles Sanders Peirce, William James, and John Dewey deployed the map analogy—and what I call *map thinking*[3]—to explore the power and limitations of conceptual thinking, and the importance of experiencing.

In a fictional dialogue, Peirce (1992, 62) has a land surveyor berated for not creating "a true representation of the land." The surveyor responds: "It cannot ... represent every blade of grass; but it does not represent that there is not a blade of grass where there is. To abstract from a circumstance is not to deny it." As with maps and mapmaking, so with syllogisms and the identification of premises, conclusions, and logical relations. Syllogisms can be critiqued as "a purely mechanical process." But they are "not intended to represent the mind, as to its life or deadness, but only as to the relation of its different judgments concerning the same thing." Differently put, like a map, syllogisms represent some aspects of "mental action," but clearly not all (Peirce 1869/1992, 62–63).

William James takes a more skeptical approach. Admittedly, he argues that concepts are abstractions or representations that "steer us practically every day, and provide an immense map of relations among the elements of things."[4] But he also believes that single concepts may be seductive and misleading, when and where the entire "map remains superficial through the abstractness, and false through the discreteness of its elements." According to James—and in contrast to his close associate Peirce—abstraction *does* suggest the negation of what is left out: "conceptual knowledge is forever inadequate to the ful[l]ness of the reality to be known" (McDermott 1977, 245).

Dewey highlights the complementary relationship between map and explorer: "The map is not a substitute for a personal experience. The map does not take the place of an actual journey ... But the map, a summary, an arranged and orderly view of previous experiences, serves as a guide to future experience; it gives direction; it facilitates control; it economizes effort, preventing useless wandering, and pointing out the paths which lead most quickly and most certainly to a desired result" (Dewey 1976, 284). The map guides; the explorer experiences.

Cartography

Interestingly, the influential cartographers Arthur Robinson and Barbara Petchenik recognize the depth and omnipresence of the map analogy in philosophy: "Most cartographers are probably not aware of the basic role that students in other fields ascribe to maps as a kind of a priori analogy for a variety of basic concepts." A map "represents some other space," and "the spatial aspects of all existence are fundamental" (Robinson and Petchenik 1976, 13–14). "Students" here include philosophers such as Alfred Korzybski,

Michael Polanyi, Ernst Cassirer, Thomas Kuhn, and Stephen Toulmin. Robinson and Petchenik investigate each in turn. Sadly, I share these cartographers' concern that often the philosophical literature fails to reflect on what a map actually *is* or *is good for*. This is one reason why I wrote *When Maps Become the World*. For now, I turn to two brief case studies of the mapping impulse across the globe: ancient China and the Marshall Islands, and draw some philosophical lessons from these cases.

Ancient China

Map thinking helps us understand power and ethics. In Winther (2014b, 2020a, and 2020b), I developed the idea of a *world navel*: "Empires measure and understand the entire world with respect to themselves. Space and time emanate from the empire's centre or *world navel*. Power and meaning radiate from these cartographic centres" (Winther 2020b, 148). As one example, consider Figure 22.1, the Ming dynasty map *Da Ming Hun Yi Tu* (Amalgamated map of the Great Ming empire).

This map places China in its center. China has been world naveled. The map spatially distorts—by current Western cartographic norms—other regions such as the Arabian Peninsula, Africa, and Japan. Scholars believe this map originates in the late 14th century CE, during the reign of the Hongwu emperor, who founded the Ming dynasty. As also described in *When Maps Become the World*, a world navel map such as *Da Ming Hun Yi Tu* ontologizes, universalizes, and narrows a single, power-laden vision and paradigm of China (see also Winther 2014b, 2020b). Hongwu's son, his successor as emperor, commanded and instructed the construction of the Forbidden City. Embedded in Beijing, the Forbidden City was understood to be the literal center of the universe, capital of Middle Kingdom (Yu 1984; Ebrey 2010).

Marshall Islands

The Armij Aelon Kein piloted their way around their islands in the Pacific by feeling the multi-directional swells and currents on which their canoes danced. Expert navigators had learned their craft from their fathers, leading caravans of canoes throughout the 30 or so atolls of Aelon̄ Kein Ad. These navigators memorized *stick chart* maps (see Figure 22.2) that represented swell and wave fronts with wooden sticks or the midribs of coconut fronds, and islands with shells (Finney 1998).

The Jolet Jen Anij ("gifts from God"), or the Marshall Islands, are a collection of atolls arranged in an irregular grid of roughly two rows of 30 or so coral isles running in a southeasterly direction.[5] Especially from July to October, when the islanders preferred to sail to avoid the strong northeastern trade winds, the gentle winds are southerly and variable. Whenever surface swells hit a small isle and its underwater slope, some of the wave energy

Figure 22.1 "Surrounding landmasses are distorted to fit around China in *Da Ming Hun Yi Tu* (Amalgamated map of the Great Ming empire). China is here a world navel."
Source: Winther (2020a, 93).

reflects back in a counterswell. When two isles are close together, the swells *refract* around both of them, thereby interfering with one another, synthesizing them into new, complex patterns.

It is this pattern of waves that Marshallese mariners sensed and interpreted. In 1962, Raymond de Brum, a trading boat captain who had learned classic Marshallese way-finding techniques from his father, explained to a reporter: "We older Marshallese people navigate our boats both by feel and by sight, but I think it is knowing the feel of the vessel that is the most important. The skipper who understands the motion or feel of the boat can sail in the dark as well as in the daytime" (Finney 1998, 479). After World War II interisland canoe travel basically disappeared, and navigators were rarely trained. Older Armij Aelon Kein ("people of these islands") mastered a way-finding skill that is mostly lost today, though there are efforts to resuscitate this skill.

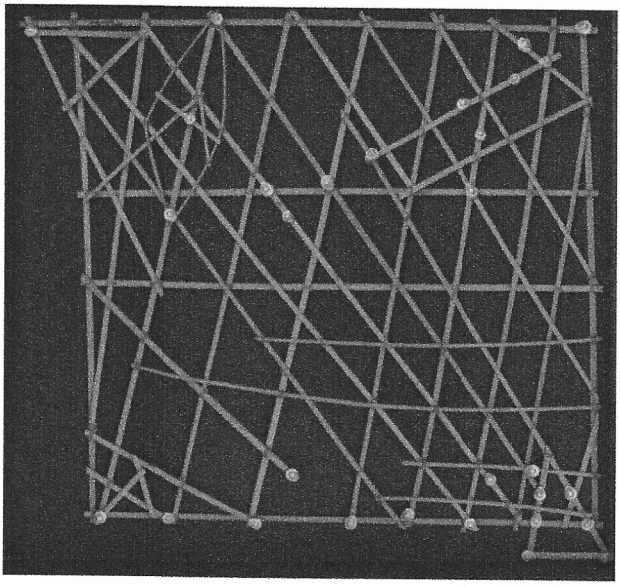

Figure 22.2 "Square rebbelib used by the Marshallese to navigate the Pacific Ocean by canoe off the coast of the Marshall Islands. Indicates sailing directions for atolls and islands in both the Ratak (eastern) and Ralik (western) chains of the Marshall Islands. Seashells depict the atoll and island locations. Atoll and island names are typed on strips of paper which are glued onto the wooden sticks. Each straight stick represents regular currents or waves around the low-lying atolls while the curved sticks depict ocean swells."

Source: Reprinted with permission from Library of Congress, Geography and Map Division. *Marshall Islands stick chart, Rebbelib type*. [Majuro, Marshall Islands: s.n., 192–?] [Map] Retrieved from the Library of Congress, https://www.loc.gov/resource/g9461p.ct003132/.

Other peoples such as the Vikings could also map and find their way at sea by reading the water (Gooley 2016). Across cultures, way-finders and explorers developed techniques in which they could *sense* the waters; deploy representational maps from memory; and get small fleets from point A to point B. (Yes, the Vikings did make it to the today-named Americas.)

In understanding and narrating such maritime stories, we see how representations and knowledge of the oceans are both empirically objective and culturally constructed. Together with seafaring practices and local technologies, very different maps than the ones we are accustomed to successfully lead Armij Aelon Kein (Marshallese) mariners to their destinations, over beautiful yet sometimes treacherous South Pacific seas. Thus we see another lesson from map thinking: in the tireless philosophy of science debates among empiricists, constructivists, and realists, *all* identify some part of the truth. None is utterly correct; each is partially right.[6]

Conclusion

Map thinking massages the imagination. It permits us to see similarities regarding representation, abstraction practices, and ethics and power from philosophy to the sciences (further details can be found in *When Maps Become the World)*.

In this brief chapter, we have explored how analogizing beliefs, concepts, knowledge, and social practices to maps and the cartographic impulse is prevalent and powerful across three fields of philosophy: analytic philosophy, European philosophy, and pragmatic philosophy. By exploring an Ancient Chinese map and the mapmaking practices of the Armij Aelon Kein, I have merely hinted at the ubiquity of mapping as knowledge-making across cultures. But interesting and important conceptual and philosophical lessons follow from continuing to map-think the cartographies of global epistemologies.

Notes

1 Wittgenstein's *Tractatus Logico-Philosophicus,* 3rd ed. The preface is from 1945. For fuller discussion of Wittgenstein and maps, see Wagner (2011).
2 Bateson explicitly builds on what he takes to be Korzybski's "original statement": "the map is not the territory," from the 1970 Korzybski Memorial Lecture, which appears as "Form, Substance, and Difference" in Bateson (1972, 454–471). Korzybski (1933, 750): "A map is *not* the territory."
3 "*Map thinking* refers to philosophical reflection concerning what standard geographic maps are and how they are made and used" (Winther 2020a, 4).
4 James (1977), quoted in McDermott (1977, 243). For further analysis of concepts such as "an immense map of relations," see Winther (2014a).
5 See www.pacificrisa.org/places/republic-of-the-marshall-islands/, which also provides a brief yet clear introduction to the Marshall Islands.
6 See chapter 9 "Map Thinking Science and Philosophy" of Winther 2020a.

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