Cartographic Perspectives

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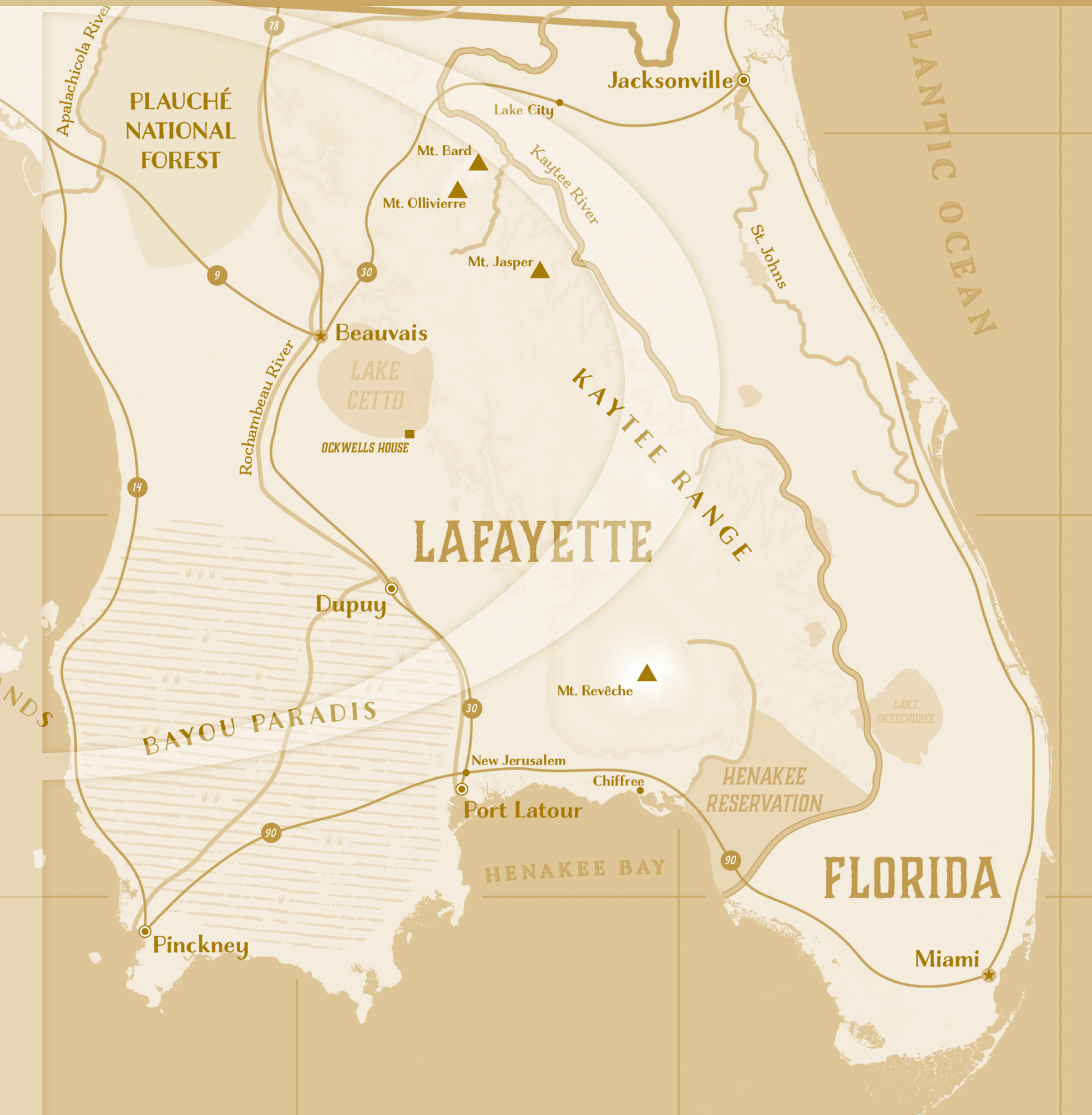

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IN THIS ISSUE

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ABOUT THE COVER: Detail from *Lafayette*, by Vicky Johnson-Dahl. The map shows an alternate geologic history of the US Gulf Coast, designed for a tabletop role playing game. You can find more of Vicky's work at vickyjohnsondahl.com.

All material published in the journal is independently reviewed and/or edited. Submissions are accepted from members of the journal staff and editorial board, but the authors play no role in the assessment or editing of their contribution.

LETTER FROM THE EDITOR

I hope that you will find this long-delayed issue of *CP* to have been worth the wait.

Mapmakers of all stripes, academic or practical, have probably at some point had to try to explain what cartography is to a non-map person in their lives. However, while this task has become considerably easier now that most people carry a map in their pocket, not all maps look like the ubiquitous navigation map. What "counts" as a map varies when you look across time, place, and context. Accordingly, those who study maps have sought to define and describe what a map *is*, and to understand the practices involved in the construction of maps. Philosophical inquiries into the nature of maps have, over time, been shaped by different epistemologies and led to different theories of what maps are (or what they are not). This journal has previously published articles (**Wood 2003**; **Wood 2006**; **Denil 2006**; **Wood 2007**) that have contributed to this conversation about the nature of maps, and in this issue, we present another installment.

In *CP* 98, you will find three PEER-REVIEWED ARTICLES. In the first, Mark Denil advocates that conceptual art can be used as model for developing a conceptual theory of cartography. He suggests that such a theory can be used to identify the fundamental characteristics that make maps "maps" and not "not maps." In the second, Matthew Edney rejects Denil's argument, suggesting that while his aim (to make what is implicit explicit) may have utility, his approach to achieving this aim is flawed. In developing his critique, Edney makes explicit some arguments that were perhaps only implicit in his recent monograph (2019; also reviewed in this issue), which devotes significant attention to the concept of cartography. I invite you to read both contributions and consider which argument you find more persuasive. The third article, by Giovanni Spissu, presents a mapping approach inspired by the narrative tactics used by the author W. G. Sebald. Reading it may challenge your own notions of "map" versus "not map."

In VISUAL FIELDS, Heather Gabriel Smith explores her practice of making maps by hand, through the media of pencil, embroidery, woodblock print, and pen and ink. She discusses the affordances of mapping by hand and the deliberation that accompanies each graphical mark.

CP 98 includes four REVIEWS. In the first, Jack Swab provides an overview of the main ideas presented in Matthew Edney's *Cartography: The Ideal and its History*. His review identifies some additional aspects of Edney's argument that might be made more explicit. The other

three reviews discuss volumes that explore North American maps and geographies from different time periods. Jörn Seeman reviews *Mapping an Atlantic World, Circa 1500*, a history of mapping during the Renaissance, and how it helped to produce particular Eurocentric worldviews that were projected onto the Atlantic Ocean. Daniel Cole reviews Candace Fujikame's *Mapping Abundance for a Planetary Future: Kanaka Maoli and Critical Settler Cartographies in Hawai'i*. This monograph provides some examples of how indigenous groups are deploying their own mapping practices to challenge colonial, Eurocentric worldviews. Finally, John Hudson reviews a recent textbook on the regional geography of North America, *Across this Land: A Regional Geography of the United States and Canada, Second Edition.* In it, he notes the author's ability to capture the sense of place in different North American regions.

Amy Griffin (she/her)
Editor, Cartographic Perspectives

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PEER-REVIEWED ARTICLE

Making Explicit What has Been Implicit: A Call for a Conceptual Theory of Cartography

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How is a map different from things that are not maps? What is a map? How do you know it's a map? *Such questions appear quite simple—the answers would seem to be things everyone knows almost without thinking—yet comprehensive answers have proved elusive. Hitherto, such existential questions have almost inevitably been either conflated with practical ones or deliberately ignored.*

Map artifacts are, by themselves, mere things. Like any text, the map artifact can be read, and, through the action of being read, the artifact comes to bear meaning. *Maps, however, go beyond mere meaning-bearing to achieve a state where they actually* embody meaning. *Reaching a state of meaning-embodiment requires a transformation that is analogous to an* apotheosis *or a* transfiguration *of the common clay of the artifact into an abstract conceptual state of map-hood.*

Describing this transfiguration into a conceptual state requires a Conceptual *theory of cartography—one that defines the relationship between the* artifact as a thing *and the* map as an abstract entity, *and that also defines the map entity in a manner unambiguously applicable to every, any, and all maps. Such a theory would also have to define the discipline of cartography in relation to that abstract map entity.*

This paper proposes the outlines for the required Conceptual theory—one based on the proven model of Conceptual Art. Practically speaking, the first step—and the effective scope of the paper—is an inquiry into the nature of the map as an abstract conceptual entity. It provides a model for an investigative methodology for interrogating the formal map, and sketches out a framework for assimilating the findings of such investigations. This paper will not settle all fundamental questions about what a map is, but it will outline an analytical course that can address them. It proposes that asking how one knows something is a map is a step on the road to discovering what a map is.

KEYWORDS: apotheosis; Conceptual Theory of Cartography; conceptual cartography; conceptual art; transfiguration; hylomorphism; mapicity; meaning-bearing; meaning-embodiment

PREAMBLE

In the preface to their 1976 book *The Nature of Maps: Essays toward Understanding Maps and Mapping*, Arthur Robinson and Barbara Petchenik wrote: "We believe that to move forward significantly we must have a deeper understanding of the characteristics and processes by which the map acquires meaning from its maker and evokes meaning in its user—a general theory of cartography." Although they confessed themselves pointedly conscious of the "incompleteness and deficiencies" of their essays attempting to address this "urgent need"—recognizing that the knowledge and theories then available were simply not adequate—it seemed to them abundantly clear that much of what would make up a general theory was hiding in plain sight, and what was needed was a way to "make explicit what has been implicit" (Robinson and Petchenik 1976, x–xi).

Robinson and Petchenik's identification of the need, and of its urgency, was correct—and their review and analysis of the available practical and theoretical evidence

conclusively demonstrated that the need could not then be met. Some forty-five years later, however, the situation is rather different. This essay aspires to heed their call, and attempts to lay the groundwork for a general theory—a conceptual theory—of cartography, by showing how to make explicit much of what has hitherto remained implicit. Practically speaking, the first step—and the effective scope of the paper—is an inquiry into the nature of the map as an abstract conceptual entity.

INTRODUCTION

Map artifacts are, by themselves, mere things. Like any text, the map artifact can be read, and through the act of being read the artifact comes to *bear meaning*. Maps, however, go beyond mere meaning-bearing to achieve a state where they actually *embody meaning*. Reaching a state of meaning-embodiment requires a transformation that is analogous to an *apotheosis* or a *transfiguration* of the common clay of the artifact into a conceptual state where the artifact becomes a map. It is thus clear that a map reader is doing something far more involved than what is done by the reader of a mere text.

A better, and more instructive, model for a map reader is that of an art viewer. Both maps and artworks embody meaning, and achieve this state by means of a transfiguration performed by some person who knows how to place the artifact into a context of meaning.

How do they choose which artifacts to transfigure? The ability of a map reader to seemingly *spontaneously* identify and engage maps leads most map users and makers to avoid inquiring into what a map *is*, so as to pass on to more "practical" questions about how a map can be cooked up, how maps can be deployed for one's advantage, or how one can make a living from maps.

THE STORY THUS FAR

Most users and makers of maps simply accept the map as axiomatic—as a thing that is presupposed to exist with whatever properties they expect a map to have—and they instead get on with the job of situating maps, mapping, and/or cartography into a wider technical, social, or scientific construct. Such theories may have utility, but their failure to examine the map as an abstract entity makes it impossible to judge the value and veracity of whatever system they posit.

Cartographic theories have traditionally focused primarily on how maps are made (produced), how they are used (consumed), and—occasionally—on how they are disseminated (circulated). Sometimes these aspects have been examined individually, or in some combination, and that production / consumption / dissemination triad has sometimes been situated in a practical or mechanistic framework and at other times in socio-political one—with occasional framework overlaps. Here follows a brief review of this situation.

For centuries, mapmaking has been taught as a craft *production* practice centering on how maps are *made*. There have been countless mapmaking manuals written, centralizing "fundamentals" and "standards." These theories conceptualize the map as a thing that can be made well or ill, and, furthermore, as something with no existential essence beyond the map-crafter's judgment on its quality. Tremendous efforts have gone into perceptual and cognitive studies aiming to measure detailed responses to the size, color, configuration, orientation, and arrangement of what have been termed "graphic variables"—and at least some of this research has been scientifically sound. Such investigations are analogous to the studies of material strengths and fabrication standards that have underpinned engineering endeavors for many decades, and they can be of tremendous utility in any craft practice (see Timoshenko 1955). Yet maps can be made that do *not* employ whatever happens to pass (at any given time) for normal mapmaking craft practices—just as the craft practices employed in mapmaking can as easily be employed in making things that are *not maps*. Clearly, whatever it is that makes a map a map *cannot* reside in its materials or in its manner of assembly—because however a map is made, and whatever it is made of, it is still a *map*.

Map *consumption* or *use* is often held up as a significant dimension in the definition of maps. Nonetheless, the practices and patterns of map consumption, employment, and use vary considerably—both diachronically (over time) and synchronically (across contemporaneous usage)—and usages to which one particular map is suited may very

well not be supported by another map (and vice-versa), yet neither is any less a map. Maps are, in fact and in every case, composed for particular uses by particular users in particular ways for particular ends—and no use to which it might be put (as a map or not) by other users for other ends makes any map *any less a map* (although it *may* affect its being judged a *good* map).

More than a few historians have insisted that, in addition to issues about how and why maps are produced and consumed, one should see map *circulation*—essentially the map business—as a core, essential element of mapping. Unfortunately, however, *not* having circulated does not disqualify any artifact from map-hood. Attention to circulation might well be expected of historians, as such activities are often documented, and thus easy to study. It is for much the same reason that archaeologists classify ancient civilizations through their pot-shards and rubbish heaps—not because the civilization hinged on its pottery but because that is what is still around to be dug up.

Circulation, production and consumption are, without any doubt, key components for understanding mapping as an interconnected ecosystem—either historical or contemporary. But even when bundled together—as they are in so-called processual theories (Edney 2019, among others)—the same objection applies: none of these theories can be used to separate the maps from the not-maps.

This brings us to *map taxonomies*—hierarchical organizations of map descriptions—that many writers use as centerpieces for their theories. While taxonomies can be useful, they only serve to group maps with certain characteristics into particular map types rather than addressing what all maps have in common. Harold Moellering's scheme, for example, classes all maps on a simple two by two matrix with axes of "permanent tangible reality" and "directly viewable as a cartographic image" (Moellering 1980, 286). Edney has his own roster of "mapping modes" that he has been elaborating for decades. The list of seven he introduced in 1993 had grown to to fourteen by 2019 and become, in his words, "a stable and tested delineation" (Edney 2019, 32). He maintains that all cartography "dissolves" (27) into these modes—despite the apparent propensity of the modes to multiply like mice, and despite some of his own admissions:

- that "a stable classification . . . does not mean that each mode is itself stable," (32)
- that the divisions between the modes are blurry, and
- that "it is undoubtedly inappropriate to to use the same precise demarcation of modes for non-Western societies" (32)
- (in other words: the definitions are haphazard, indistinguishable, and far from broadly based).

All well and good, one supposes—but, like all taxonomies, the modes are *not* useful in identifying what a map actually *is* as an *abstract conceptual entity*. For that, one needs a definition that is not tied to *the way mapping happens to be done*, but that *does* account for there being *any number* of ways it can be *done* or *understood*.

As an inverse to map taxonomies, many writers have chosen to identify classes of map that are—somehow—*not* maps. Ephemeral maps, diagrams, and map-like-objects are just a few of the pejorative labels that are from time to time pasted on artifacts indistinguishable from other artifacts the writer sees as *real* maps in every way *except* that they do not fit into that writer's taxonomic structure. Denis Wood, for example, ridicules the idea that drawings in sand can be maps (Wood 2007), only because he apparently finds them too hard to explain. However, that there are maps that do not fit a particular system is a shortcoming of the system, not of the maps. One is reminded that the existence of the platypus, too, was ridiculed by European taxonomists for decades, simply because such a creature (an egg-laying mammal with a poisonous sting?) cut straight across their carefully constructed hierarchical systems.

So-called "art maps" occupy a strange place in map taxonomies: some taxonomists lump them with the *not-maps*, while others—such as Wood (2007), Ferdinand (2019), or Winther (2020)—conceive them as having special powers not available to the common run of maps. Wood (2007), for example, sees art maps as appearing in the world without the "mask" of pretense he sees all other maps as wearing, despite my (Denil 2007) having shown that there is no way to tell an art-map from any other map. With no unambiguous way of identifying them, art-maps can play no role in a map definition—art-maps are in fact just another use to which maps can be put: like road or topographic maps.

It is, nonetheless, useful to taxonomize, so a comprehensive theory of cartography should support map taxonomies,

but support them in the plural. The range of cultures and communities that recognize maps, and the myriad uses to be found for maps, both require and provide a multitude of taxonomies—but the comprehensive theory itself cannot be beholden to any of them.

A few researchers have thought to find an answer to the map question in opinion polling and practical lexicographic usage surveys—either showing things to people and asking if the things are maps (Forrest 1999) or reviewing the various ways dictionaries or official bodies have defined terms like *map* (Andrews 1996). This is likely a sound place to start, but for the results of such activities to go beyond an anecdotal interest, the findings would have to be leveraged in order to construct maps that would conceptually interrogate the stratification of the polled opinions. Opinion polls are only a first step on that road.

Many writers have approached maps and cartography from other disciplines, or from the perspective of particular ways maps are used or instantiated. As Edney remarked: "scholars from across the humanities and social science have adopted sophisticated arguments, but their work has been diffuse and partial in scope, so that mapping as a *whole* has remained under-theorized" (2019, 26, emphasis in original; see also Edney 2015). While the term *partial* might have been used here as meaning *part of the whole*, it also could as well read in the sense of *partiality*—as a predilection for, or a narrow focus on, essentially *parochial* concerns. There are, without any doubt, a great many important issues—and not only in regard to maps and mapping—that are only brought to light when viewed from such disciplines—and there have been tremendous contributions to the deeper understanding of maps and cartography by deconstructionists, Barthians, Foucaultists, feminists, anti-colonialists, and others—but none of these parochial disciplines has any interest in or bearing on the matter at hand: how someone recognizes a map. For such theories it is simply presupposed that a map—of whatever sort and characteristics required—exists, and the existential details of an abstract map entity are, for such theories, irrelevant.

All existing theories place cartography at the service of some larger project. This is not, in itself, wrong: cartographic activity and products are always undertaken or created in the service of some *intention*, and an examination of intentions can throw a great deal of light on actions—witness criminal trials. Particular intentions alone, however, can only provide a justification—a business case—for the activity or artifact; intentions exert influence on maps but are not a map's *essence*.

In discussing the shortcomings of what has been here termed parochial theories, the aim is not to label them all as wrong but rather to highlight the limitations of what they cover, or can be expected to cover, and to show that none can or will address any map's essence.

A conceptual theory, by contrast, is concerned with the map as *a thing in itself*, whatever its instantiation, however it is used, and whyever it comes to be made. A conceptual theory of cartography must be able to differentiate those aspects or features common to all maps—and are thus aspects or features of the map as a conceptual entity—from those pertaining to individual, or to classes of, maps—and are thus variables of instantiation. A correct conceptual theory will apply to any and all maps, and be resistant to counter examples—such as might be raised by socio-political interrogations. Conversely, a conceptual theory, once available, cannot fail to throw light on the parts of other, parochial, theories just where they are darkest and thinnest.

THE CARTOGRAPHIC GAME

Non-conceptual and parochial cartographic theories are grounded on the way cartography is *carried out*—on the *way the game is played*. This is not surprising, because, at the level these theories engage it, cartography is in fact very much a game. Like any game, the cartographic game defines specific and particular *roles*, *rules*, *goals*, *rituals*, *language*, and *values* (Leary 1968), but again, like any game, it is unable to say anything about what lies outside itself. For example, the *goal* in chess is to capture the king, but chess itself—as a game—can only provide this goal as a given. Not only must the chess players bring their own reasons for attaining the chess-game goal—think of the knight in *The Seventh Seal* (Bergman 1960, 101)—but the game itself cannot tell us anything about what it is to play a game of chess.

Examination of the game givens of cartography—the roles, rules, goals, rituals, language, and values—outside of the game itself requires an examination of the conceptual core of what a map *is* and how it comes into its *abstract*

conceptual state of being. This cannot be accomplished *except* by stripping it down to a conceptual core outside of the framework of norms and conventions[1] within which it normally operates and outside of which it usually is not sought.

This is the space to be filled by a *Conceptual Theory of Cartography*. Such a conceptual theory will be able to clarify, refine, and test the parochial theories that require the existence of map entities (and may themselves reasonably apply only to certain types or uses of maps).

WHAT IS A CONCEPTUAL THEORY OF CARTOGRAPHY?

Key to such a conceptual theory is the ability to establish a clear division between the map and the map artifact—differentiating a map's what-ness from its thing-ness. At first glance, it might seem to be a tall order to isolate the essential (mappy) part of a map, but this sort of analysis is centuries old. According to Aristotle, substances in the world (in this case, maps) are made up of *form* and *matter*, complementary features of reality that can be distinguished only in thought. Here, then, is a framework for establishing the division, but the framework does not demonstrate what is to be done with the form thus isolated.

Happily, there is a well tested model for this, too: *Conceptual Art*. It is widely understood that any artwork exists *only* as a conceptual construct that is applied to an object or composition. This means that an artwork is a work of art only for *particular* persons in *particular* places at *particular* times. It is also clear that a map is a map in exactly the same way, and through exactly the same mechanisms, as an artwork is a work of art—and thus maps can be explored through exactly the same sort of conceptual analysis as lies at the heart of Conceptual Art. Conceptual Art questions the nature of art, and centralizes the examination of its own nature. A *Conceptual Theory of Cartography* would similarly question, examine, and expose the conceptual nature of map-hood.

Such a theory is likely to be somewhat controversial, and perhaps disturbing. And just as Conceptual Art is among the least popular forms of art—particularly amongst art dealers, who have a stronger financial interest in sell-able artifacts than an intellectual interest in shareable concepts—Conceptual Cartography will, no doubt, find a limited niche in the map market despite its potential for realizing significant intellectual dividends.

Its utility, however, is unmistakable, and goes straight to the core of the nature of *any* and *every* map. With a means of examining the map as an abstract state of being—as opposed to its matter, intention, use, business, or whatever—one would be able to define the map *outside* of taxonomy, *outside* of parochial concerns, *outside* of craft, *outside* of connoisseurship, *outside* the game; and *within* a framework that would actually cover any and every map. It will not overthrow sound parochial theories—or devalue their utility—only refine them, and explicate their boundaries.

One might ask just why anyone should care about the abstract nature of maps—do we really *need* this conceptual—some might say, totalizing—theory? Is it not clear that mapping and cartography are functioning just fine—from the spread of GIS and geospatial software, to the daily use of maps on smartphones by billions of people, to the fine craft mapping that is evident among the NACIS folks—and have they not gotten on well for thousands of years *without* any such theory?

First off, this is *not* a totalizing theory. It describes how maps are recognized in artifacts in an abstract manner, one that is *not* contingent upon any particular set of map features or requirements, but that *does* recognize that cultural communities do indeed rely on such requirements—requirements that come into currency for complex reasons and that can evolve over time and circumstance.

Clearly a conceptual theory of cartography, and an understanding of the nature of the map as an abstract formal state of being, is not absolutely necessary in order for maps to be made, used, or distributed—any more than an understanding of the nature of oxygen is necessary in order to breathe. In the past, substances such as caloric fluid,[2]

1. The operative distinction between norms and conventions resides in the idea that conventions are standard encodings, while norms are normative practices. As the saying goes: *the great thing about standards is that you can pick whichever one you want*—the standards are conventions, and the ones you usually pick are the norms (see Southwood and Eriksson 2011).

2. A self-repellent fluid that flows from hotter bodies to colder ones.

phlogiston,[3] and luminiferous aether[4] were posited to explain various physical phenomena—and, some might argue, with such explanations in hand no one ever really *needed* theories of thermodynamics, chemical combustion, or electromagnetic radiation. Map readers have, and will no doubt continue to, (seemingly) spontaneously recognize maps—but this is not to say that map readers do not invoke theory in recognizing a map. No map can exist without a theory that makes it one—however naive and unexamined a theory it may be. Without a real understanding of what maps are, map readers and makers will have to continue to rely on fairy tales in order to read or make them.

BOTH MAPS AND ARTWORKS DEMAND INTERPRETATION

Why, one might ask, should a cartographic theory be modeled upon one of art? Some would maintain that it is inappropriate and frivolous to equate a supposedly serious discipline like cartography with art—and Joel Morrison's (1977) high dudgeon on this topic is as strident and entertaining as it is typical—yet there are many resemblances between the products and their generating practices that recommend such a course.

To begin with, both artworks and maps are meaning-bearing artifacts: in short, each is, ultimately, *about* something other than themselves. *About-ness*, then, is as necessary a condition for a map as it is for an artwork, but because something can possess about-ness without being either a map or art—a clock, for example, is about time—it does not distinguish either one. Maps and artworks, however, go beyond about-ness, and are *transfigured* in the minds of their readers to actually *embody meanings*—the complexity and richness of which meanings depend upon the training, experience, and sophistication of the reader.

As has been mentioned, a clock is about time. A pair of identical, battery-operated clocks, synchronized and hanging side-by-side, when transfigured into an artwork by a sophisticated viewer, "demands an interpretation, an ascription of meaning which expresses its manifest properties" (Danto 2003, 66). The 1991 work *Untitled* (*Perfect Lovers*) (Figure 1), by Felix Gonzales-Torres, rewards a viewer who is properly prepared to perform the transfiguration. There are, of course, a range of art-historical echoes

Figure 1. Felix Gonzales-Torres. 1991. *Untitled (Perfect Lovers).* Reproduction by author.

present—of Marcel Duchamp in the use of mass-produced articles, of Modernism from the clean geometry, of Minimalism by the simple relationships of the forms—but the central meaning expressed by the work's properties concerns love and marriage. The clocks tick together in syncopation, and the possibility of them running down and stopping together (*à la* Philemon and Baucis) is quite small—almost inevitably, one will falter and die before the other, and at the very least they will, at some point, fall out of synchronicity.

Any person encountering such an artifact *must,* to see it as an artwork, be properly prepared to discover specific types of meaning in specific types of artifact. A twenty-first-century art viewer *knows* how to engage an artifact like this that they have decided—for reasons they also *know*—is an artwork, and how to read meaning into it by interpretation of clues *they know how to find and read*. So too must a map reader recognize and decide to engage an artifact *as a map*—something they do in a way analogous to the way an artwork is recognized—and to then employ their map-reading skills to find and interpret the clues *they know how to find and read into a map*.

Here, then, is a clear, practical, and demonstrable conceptual correspondence between maps and artworks—one that neither requires nor forbids instances where one artifact could be both—and a demonstrable conceptual correspondence between their respective disciplines.

3. A fire-like element released in combustion and rusting.

4. The postulated medium for the propagation of light.

MAP OR NOT MAP?

In 1934 John Dewey proposed a thought experiment where:

> A finely wrought object, one whose texture and proportions are highly pleasing in perception, has been believed to be a product of some primitive people. Then there is discovered evidence that proves it to be an accidental natural product. As an external thing, it is now precisely what it was before. Yet at once it ceases to be a work of art and becomes a natural "curiosity." It now belongs in a museum of natural history, not in a museum of art. And the extraordinary thing is that the difference that is thus made is not one of just intellectual classification. A difference is made in appreciative perception and in a direct way. (Dewey 1934, 50)

A similar experiment can be made using an artifact that might or might not be a map. This graphic in Figure 2 was found in 1963 CE on a wall in the Neolithic town of Çatalhöyük (or Çatal Hüyük) in present-day Turkey, and dated to around 6200 BCE. The map status of this artifact is rather vigorously contested—Catherine Delano Smith tells us the excavator, James Mellaart, sees it as a map, although she, herself, seems ambivalent about the claim (1987, 73). Matthew Edney, on the other hand, rejects it *ex cathedra* (2019, 69), as do many others.

It should be noted that, for the purposes of this paper, the "true" status of this artifact for its original community long ago is *entirely irrelevant*. What *is* relevant here is the palpable, perceptual, and very real difference in engagement that takes place when a map reader transfigures an artifact into a map—an entity that embodies meaning. When the decision is made that an artifact is a map, the artifact instantly blossoms into an embodiment of meaning, and by that apotheosis, is embedded into context. Through that transfiguration, a direct and fundamental difference is made in appreciative perception.

DELANO SMITH'S CRITERIA

Obviously, historians—and other map users—must have *some* criteria for forming hypotheses about the map-hood of a given artifact, and Catherine Delano Smith provides some in Volume 1 of *The History of Cartography*:

> What appears to be spontaneous recognition of a map in fact involves three assumptions: that the artist's intent was indeed to portray the relationship of objects in space; that all the constituent images are contemporaneous in execution; and that they are cartographically appropriate. (Delano Smith 1987, 61)

According to Delano Smith, the *intent* is "the most basic" criteria, while *cartographic appropriateness* is demonstrated by identification of signs "most likely to be commonplace on a . . . map" (Delano Smith 1987, 61).

While these are likely useful rules of thumb for the historian—and perhaps in other situations as well—they leave open some serious questions about defining maps more

Figure 2. Drawing on Wall 14, Level VII of the Neolithic settlement of Çatalhöyük (or Çatal Hüyük), Turkey.

generally. For one, Delano Smith is quite correct when she writes that a mapmaker's intent "has to be taken largely for granted" (Delano Smith 1987, 61), but this is not just for prehistoric maps—regardless of any explicit declarations, one can *only* ever make assumptions about the true intentions of *any* mapmaker. Similarly, a requirement for contemporaneous execution becomes problematic in, for example, the case of thematic data layered over a preexisting base. Finally, the third criterion leaves unexamined just what might or might not be commonplace in any given historical, cultural, or intentional situation. However, when boiled down, these three criteria equate simply to questions of *recognition* and *interpretation*. Delano Smith's criteria are illustrative of the fundamental questions posed whenever an artifact is encountered: *Do* I *see this as a map?*

The key, clearly, lies not in the *artifact* but in the *interpretation* a given person applies to it. One person looks at an artifact and finds only a material substance without any particular meaning, while another person (one who has chosen to go beyond looking and become an interpreter or reader) *transfigures* the material substance into a repository of embodied meaning: a *map*. The *only*, and *crucial*, difference is the *decision*—really a series of decisions—that the artifact is a *map*.

SEEKING STABILITY

This transfigurative model may at first seem to be very like the model of the map as "constantly becoming," put forward by Martin Dodge, Rob Kitchin, and Chris Perkins (2011, 2), but this resemblance is only superficial. What Dodge, Kitchin, and Perkins do is to fetishize the meaning-making process into a never-ending turmoil of "becoming" that never allows the map a space to actually function stably. It simply ignores the fact that users actually experience the map as stable—and expect it to be stable—and this inevitably leads to a false conception of the map's chronic *instability* as an entity (Kitchin and Dodge 2007).

It is clear, however, that while the social and technical practices that facilitate bringing maps and map artifacts into being are ultimately *unfixed* and *mutable*, this circumstance is *not* a weakness, but a *strength*.

This confusion arises because there are two types of stability: *initial* and *dynamic*. For example, a broad, flat-bottomed boat has a great deal of initial stability. One can stand up and walk around in it, and in still water it seems as steady as a rock. A boat with a rounder bottom can be quite tender—or tippy—and it can rock from side to side any time a passenger moves. In a seaway, however, a flat bottomed boat (or a catamaran) can flip over like a light switch, while the rounder boat, with greater *dynamic* stability, rides the waves safely.

It is, in fact, those very *unfixed* and *mutable* social and technical practices—practices capable of development and adaptation; of evolution and innovation; of coming into and going out of use or fashion; of being applied strictly, or loosely, or subversively, or of being ignored altogether—that provide the *dynamic stability* that allows maps to exist and operate in a wide variety of situations and under a wide variety of conditions.

Maps are, in fact, remarkably stable—albeit dynamically—because the transfigured map weathers the storms that rage around it by virtue of the *belief* that is born of the act of transfiguration. It will remain stable until and unless that belief is dramatically undermined—after which either a new equilibrium is established, or the artifact is tossed aside with oaths terrible to hear.

DYNAMIC STABILITY

The prevailing situations and conditions dictate and provide a broad potential stage for the criteria each and every person encountering a *thing* applies in order to decide if that *thing* is a *map thing*. Almost all of these criteria are particular and contingent—that is, they apply in some situations, for some people, at some given time—but there is *one* element that is always present, always pertinent, and always applicable: the need or desire to *convince*, or to *be convinced*. This is the *Rhetorical Imperative*, and that imperative is the *dynamically stable ontological core* of the map—it is why each and every map exists (Denil 2003, Winther 2020, 15).

As an ontology for the map, rhetoric is stable—even when the variables of who, what, when, where, why, and how are considered—because rhetoric is a discipline *without particular subject matter*. This means that the map's ontology—its core essence of being—is not tied to any particular topic, map type, or style. The *particulars* of intentions and means pertain *only* to individual maps in same way that the *law* requires a motive for murder, but a *legal case* rests on the motive's particulars. It is the map's core rhetoricity

that allows the persuasive map communication to take *any* suitable or appropriate form to meet the need, situation, and audience at hand—and helps the transfiguring user to persuade *themselves* that they are finding propositional arguments on their own.

The rhetorical nature of the map requires the mapmaker to anticipate what it is that the map reader will recognize and accept as a map, and to anticipate how the argument being forwarded must be framed by the artifact to appeal to that reader. Furthermore, it separates *making* and *reading* without privileging *either* side. While the *manifestation of the artifact* is governed by decisions made by its maker, the *transfiguration of the artifact into a map* remains entirely up to whoever it is that has decided to be its reader—the *maker* makes a *thing*, but the *reader* decides what that thing *is*.

SUBSTANCES ARE MADE UP OF FORM AND MATTER

It is the map reader's perception of the formal stigmata (marks recognized as being of significance) of *mapicity* (Denil 2011) that triggers the reader's decision about the map-hood of the artifact. How does the map reader perceive it?

In Book VII of his *Metaphysics* (1943, 24), Aristotle recognizes that *substances* in the world are whole, yet are divisible by thought into *form* and *matter*. A form, according to Aristotle, is a thing's essence or nature, and is related to that thing's function—what it *is*. An object's matter, by contrast, is what is unique to that particular object. Matter is what makes individual things different, even things with the same essence. In the nineteenth century, this type of analysis came to be called *hylomorphism*.

This conception of form differs significantly from that of Plato, who saw forms as unreachable ideals that we in this world only perceive as shadows thrown on a wall (1888, 514a–520a). This conceptualization does nothing at all to help us understand and define the map, although it may be of some comfort to those who suggest we should not even try (Vasiliev et al. 1990).

It is worth noting that it is the Platonic concept of form that grounds Alan MacEachren's (1995) so-called "prototype" model of the map. MacEachren says that each individual holds in their mind a paradigmatic ideal about what constitutes a prototypical map artifact: an exemplar of what a perfect map artifact must be. This ideal of map validity sits at the center of a "fuzzy and radial" field (161) upon which all real world maps are located. Anything that does not fall on or near the center of that field is, necessarily, less and less a map as it lands further from the center. According to this model, each individual can have their own ideal prototype, and they measure everything in the world against that ideal to judge just how much of a map it is. MacEachren seems to recognize that is this a hopelessly haphazard model, with, on the one hand, everyone having their own prototype, and, on the other, no explanation of how or why any two people might agree on any map. He solves these issues by the expedient of dictating that every valid prototype *must* be loaded with a particular and peculiar set of conceptual elements—"an expectation of a plan view and transformations that allow the world to be split open and flattened," for example (196)—that, he claims, are *absolutely required* so as to "allow maps to be understood rather than misunderstood" (196). Thus, if someone's prototype does not approximate his, then *they* are simply *wrong*, and thus condemned to *misunderstand* maps. Although such a model—clearly more of a *stereotype* than a *prototype*—is obviously useless for actually defining the map, it provides an excellent demonstration of the problematic nature of Platonic forms.

In contrast to this, Aristotle's model allows us to conceptually divide the map's formal *what-ness* from its material *thing-ness* in a useful manner. The map's what-ness can be thought of as the realm of theory. It encompasses all those things that make a map a map: not "on the paper" but in the mind of someone who sees the map—all the things that together constitute the stigmata of an abstract conceptual map entity. This is the cartographic schema—called *mapicity*—and it constitutes the conceptual hallmark of map-hood (Denil 2011). These formal aspects are what differentiates a map from a not-map for a reader, even when they are choosing between outwardly similar (or potentially identical) artifacts. By contrast, a map's thing-ness is the realm of craft. Craft is how map artifacts are made, and how the signals of map-ness—or mapicity—are instantiated. Thus, while theory shows what it is that needs to be made in order to get map readers to see the signals as signals—and as signals of what is intended to be signaled—it is craft that delivers the artifact.

Most standard works on cartography—from *General Cartography* (Raisz 1948) through *Cartographic Design and*

Production (Keates 1989), and even to *Cartography.* (Field 2018)—focus primarily on the craft of mapmaking, and these works not only centralize the materiality of the map artifact, but—incidentally or deliberately—lend credence to the notion that cartography is nothing more than a craft practice. There have also been, however, a variety of other publications—from the likes of Robinson and Petchenik (1976), J. Brian Harley (2001), Krygier and Wood (2005), and others—that centered on a recognition that the making of maps involves concerns beyond "fundamentals."

None of these writers, however, have been able to isolate anything so ineffable as the map's formal existential essence—although Robinson and Petchenik were looking for just that—and while some investigators have found bits and pieces of evidence, hitherto there has not been any theoretically sound way of accessing or exploring these formal dimensions. I propose that Aristotelean hylomorphism opens a door to that exploration, and that Conceptual Art provides a model for how that exploration could play out.

Much of the difficulty in defining the map, and in defining cartography, rests upon unexamined assumptions of what map *is* as an abstract entity. A Conceptual Cartography practice, built on the model of a Conceptual Art practice, offers the best and most promising pathway to defining the map, defining cartography, and achieving a sophisticated and complete understanding of the discipline, the practice, and of the products.

WHAT IS CONCEPTUAL ART?

Conceptual Art questions the nature of art, and centralizes the examination of its own nature. Sol LeWitt wrote that "In conceptual art the idea or concept is the most important aspect of the work. When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair. The idea becomes a machine that makes the art" (LeWitt 1992, 834).

Music provides an excellent illustration of how this works. It would be difficult to identify an art form that invokes stronger disagreements than those that swirl around what, for any particular individual or group, constitutes music. Alex Ross, writing in 2008, sums it up quite well:

> Ultimately, all music acts on its audience through the same physics of sound, shaking the air and arousing curious sensations. In the twentieth century, however, musical life disintegrated into a teeming mass of cultures and subcultures, each with its own canon and jargon. Some genres have attained more popularity than others; none has true mass appeal. What delights one group gives headaches to another. Hip-hop tracks thrill teenagers and horrify their parents. Popular standards that break the hearts of an older generation become insipid kitsch in the ears of their grandchildren. [Alban] Berg's *Wozzeck* is, for some, one of the most gripping operas ever written; [George] Gershwin thought so, and emulated it in *Porgy and Bess*, not least in the hazy chords that float through "Summertime." For others, *Wozzeck* is a welter of ugliness. The arguments easily grow heated; we can be intolerant in reaction to others' tastes, even violent. (Ross 2008, xi)

John Cage, in his 1961 book *Silence,* remarked on how music can be found in all sorts of unexpected places if one pays proper attention: "Wherever we are, what we hear is mostly noise. When we ignore it, it disturbs us. When we listen to it, we find it fascinating" (Cage 1961, 3). A conceptual approach to music centers on how to listen to what is usually ignored. This music might well be played on a piano "prepared" by having objects jammed between its strings; by tossing a rubbish bin downstairs; by being silent; or—as has been demonstrated by the Fluxus artist Yoko Ono—by screaming.

Fluxus, a broad, international, conceptual movement founded in the early 1960s, was revolutionary in that it "removed from the received concept of art almost everything that had been thought to ground the distinction" between art and not-art (Danto 2003, 24). According to George Maciunas's 1966 *Fluxus Manifesto*, some of these concepts include Exclusiveness, Individuality, Ambition, Significance, Rarity, Inspiration, Skill, Complexity, Profundity, and Greatness, as well as Institutional and Commodity Value.

From her earliest years, Yoko Ono received training in traditional Japanese music—in both folk forms and in styles associated with kabuki and noh theater. She took up vocal training in European lieder-singing as a teenager, and studied music composition in college with a Viennese-trained composer. For a number of years she wrote avant-garde twelve-tone compositions, before eventually collaborating with popular musicians such as her

husband, John Lennon. Thus, with a thorough grounding in the syntax, grammar, and canon of both Western and Japanese music, she is clearly no stranger to what a broad swath of humanity considers to be music.

If one compares her **Voice Piece for Soprano**—sung in 2010 at New York's Museum of Modern Art—with the traditional Japanese song **Sakura** she sang on the *Mike Douglas Show* in 1972—one can see that the *concept of singing* is identical in both. The latter is a virtuoso performance of a canonical component in a cultural repertoire, while in the former the execution is stripped of craft virtuosity—instead foregrounding what it *conceptually means to sing*.

That the vast majority of viewers of these two clips would (and often do) applaud the 1972 and dismiss the 2010 performance is not unexpected; most people conflate concept and execution, and virtuosity in execution is a common criterion for value. It is important, however, to also take account of the fact (and it is a fact) that the qualities associated with virtuosity are *mutable*. The indices of *skill* vary from culture to culture, from group to group, and from time to time. The *conceptual essence* of singing, however, remains, on a basic level, more or less the same. In both of these cases, Ono sang—in *Voice Piece for Soprano*, it was the concept that made the song. It is the listener who decides how to engage with it.

ON WHAT GROUNDS ARE SUCH DECISIONS MADE?

In 1964 the philosopher Arthur Danto walked into the Stable Gallery on East 74th Street in New York City, and encountered a stacked pile of facsimile Brillo scouring pad cartons. As he later wrote: "Some irrelevant negative mutterings aside, 'Brillo Box' was instantly accepted as art; but the question became aggravated of why Warhol's Brillo boxes *were* works of art while their commonplace counterparts, in the back rooms of supermarkets throughout Christendom, were not" (Danto 2003, vi, emphasis in original). There were, of course, manifest differences between the boxes in the gallery and the ones in the grocers' stockrooms, but the pertinent difference could not be found in an examination of the boxes themselves. Nor could it lie in anything physical the two had in common. Clearly, too, the difference could not be that an artist had produced one and someone else the other—both Andy Warhol (maker of the Brillo Box artworks) and James Harvey (designer of the commercial Brillo box package), were successful commercial and fine artists. Harvey was an established Abstract Expressionist painter as well as an industrial package designer, and Warhol was, at the time, most known for his magazine shoe advertisements.

There *was* the art-historical precedent of Marcel Duchamp, who had, for many years, made a practice of identifying individual objects to be works of art. He called these objects—which included a grooming comb, snow shovel, bottle rack, and urinal—*readymades,* and by 1964 Duchamp's readymades were widely accepted as artworks. The two activities, however, were different. Duchamp had plucked artifacts off a shelf and declared them art—and he regularly substituted the artifacts with new purchases as needed—leaving "quite in darkness the question of how such objects get to be works of art, since all that would have been shown is that they have an unanticipated aesthetic dimension" (Danto 2003, vi). Warhol, however, had made a thing that was indistinguishable from some other thing, and said that *his* was art—a declaration that demanded an answer to the question: *why?*

Danto wrestled with this question (eventually for decades), and concluded that it was the *viewer* that made the decision—it was the viewer that *transfigured* the artifact into an artwork—but that the viewer did *not* do this in isolation. Every viewer is necessarily a creature of their own time, and of the overlapping and intersecting paradigms, norms, and conventions bequeathed to them by their own constellations of cultural heritage and interpretive community memberships. It is clear, too, that both the richness and diversity of the viewer's experiential/cultural background—and their sophistication in inter-operating between diverse and occasionally conflicting elements of that background—is what allows them to reach rich and sophisticated interpretations. It is the role of each viewer to select and mash-up this background in order to come to such decisions. This holds true regardless of whether the issue at hand is an artifact's status as an artwork, or its status as a map.

READERS ARE BOTH CREATED AND CONSTRAINED BY NORMS

Every reader exists, as a reader, within a structure of norms and conventions that both allows them to *be* readers and operates to *facilitate* their reading activities—allowing them to recognize and find meaning. The structure

also determines their expectations as to what types of meanings are likely to be found, and, as well, tends to restrict the meanings within certain conventional bounds. Language works the same way, and Aldous Huxley noted that "Every individual is at once the beneficiary and the victim of the linguistic tradition into which he has been born—the beneficiary inasmuch as language gives access to the accumulated records of other people's experience, the victim in so far as it confirms him in the belief that reduced awareness is the only awareness . . . , so that he is all too apt to take his concepts for data, his words for actual things" (1954, 6). This restriction of the horizon of the possible is just what Delano Smith's third assumption—that of cartographic appropriateness—spoke to: is it appropriate to view a particular artifact as a map?

Ana Pulido Rull has recently shown how land grant mapping in sixteenth-century colonial New Spain incorporated both Indigenous and European elements into artifacts that could be persuasive documents in legal proceedings. The indigenous tlacuiloque (scribes/painters) composing the maps had to provide a single artifact around which a variety of diverse audiences—each of which brought their own mapping traditions, norms, conventions, expectations, and contexts to their readings—could build a common consensus and understanding (Pulido Rull 2020).

This demonstrates that the challenge the map *maker* confronts is the manufacture of an artifact that will not only be recognized and willingly transfigured, but that will reliably guide that transfiguration so that whatever meaning(s) the maker needs/desires the viewer to read into/onto the map, will prevail. The maker usually wants to discourage—or hide the possibility of—unguided, deviant, or improvisational readings, but there is only so much the maker can do. The usual tactic is to stick closely to the current version of cartographic appropriateness, making an artifact that—as Delano Smith put it—appears spontaneously recognizable.

COURTING UNGUIDED INTERPRETATIONS

As I pointed out in my 2011 article, "The Search for a Radical Cartography," a truly radical map would deliberately skirt those conventional appeals to cartographic appropriateness—and risk open or unguided readings in an attempt to establish new conventions that could serve as alternatives to those seen as contemporary standards. This

Figure 3. Page from *Song Without Words: A Book of Engravings on Wood* by Lynd Ward. 1936.

radical map tactic, however, is different from the risk suggested for a conceptual map—a conceptual map would be less concerned with *replacing* the conventions than in *finding their edges* and *testing their centrality*.

Most mapmakers, however, do *not* deliberately court open interpretations, but Lynd Ward did just that—albeit not with maps—when, in 1936, he published his fifth wordless novel: *Song Without Words* (2010a). The shortest of his six works in this medium, it consisted of twenty-one wood block prints, one per right-hand page (Figure 3). Art Spiegelman wrote that it was through his own struggle to decipher Ward's narrative that he came to realize that "wordless novels are filled with language, it just resides in the reader's head rather than on the page" (Spiegelman 2010, xvi).

Ward's own essay "On *Song Without Words*," acknowledges that it is the *reader* who must seek and perhaps find a meaning in the work, and that the meaning found could well, and easily, be quite different from any author's intention.

> I have always held that the individual who "reads" a pictorial narrative should feel completely free to develop his own interpretation and end up with something that is right for him. The cumulative associations of his own experience will provide a basis for understanding and endow each image encountered with significance or meaning (Ward 2010b, 649).

That it is also happening with readers of maps is only less noticeable because most maps seldom challenge the reader on this level. They deliberately keep well within the bounds of conventional vocabularies and syntaxes—paradigms with which their readers can reasonably expected to be conversant—and actively avoid making (or allowing) fundamental interpretive demands (or opportunities), because such demands would detract from the smoothest path to persuasion. Such demands would, in fact, openly court misreadings, but, "if the reader perseveres he may very well arrive at an interpretation quite different from the intention that generated the narrative. Or he may perceive more in the images than was consciously put in by the creator" (Ward 2010b, 649).

But most significantly, Ward recognizes that *however* the reader might choose to interpret, the "*reading is not thereby any less valid*" (Ward 2010b, 649, emphasis added).

WHAT ABOUT INTENTIONS?

So if, as Ward tells us, *all* readings—and this would include mis-readings, counter readings, subversive or deliberately distorted readings, and incomplete readings—are valid, then what role does the maker's intention play in reading?

Artifacts that might or might not ever been intended as maps *can* sometimes be read as if they were—remember the undecidability of the Çatalhöyük graphic—but most maps are discovered in artifacts that were deliberately intended to invoke such readings. Still, intentions are clearly as open to interpretation as any other aspect of a map artifact. What role do these intentions play in the transfiguration of the artifact?

It happens that intentions, too, can be divided conceptually; albeit not into form and matter. Rather, the issues of *root* and *cardinality* are of importance here: from the maker to the user, and back the other way. A mapmaker has some intention—perhaps a variety of intentions—in creating the map artifact. Whatever the particulars of the intent—and in any particular map the particulars are important—the intent *must* include making a statement and backing it with some sort of evidence: that is to say, the artifact must have some rhetorical purpose and argument. The particulars, however, are of critical importance in any particular map, and it is those particulars that suit the artifact to the task of convincing a particular audience of a particular argument.

Going back the other way, a map user—one who has chosen to be a map reader for this artifact, and has chosen to transfigure it into a map—has both intents and assumptions of their own. The reader's *intent* will include discovering if this particular map can and will convince them of its usefulness (in informing them), usability (in being employable), and reliability (in being a valid characterization of the argument). The reader's *assumptions of reliability* include whatever idea they have formed of what the *maker's particular intentions* might have been. The reader, of course, has no direct access to the maker's intentions, and evidence of those intentions must be discovered, interpreted, and judged. One question the reader must consider is *What would the maker of this map like me to believe*? Another may well be: *Do I want to read counter to that assumption about the maker's intent*?

Presentation, reputation, citation, and any number of other profound, significant, and sometimes superficial -ations each play a role in this critical decision made by the reader. Addressing an audience's criteria for belief is one of the fundamental aspects of mapmaking—and its criticality is reflected in its inclusion in the core Rhetorical Imperative of cartography through the rhetorical appeal to *ethos*: the appeal to authority. *Does this map look worthy of belief*?

It is important to not confuse *intention* with *concept*—the concept concerns what it is to be a map, while the intention is just the business case for having taken on the job. Looking back at the singing performances turned in by Yoko Ono—mentioned above—in *Sakura* we have an intentional exhibition of craft, and in *Voice Piece for Soprano* there is an intentional demonstration of concept. The *intentions*, in either case, only provided *opportunities*.

CONCEPT, INTENTION, AND CRAFT

Thus it can be seen that clear and useful intellectual divisions can be made, not only between *form* and *matter*, but between *concept*, *intention*, and *craft*. In any map—as in any artwork—this division allows us to examine, explore, and come to an understanding of the work's elemental components and of its whole.

In practice, of course, these three elements are inextricably intertwined—no one or two of them can exist without the others, and none can be severed from the others *except* in thought. The *idea* or *concept of a map*—what a map is, its what-ness—is instantiated by its *craft embodiment*—its how-ness—and is invoked by a map's *business intention*—its why-ness—and yet it exists as a single entity. In the transfigured map, each element feeds directly into the center of the others.

In addition, each map is *judged* independently by each potential user, and each potential user brings their own selected mosaic of criteria to bear in making their own decisions on the map-ness of the artifact. Yes, each individual is constrained by culturally promulgated conventions, but each one compiles and understands that medley of conventions to suit themselves—each reader *makes their own map* out of a given artifact. It is conventionality that makes different readers' maps so similar.

THE CONCEPT OF MAP ALLOWS MAPS TO EXIST

Nothing can be a map without an interpretation that constitutes it as a map, and any map has more to do with other maps than with whatever it purports to depict. It is a characterizing feature of the entire class of objects that are maps, that they are what they are because—and *only because*—they are interpreted as such.

Not all maps are possible at all times. This operates in much the same way as Thomas Kuhn (1970) has shown that science advances—not by cumulative growth in an ascending curve, but by operation within a series of paradigmatic norms that arise and replace earlier sets of norms that have played out their utility. What counts as normal and valid at any one time tends to be related to the needs and interests of the community the norms serve—communities that may be be egalitarian or hegemonic. While a particular paradigm reigns, that which is normalized by it is accepted as given, and not questioned until needs and interests change.

The naturalization of mapping norms and of restrictions of the cartographic horizon is part and parcel of being a map reader. As Stanley Fish (1980) has pointed out, a reader necessarily sees the thing they recognize as a text as being *already embedded* in a structure of meaning. Thus, a map reader, by recognizing a map, has already made a number of decisions about it and about how to go about reading it. This can lead to situations where artifacts never intended as maps are recognized and employed as maps—as well as to the reverse, where something intended to be a map goes unrecognized. In either case, while the reading (or non-reading) may be inconvenient, misleading, impractical, or otherwise undesirable, it is *not* in any way conceptually *less valid*.

TWO CONCEPTUAL CARTOGRAPHY EXHIBITS

It is the perception of the stigmata of an abstract yet mutable concept of map form—mapicity—in an artifact that prompts map readers to transfigure that artifact into a map, and thus allow meaning to be read into it. Examples of this are not hard to find. The works discussed in the following sections serve to illustrate some of the ways a conceptual analysis might be applied to two groups of map artifact.

THIS WAY BROUWN

The practice of the Dutch artist Stanley Brouwn (1935–2017) centered on place, direction and measurement, and he is perhaps most famous for *This way Brouwn*, a long running series of works that combined all three. As Antje von Graevenitz described the project:

> Brouwn selected a pedestrian at random and asked him to draw the way to a particular place on a piece of paper. The only thing the pedestrian had in mind was to do Brouwn a favour, but what he was in fact doing was giving shape to his ideas and projecting them onto paper: unskilled drawings consisting of loops, lines, circles, dots, arrows, crosses and street-names. The well-meant scrawls have a very personal effect, but they nonetheless

> express a way of thinking which anyone might have. Brouwn then added his motto to the projection: This way Brouwn. One of the inexcrable [*sic*] consequences is that blank sheets of paper also counted as works of art. They, too, expressed a thought process: Brouwn had asked somebody the way to a place he had already reached: no way Brouwn. (von Graevenitz 1977)

This way Brouwn was a complex project combining interaction, place, travel, and artifact making. He, himself, remarked—typically, in the third person—that "Every day, Brouwn makes people discover the streets they use" (Becker and Vostell 1965). It is most significant, however, that apart from incidental photographs of a few of the encounters (Figure 4), the only artifacts that remain from the activity are the maps (Figures 5 and 6).

That the drawings are *intended* as maps is indisputable—they were maps for their makers, and they were maps for Brouwn when he accepted them. If they are maps when they are seen by map readers today, it is because of the stigmata of mapicity that readers of maps read into these drawings that both permits them to be recognized and facilitates their reading. The example of these maps opens the door to the conceptual question: "Where exactly is the borderline between reading into and reading?" (Gombrich 1963, 153).

Brouwn's maps—sketchy, terse, fragmentary, divorced from their origins and uses, and adrift from their contexts—serve as a bridge into the realm of maps as abstract

Figure 4. Stanley Brouwn (foreground) and a collaborator in the 1960s. Taken by Igno Cuypers. Source: **https://www.are.na/travess-smalley/stanley-brouwn-this-way-brouwn-1960-1964**.

Figure 5. Stanley Brouwn. *This Way Brouwn.*

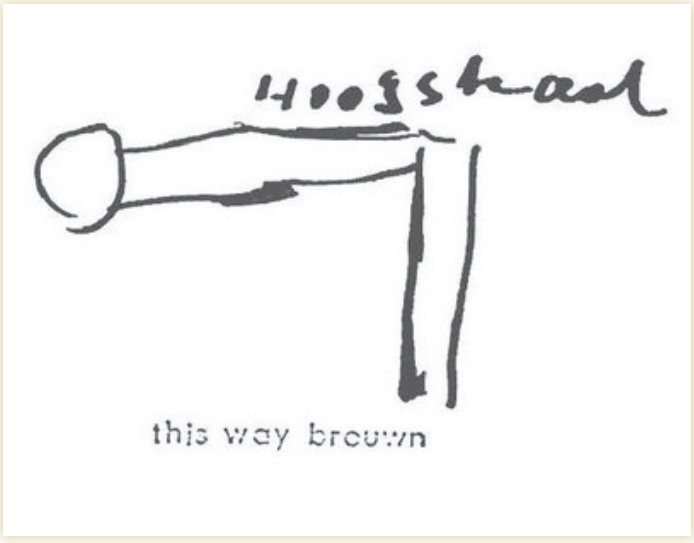

Figure 6. Stanley Brouwn. 1969. *This Way Brouwn.*

concepts. Having crossed that bridge, one is, perhaps, prepared for a stroll through more challenging terrain.

A WALK THROUGH H

In 1978 Peter Greenaway released a short film entitled *A Walk Through H*: *The Reincarnation of an Ornithologist*, built around maps that can arguably be identified as conceptual. Over the course of forty minutes, a journey is narrated through the unseen landscape of H—a landscape that is only shown through a series of ninety-two maps—a landscape that, as the narrator remarks, may well have only existed in its maps.

In addition to the obvious questions raised in *A Walk Through H—What does H stand for? Why is the narrator on this journey?*—there looms the implicit one of *What constitutes a map?*, and it is this question that ties the film together.

The authority of the mapmaker is repeatedly called into question by the film's narrator, as with the map (Figure 7) that "was supposed to have been by Erhaus Bewler, but if that's the case then it's a fake,"* although in this instance the narrator concludes that this particular map was "obviously more valuable to me as a fake."*

The film makes clear that, whatever the actual or assumed intentions of the map author, it is the *map user* that both assigns belief and choses how a map is to be used in a given situation—as is demonstrated in map seventeen (Figure 8):

> This is a map made by an exiled pianist, as a directive to the members of his band. He could not foresee that his musical and topographical instruction should be used backwards. As a cartographer, he was not appreciated in his own country.*

Issues of trust and belief are also raised, over and over. These issues are sometimes triggered by suspicions about the artifact itself, as in that case of map sixty-four (Figure 9), where: "the map was not especially clear. I distrusted its usefulness, and I distrusted its place in the chronology,"* and occasionally for reasons that are less easy to define.

Figure 7. Peter Greenaway. 1978. Map 27 detail. A fake Erhaus Bewler map.

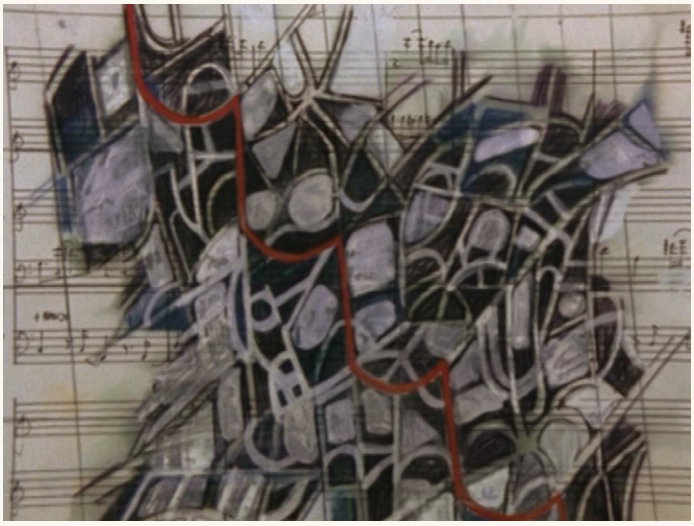

Figure 8. Peter Greenaway. 1978. Map 17 detail. A map made by an exiled pianist.

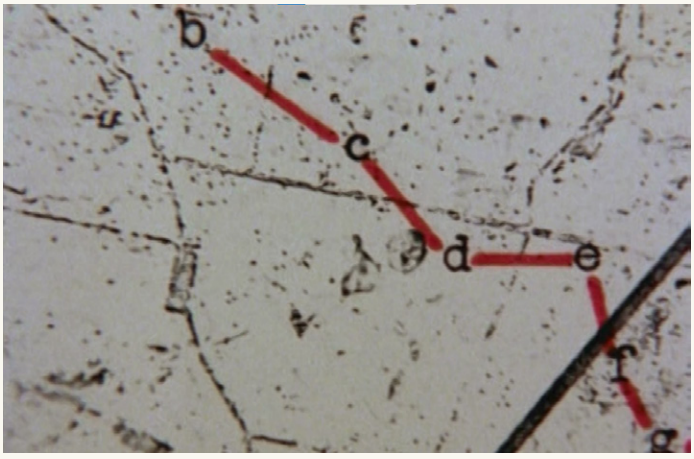

Figure 9. Peter Greenaway. 1978. Map 64 detail. This map was not especially clear.

* All quotations thus marked are from the script of *A Walk Through H: The Reincarnation of an Ornithologist*, written and directed by Peter Greenaway (1978).

> The twenty-first map [Figure 10]. The map of a conscientious cartographer. This map had been a legal orthodox buy from an antiquarian's bookshop. It had been kept in a map cabinet. It had been exchanged in daylight for an authorized cheque. There had been a receipt. Yet, for all that I never felt the map was mine. I'd kept it hidden.*

In every case, it is the relationship of the map reader to the map artifact that is pivotal, although, clearly, the narrator's reading is never entirely idiosyncratically autonomous. He relies a great deal on the advice of his mentor, Tulse Luper, who had earlier, in regard to map twenty (Figure 11), advised him that "if in need I should play this map like a blank in a card game. It might get me out of trouble."* In fact, the narrator does find himself needing to do just that, after being misled by another map (Figure 12)—one which he had been duped into bringing.

> This drawing was bought on my behalf from a traveler who said she had made the journey before. I'd paid a lot for it. I thought at the time that any journey she might take would be worth taking. The road was clearly marked, perhaps too clearly. As a map the drawing was worthless.*

As it happens, the journey's end is reached; but the questions opened—including questions about map provenance, intentionality, interpretation, and formal existential being—remain unclosed. They are instead laid out on the dissecting table—like the proverbial umbrella and sewing machine (de Lautréamont 1978, 73)—where they can be examined.

All along, and increasingly, assumptions about intentionality in map composition and the existential status of map-hood—*is this supposed to be a map?*—are assailed. Throughout the journey, as each artifact is transfigured into a map by the traveler, a belief is engendered in the resulting map entity, despite any reservations the traveler has in the artifacts themselves. This belief persists despite instances where a map requires a great deal of interpretation, such as the one that "seemed based as much on a speculative appreciation of landscape as on anything permanent."* Significantly, his belief in each transfigured map was borne out in every instance *except* in the case of map nineteen—the lone artifact that had come to him from *outside* his training and experience—the one that was bought *for* him from an unknown authority—and that led him astray.

Figure 10. Peter Greenaway. 1978. Map 21 detail. The map of a conscientious cartographer.

Figure 11. Peter Greenaway. 1978. Map 20 detail. A map to be played like a blank in a card game.

Figure 12. Peter Greenaway. 1978. Map 19 detail. This drawing was bought on the traveler's behalf.

EVALUATION OF THE EXHIBITS

Thus—as demonstrated by Brouwn and Greenaway—it can be seen that one of—*one of*—the critical aspects of map-hood explorable through a conceptual approach is the question of how a map, *any map*, comes into being through the reader, and through the choices they make at each and every step of their engagement.

Interestingly, Simon Ferdinand uses *A Walk Through H* as the center piece of the concluding chapter of *Mapping Beyond Measure* (2019), although his interest in the film is quite different from the issues raised in this paper. While, admittedly, his overall thesis is quite nuanced, it is nonetheless clear that Ferdinand sees cartography and individual maps as, broadly speaking, "the manifestation, in concrete objects and practices, of a particular culture's grasp of what *geography* is and means" (Ferdinand 2019, 209, emphasis added), while recognizing the existence and value of "counter-hegemonic *spaces* and *spatialities*" (Ferdinand 2019, 210, emphasis added). From this it is equally clear that he is not particularly interested in the map *itself*, but in how it functions as handmaiden to the likes of geography, spaces, and spatialities, and that his thesis is thus just another socio-political commentary—commentaries that in this paper have been dubbed parochial. Similarly, Ferdinand clearly differentiates between maps grounded in what he calls the "ontology of calculability" and those employing "other ontologies" (Ferdinand 2019, 209)—including categories of counter-hegemonic maps and of art maps—without addressing how things so very different on an (supposedly) ontological level can all be maps (*hint*: if your ontologies are jumping around, your categories are defective). This also places him in the company of Denis Wood (2007) and Rasmus Grønfeldt Winther (2020) in positing the existence of special "art" maps somehow privileged with various magical powers not available to the common run of maps, but without explaining how a poor muggle might identify one in the field (Denil 2007, 9).

This paper, by contrast, focuses on that almost-never-addressed and yet-to-be-adequately-explained question of how so many things can be maps—sometimes all at once and sometimes only in certain circumstances or for certain people. This is a far more fundamental question than any parochial, craft, or other existing theory manages to engage, and, has thus far proved so hard to answer that entire platoons of experts have declared the attempt to answer it superfluous (see Edney 2019, 21).

SOME CONCLUSIONS

ARTIFACTS ARE TRANSFIGURED INTO MAPS BY MAP READERS

The idea that the map is some sort of container into which the mapmaker has poured content—or stuffed meaning—that the user then pulls out and uses is clearly mistaken. Similarly, theories based on the craft of mapping, on taxonomies, or on socio-political critiques fail to describe the act and activity of leaping from artifact to map. Recognizing, interpreting, and comprehending an artifact as a map constitutes an activity in which the map reader plays a central, and pivotal, role. The artifact is inert until a reader does something with it, and the something they do is nothing short of a transfiguration of the artifact into a very specific type of meaning-embodying entity—a map. The artifact furnishes conventionalized materials out of which meaning can built, but the tools for constructing that meaning are brought to—and applied to—the artifact by the reader. Thus, maps, and their meanings, are made *on the spot* (Rhona Scullion 1979, personal communication) through intellectual meaning-finding and meaning-making activities. The reader is not a passive receiver, but an active agent—choosing and applying map reading conventions as they, the readers themselves, think appropriate.

Just as each observer discovers and sees their own rainbows or Brocken spectres, every map reader discovers and sees their own maps in the artifacts they recognize. Unlike these atmospheric phenomena, however, the map, once transfigured, persists in the reader's understanding as a dynamically stable entity resistant to all but the most profound assaults.

This transfigurative meaning-making does not entail sheer relativism, or an infinite diversity of interpretation—it is, in fact, the product of training and of experience that both constrains and facilitates the activity and its outcomes. Map readers are created through their training, which consists of learning reinforced by means of evaluated observations and critiqued actions—in the earlier stages, relying primarily on instruction (the instructor supplies

the student with opinions) and later, increasingly, by trial-and-error investigations and leaps of informed intuition. The goal of such education is the establishment of policies that can be applied judiciously, as circumstances require, and through this education a map reader is made (see Cabi et al. 2019). Although this education *can* tend to impose one particular conceptual map schema on the reader—and studies show that less experienced map readers are generally more schematically doctrinaire (Forrest 1999)—the fact is that it need not.

THE UTILITY OF A CONCEPTUAL THEORY OF CARTOGRAPHY

A *Conceptual Theory of Cartography* would be concerned with the map as *a thing in itself*: whatever its instantiation, however it is used, whyever it comes to be made. A correct conceptual theory will apply to any and all maps, without special cases or exceptions.

Conceptual cartography would similarly aim to clearly differentiate that which makes up the common, dynamically stable core of the discipline from that which is mutable, contingent, and variable.

Conceptual maps would explore the essential qualities that differentiate maps from mere artifacts, by exploring the act of transfiguration that is perpetrated upon an artifact by a map reader. Contingent qualities such as *virtuosity*, *clarity,* or *ease of use* would be set aside—not as undesirable in themselves, but as definable and applicable only in individual situations, times, and/or places for individual users or map uses—in order to focus on the conceptual leap that must precede the discovery of such qualities.

A CLARIFICATION

The insistence that it is the concept of *map* that allows maps to exist might be seen by some observers as a hegemonic power play—one laden with overtones of racism, sexism, elitism, colonialism, or whatever—seeking to assert a cultural domination over cartographic legitimacy. Quite to the contrary, there is *no* single, overreaching set of properties that critically acceptable maps must possess in order to be maps. The conceptual focus on the way an artifact is transfigured into a map explains all the various ways maps can and have been used—for oppression, for liberation, for perpetrating exploitation, for exposing it; and for showing the way to the post office as well. The conceptual framework outlined in this paper emphasizes the *agency* of the map reader in the navigation and selective interpretation of the range of norms and conventions available to that reader. Thus, a map reader is free to use, ignore, mash-up, influence, and, indeed, to help remake, the very cultural norms and conventions that structure—both clearing a space for, and fencing in—the abstract concept of map. The map is not there until *you* transfigure an artifact into one, and the question at that point becomes: what map will *you*, and *your society*, make of the artifacts you read? To quote the late David Graeber, a founder of Occupy Wall Street: "The ultimate, hidden truth of the world is that it is something that we make, and could just as easily make differently" (Goodman 2020).

ON THE EXISTENCE OF CARTOGRAPHY

Some voices have been raised in recent years, calling upon us to dispense with cartography altogether. In 2003 Denis Wood announced that cartography was dead, and in 2019 Matthew Edney declared that cartography has never existed. Why, some might ask, bother with a conceptual theory of cartography if cartography doesn't exist—or if it is dead?

The main arguments Wood and Edney put forward are basically similar. They both say that:

1. Cartography is a johnny-come-lately made-up word that was never wanted or needed.

2. No one can legitimately apply neologisms to anything occurring before that term was coined.

3. Cartography is only what *they themselves* say it is—although they each say it is something different.

It is well documented that the word *cartography* was assembled in the early nineteenth century from Greek components to describe and label a body of practice pertaining to the drawing of maps. The coinage was, in fact, quite in line with the spirit of its time. The late eighteenth and early nineteenth centuries were the salad days of European Romanticism—a philosophic movement that insisted on a holistic view of the world—a unity and interrelationship we speak of today with terms like environment and ecology. The Romanticists sought ways of speaking about these relations and connections, and the terms they invented—like cartography and psychology—denoted concepts with

wide connotative reach. Much of the way we see the world today we owe to Romanticism.

In his book *Early Thematic Mapping*, Arthur Robinson wrote that "romanticism is . . . diffuse and elusive," and he explicitly divorces it from the "concern with the conditions of the natural environment and . . . with the health and quality of life" that he recognized as flourishing at that same time (Robinson 1982, 39). Robinson was wrong to separate the two, because the concerns he cites are integral components of Romanticism—as was demonstrated by Alexander von Humboldt in works such as *Aspects of Nature* (1849) and *Cosmos* (1856).

Charges that the broad use of the term cartography is anachronistic are similarly groundless. We know that mapmakers clearly did have ideas about what went into making maps—activities and practices we *today* call cartography—long before that term existed. The word cartography means specific things to *us* and labels, for *us*, what earlier people had to describe in other ways. It would only be anachronistic to put the term in those earlier mapmakers' mouths.

Finally, one must examine just how narrowly either writer defines the term cartography. For Wood, "cartography" means a cadre of pedagogues he sees as laying the "dead hand" of "professionalism" (Wood 2003, 4) on a growing army of heroically unschooled mapmakers "willing to rise to the challenge" (6). Rather than laying out any actual evidence supporting his indictment, however, Wood prefers to spin a perverse, counter-factual, and unpersuasive Horatio Alger-esque fairy tale of Noble Savage mapmakers.

Edney, on the other hand, equates "cartography" with an "Ideal" resting upon a "series of preconceptions that construe the diverse practices of mapping to form the singular and coherent endeavor of cartography" (Edney 2019, 50). The fifty-eight hearsay "convictions" he has collected to underpin his indictment (52–55) unquestionably add up to a laughable, offensive, and pernicious caricature of a belief—but even if they add up to his "Ideal," it is not proven that this bogyman Ideal can only be addressed by calling it cartography and chopping off its head.

If there *is* anything wrong with cartography—as a body of informed practice, warts and all—it is that the map at its core remains undefined. If any question remains about the need for a Conceptual Theory of Maps, Mapping, and Cartography, this surely lays them to rest.

IN CLOSING

The kind of advantages that will accrue from adopting a Conceptual Theory of Cartography—one that can differentiate the formal essence of cartography from the incidental elements of some maps—can be illustrated by reviewing the resolution of the long-standing question of the relationship between art and beauty that was made clear through conceptual art interrogations.

Plato (1888) held that art could only imitate the beauty of nature—and therefore banned all artists from his Republic. By the eighteenth century, the idea that *Beauty is in the eye of the beholder*—a phrase ascribed to David Hume (1912)—was gaining ground. Before the Great War, Roger Fry (1920) and the Bloomsbury Group promoted the idea that advanced art was what might nowadays be called *differently beautied*, and that one had to learn to see it as beautiful. Just a few years later, however, the Dadaists—shocked and jarred by the 1914–1918 war—felt compelled to divorce beauty, and jettison it wholesale from art. These different approaches cannot *all* be right: what *is* the relationship of beauty to art?

It was only through the conceptual interrogation of art that it has come to be clear that beauty is not only one of countless aesthetic qualities an art work may or may not possess—qualities like cuteness, the sublime, the disgusting, the abject, or the silly—but that it is, *at the same time*, the only one of the lot that can also claim to be a *value*, like *truth* or *goodness* (Danto 2003).

It was the interrogation of art as an *abstract conceptual entity*—not only through deliberately conceptual artworks, but through application of the sharp hylomorphic edge of conceptual analysis, applied in conceptual art practice—that allowed the essential to be divided from the incidental in a manner that exposed stratifications that explained and justified its findings, and allowed those findings to be generalized to all art.

So too, the discoveries made by a conceptual cartography will be applicable throughout the whole of cartographic practice, and show the way to not only differentiating the essential formal elements from others that are not—regardless of how desirable such other elements might be

in certain situations. A Conceptual Cartography practice, built on the model of a Conceptual Art practice, offers the best and most promising pathway to a more sophisticated, complete, and general understanding of cartographic practice and of its products.

The terms "map reader" and "art viewer" have been used throughout this paper, but it is clear that neither really encompasses all that map reader/art viewer undertakes in their reading/viewing. We approach map and/or art works as readers and/or as viewers, but leave them as altered beings, with altered perceptions and understandings of the artifacts that we encounter and chose to transfigure into maps and/or art (see Danto 2000, 134), just as the artifacts themselves have acquired—in our minds—a new formal abstract existence as map or as art.

This philosophic distinction between artifact and map has both immediate and long-term practical repercussions for our understanding of maps and of the informed discipline concerned with maps and mapping: cartography. Robinson and Petchenik recognized this in the 1970s, without being able to come to grips with the issue, but this paper proposes that these foundational questions can be tackled by means of a Conceptual Theory of Cartography, and a conceptual interrogation of the map.

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PEER-REVIEWED ARTICLE

Moving Lightly over the Earth: A Cinematic Map of Post-industrial Sulcis

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In the novel The Rings of Saturn *(1995), the German writer W. G. Sebald recounts his solitary journey to the town of Suffolk (UK) at the end of his years, while he also reflects on some of the dramatic events that shaped World War II and his personal memories. In this work, he takes on a particular narrative tactic defined by the interaction between the text and images that creates a special type of montage in which he seems to draw from cinematic language. I argue that, drawing on Sebald's work, we can imagine a form of ethnographic observation that involves the creation of a cinematic map through which to explore the memories and imagination of individuals in relation to places where they live. I explore the day-to-day lived experiences of unemployed people of Sulcis Iglesiente, through their everyday engagement with, and situated perceptions of, their territory. I describe the process that led me to build* Moving Lightly over the Earth, *a cinematic map of Sulcis Iglesiente through which I explored how women and men in the area who lost their jobs as a result of the process of its deindustrialization give specific meaning to the territory, relating it to memories of their past and hopes and desires for the future.*

KEYWORDS: Sebald, W. G.; cinematic map; unemployment; Sardinia; Sulcis Iglesiente

FROM SEBALD'S LITERARY STYLE TO BUILDING A CINEMATIC MAP OF SULCIS

> *To write is to struggle, in other words, to resist; to write is to become; to write is to make maps.*
> *(Foucault 1983)*

In this article, I intend to describe the process that led me to create *Moving Lightly over the Earth*, a cinematic map of Sulcis Iglesiente, one of the poorest areas of Sardinia, Italy, with one of the highest rates of unemployment in Europe. Specifically, I will discuss how I drew inspiration from the German author W. G. Sebald, especially his novel *The Rings of Saturn* (1995), in order to build a cinematic map to investigate how the people of Sulcis attributed particular meaning to their territory as a result of the process of the area's deindustrialization. In *The Rings of Saturn*, Sebald recounts his solitary journey to Suffolk (in the United Kingdom), where he lived until the end of his life. The road, in Sebald's telling, stands as a metaphor of life, in which everything can crumble, shatter, or precipitate into ruin and destruction. Sebald moves through a space bounded by the sea, hills, and a few coastal cities; through large decaying estates on the edges of airfields from which fighter planes took off to bomb Germany. The novel is organized around a route of ten stations, where he meets different people and objects that reflect the area's natural history of destruction, marking out the human journey and succession of natural events.

He alternates the stories of his pilgrimage with those of other wanderings and emigrations that echo his, such as that of a refugee from Germany who was a poet and translator of Hölderlin; Joseph Conrad, who in the Congo knew the melancholy of the emigrant and the horrors of a country of darkness;[1] Chateaubriand, exiled in England; and Edward FitzGerald, a translator of Persian poetry.

1. Many commentators have seen Conrad's portrayal of the "dark" continent and its people as part of a racist tradition that has existed in Western literature for centuries. In particular, Chinua Achebe accused Conrad of racism because of his refusal to see the Black man as a full-fledged individual, and for his use of Africa as an environment representative of darkness and evil. While it is true that evil and its corrupting power is Conrad's subject, Africa is not simply representative of that theme. The darkness in the heart of the "civilized" white man (especially the civilized Kurtz who entered the jungle as an emissary of piety and science and who becomes a tyrant) is contrasted and confronted with the so-called barbarism of the continent. The civilization process is where the true darkness lies.

Sebald interweaves the stories of the characters he meets with those he only remembers through glimpses of ancient and modern history (the cruelties of the Celestial Empire, the violence of World War II), as a counterpoint to earthquakes, floods, catastrophes of nature, and the suffering inflicted by a rapacious economy. Karen Remmler (2005) compares Sebald's literary style to the activity of an *archaeologist* in which the discovery of past ruins caused by natural events are indistinguishable from those generated by historical destruction. The mutual relationship between "man made and natural" (Remmler 2005, 238) disasters reminds us of the multi-dimensional characteristic of destruction that affects both the social and natural spheres of human life. The recognition of destruction is inherent in the process of remembering. Only through the fragments and the ruins can we recognize the double dimension (presence / absence) of the past in us. *The Rings of Saturn* suggests that by changing one's place to see the remnants of destruction, no matter how miniscule or marginal, we see the past as distant and yet connected to the present.

David Darby has said that *The Rings of Saturn* can be seen as a particular form of territorial mapping (2006, 270). At first glance, Sebald's walk along the coast of Suffolk does indeed seem to describe the territory as a topographically transparent entity. Geographical locations are accurately marked, often with photographs. This makes it seem as if his walk could be easily replicated "with the help of a good map." Yet, as Darby has also said, this is only an illusion. Many of the routes taken come from improvised choices: "the walker cuts across fields, climbs over walls, loses himself in labyrinths, real and metaphorical, wanders lost in circles, and nearly comes to grief, blinded in a sandstorm" (Darby 2006, 270). Some of this can be reproduced in a map that seeks to be an objective representation of the territory. Sebald's wandering on the Suffolk coast seems mostly like a trip through time. "It is a landscape of a borrowed time, a landscape that will one day be gone, its tenuous afterlife, consisting exclusively in whatever memory is left, of the stories still contained in its fraying fabric" (Darby 2006, 270). In *The Rings of Saturn*, Sebald overlaps and mixes the experiences of the characters he meets (or recalls) and historical events, forging a connection between individual memories and historical events. This particular narrative tactic is enhanced by the interaction between the text and images to create a special type of montage in which he seems to draw from cinematic language. I argue that, drawing on Sebald's work, we can imagine a particular form of cinematic mapping through which to explore the memories and imagination of individuals in relation to places where they live. For the purpose of this article, I intend to describe how Sebald's literary style, and in particular *The Rings of Saturn,* can be taken as a significant source of inspiration for the making of a cinematic map.

Sébastien Caquard (2009) wrote that maps are often inspired by stories and their relationships with places. Different forms of narrative (oral, written, and audiovisual) may use cartographic forms to represent space-time structures; to give shape to the spatial expressions of particular events; and to connect aspects of the personal sphere to where daily life happens and to other phenomena that act on a global scale. This aspect takes on special importance concerning the current maps, made through cinematic tools. The interconnections between cinema and geography have been the subject of study by several authors (Mauduit and Henriet 1989; Lukinbeal 2004), and the cartographic reading of films has been conducted by several authors, such as Tom Conley (2007) and Teresa Castro (2009). Christian Jacob (2005) was one of the first authors to recognize the cinematic dimension of cartography. He conceived the idea of the atlas as an accumulation of individual maps, cut out and organized following a particular logic aiming to create a specific sense of structure, rhythm, and progression. Through his analysis, Jacob showed the narrative dimension of mapping, drawing on the work of scholars in different disciplines (Bruno 2002; Castro 2009; Conley 2007).

Drawing from Jacob's ideas, Teresa Castro (2006) sees Albert Kahn's vast film and photography project, *Les Archives de la Planète* (1912–1931), as a way of mapping the world through a systematic collection of images that convey a particular form of knowledge. Castro compares the film director to a cartographer who selects, records, and archives different aspects of the world, and the camera to a cartographic tool that can narrate human beings' stories in relation to geographical spaces. In *Cinema's Mapping Impulse*, Castro looks at several films about World War II, identifying in each different cartographic shapes (areal views, panoramic views, atlases) that correspond to different forms of knowledge. While panoramic views in films create a sense of understanding of places and landscapes, and the aerial views offer a sense of "unquestionable source of emotion" (Castro 2006, 11) through their particular association with the landscape, atlases are associated with a collection of images that can give information about certain places in particular time periods. The mapping

impulse is intended as a vehicle of knowledge to investigate the emotional aspect of the atrocities of the war.

The theme of memory related to the events of World War II is also the focus of Tom Conley's observation of the trauma of war through the genre of film noir (2007). Through the eye of French director Jean Renoir, he maps French society in the interwar period. Then, through two American noir films—*The Killers* by Robert Siodmak (1946) and *The Crooked Way* by Robert Florey (1949)—he takes on the theme of memory lost during World War II. By analyzing these films, Conley underscores "much of the ambivalence and the trauma of war that the cartographies of film noir locate relentlessly," and concludes by pointing out the importance of cartography in a broad sense "to take issue with our own sense of location and our rapport with traumatic and traumatizing events" (Conley 2009, 22). As Sèbastien Caquard (2009) noted, both Castro and Conley use film as a tool to map the places of World War II with the aim of revealing the atrocities of armed conflict in a way new to traditional cartography. Conventional maps often simplified and dehumanized the landscape to help wartime leaders "avoid conscience issues related to the impact that any of their decisions might have on the population of the mapped area" (Caquard and Taylor 2009, 7). Film noir and "cartographic shapes" subverted this trend by revealing the human presence in the landscape in order to make visible the human consequences of the conflict.

In Sebald's work, too, a central theme is memory and the attempt to re-humanize the landscape as a historical product: the fruits of the war's destruction. One of the central aspects of his literary style consists in framing the experience of the individual within a geographical space and mnemonic process. This aspect emerges clearly in *The Rings of Saturn,* where the practice of walking favors the mnemonic reconstruction of a past that comes up against the irreversibility of historical events and the geographical condition of the landscape. As the stories unfold in the narrating consciousness, the events of epoch-shifting changes and the atrocities of war cannot be stopped, just like the degradation caused by nature. "The trees crushed by the wind, burned in the name of progress, or fallen from the crumbling cliffs, cannot be saved or resurrected" (Sebald as quoted in Wolff 2014, 17). Sebald's landscape is an intricate collection of fragments of the past, floating in a melancholy narrative consciousness. The practice of walking in this sense is defined by an ongoing process of disintegrating and reconstructing the landscape, an attempt to reconstitute a nearness of the fragments of the past in the present, the faraway in the near, and the living in the deceased. Drawing from Sebald's literary style, a particular form of cinematographic mapping can be conceived that aims to capture the temporal coexistence of the past and present in places.

Sebald's literary style, in particular that used in *The Rings of Saturn,* has been a source of inspiration both for cinematographic and cartographic works. For example, in the 2012 film *Patience (After Sebald)*, the British director Grant Gee takes a particular documentary approach in which he revisits the Suffolk coast through interviews conducted with characters who knew or were influenced by Sebald. Ng-Chan (2015) notes that, in addition to being a meta-travelogue, *Patience* can be seen as a "travel story of a travel story" that explores how understanding the emotional experiences of a place can be conveyed through cinema. Drawing from Castro's analysis of the analogies between cinematographic shots and cartographic shapes, Ng-Chan notes how *Patience* explores the territory through a double perspective, consisting of both a mobile viewpoint that retraces the paths of Sebald and a distant viewpoint of the places that he moved through, noting how they refer to different forms of knowledge.

In a similar way, Barbara Hui in her 2009 *Litmap* draws from *The Rings of Saturn* to develop a cartographic work on the routes taken by Sebald. Her project conceives geographic space with a positivistic, empirical approach, using "numerically precise data" to delineate the names of places on the earth's surface "with a certain degree of mathematical accuracy" (Ng-Chan 2015, 558). Hui should be acknowledged for offering a key to understanding *The Rings of Saturn* and Sebald's literature in general, presenting a direct correspondence between its geographical orientation and textual narrative description. However, as Lynn Wolff (2014) noted, this type of spatial representation runs the risk of disorientation and decontextualization. Making Sebald's paths visual through spatial geometry, Hui "decontextualizes the narrative passages and erases the visual elements of the text" (Wolff 2014, 17). This approach specifically lacks a central element: "the images integrated into the text" (which are typical of Sebald's work and essential to his poetics) "are neither reproduced nor referenced in this form" (Wolff 2014, 17).

In his work, Sebald combines texts and images in a particular way to highlight the intellectual and emotional

involvement in the themes he addresses, to the point that the reader wonders if the text can be considered a novel, a travel story, or an autobiography. What is the role of integration between text and images, and why does this story refer to other writings, such as Kafka, Borges, and Nakobov? What is real and what is invented? Where is fact and where is fiction? The readers are engaged in an interpretation of a multiplicity of simultaneous levels that inspires them to ask various questions and, at the same time, to have a sensory involvement (visually and haptically) and to actively imagine what is written. Drawing from Sebald's literary style, a particular form of cinematographic map can be imagined as consisting of a series of photographs, places, writings, and soundscapes whose purpose is to involve the reader in a sensory disorientation of the landscape, one that can elicit different forms of chronotopic reconstructions of the past.

Below, I describe the process that led me to construct *Moving Lightly over the Earth*, a cinematic map of Sulcis Iglesiente, through which I explored how unemployed people in the area (who lost their jobs as a result of the process of its deindustrialization) give specific meaning to the territory of southwest Sardinia, relating it to memories of their past, as well as their hopes and desires for the future. Using the cinematic map as a tool of ethnographic observation, I observed Sulcis's process of deindustrialization, seeking to understand how the experience of job loss changed how local people perceived the territory.

THE SILENT REAPPROPRIATION

THE RETERRITORIALIZATION OF SULCIS AFTER THE AREA'S DEINDUSTRIALIZATION

> *We believed in the immediate advantage of employment, wages, and greater consumption. We believed that modernity had arrived. We are paying and we continue to pay a terrible price for this kind of modernity.*
>
> (Bachisio Bandinu, *Noi non sapevamo*, 2016; translated by Miriam Hurley.)

In March 2012, about a hundred miners from Sulcis occupied the coal mine of Nuraxi Figus in the Carbonia-Iglesias province. The former employees barricaded themselves 400 meters underground to protest the closure of the mine and demand their right to work. This was the last event in a line of many protests and attempts to reappropriate the territory, which had shaped Sulcis's society since the 1990s and turned it into a theater of protests and violent social conflicts. Protests had progressively declined over ten years, giving way to a state of helpless resignation. Yet, there was a process underway in Sulcis of reconfiguring spaces, through which its inhabitants reappropriated the territory through their memories and imaginations.

Immediately following World War II, Sulcis Iglesiente was chosen by the Italian government as a strategic location to launch its revival plan, a process of industrializing Italy's poorest areas (Di Felice 1993). In Sulcis, this process involved establishing chemical and manufacturing factories and modernizing existing mining plants (Ortu 1986). A large part of the local population saw the coming of major industry as an era-changing event. It generated many expectations among the local residents in terms of achieving employment stability, economic improvement, and lessening migration. This process, however, did not have the desired long-term effects. Starting in the early 1990s, there was a gradual decline in manufacturing that reached its lowest point at the start of the Great Recession (2008), when many area factories went out of business, laying off thousands of employees. In 2014, Sulcis Iglesiente had the highest rate of unemployment in Italy and one of the highest in Europe (Pirina 2018; Madeddu 2018).

Deindustrialization has fundamentally, and irreversibly, reconfigured Sardinian society, including people's most basic relationships with the state, society, territory, and the land. This process of ongoing social change and disruption was accompanied by deeply felt emotions of displacement, marginalization, loss, precarity, purposelessness, and betrayal. These emotions manifested as distrust and resentment towards governmental authorities and foreign businesses, but also generated new forms of individual and collective action through which people attempted to reclaim and reappropriate the territory. People without work, and those at risk of losing their livelihoods, sought a claim on the land, economy, and their futures by staging high profile public protests, including strikes, marches, and occupations of mines and factories that ultimately failed. However, alongside these dramatic, publicly-shared, and

visible demonstrations, I argue there is a more subtle, silent, and extensive form of reappropriation and reterritorialization going on. It is one that involves the transformation of how the territory itself is perceived, experienced, re-shaped, and re-imagined on an embodied, emotional, sensory, and affective level, on an ongoing daily basis. This not only constitutes the existential, emotional, and moral content of people's everyday lives but provides a critical framework of interpretation and understanding through which people reshape their experience and future, reflect on events and their life situations, and negotiate moral dilemmas.

For more than thirty years, unemployment has been a subject of growing interest in anthropology and the social sciences in general. Many studies on the topic have focused on enormous economic, political, and institutional upheavals (such as the deindustrialization processes in the UK and the US, the recession in Argentina, and the reunification of Germany). Two aspects of unemployment that have been studied in particular depth are social marginalization and the process of personal and community change arising from job insecurity. Many authors have likened the condition of unemployment to a liminal phase (Newman 1989; Diedrich 2004; Jancius 2006; Hall 2005; Hall and Milgrom 2007), in which, through the experience of being alienated from productive activity, individuals and social groups begin a process of profound transformation in how they perceive themselves in relation to the community. Leana and Feldman (1988) have noted how the experience of job loss can lead to the distancing of social groups, and the loss of practical, shared knowledge, while Newman (1989) has noted how it can lead to a deep, unsettling reconsideration of the system of practices and beliefs acquired in previous work experience. In particular situations where unemployment affects the population on a large scale, this process of reconsideration can affect how an entire community perceives categories of time and space. Daniel M. Knight and Charles Stewart (2016) compared the economic crisis in southern Europe following the Great Recession with the crisis of presence described by Ernesto de Martino. The crisis of presence is the state of separating from historical temporality through which people can take a critical viewpoint on the temporality of the present. The historical being in the world is not a certain and guaranteed condition, but rather it is "a conditional reality" (de Martino 1997, 48), always exposed to the risk of annihilation, to terrible trials that "can put a strain on the resistance of the existing" (48). Similarly, Bryant (2014) noted how a situation of economic crisis can cause an unusually overburdened perception of present-ness. It can be seen as a *critical threshold* where the amplified perception of the present leads to a space-time reconfiguration in how the events of the past are perceived and the future is imagined. Transferring these ideas to the context of Sulcis, we can see how the area's process of deindustrialization has created a space-time reconfiguration through which its people have changed how they perceive the territory in relation to their lives.

My primary objectives for this project were as follows:

1. Observe how deindustrialization in Sulcis generated a process of reterritorialization among people without work, shaped by a changing attribution of meaning to the territory in their memories and imagination.

2. Explore how those without work in Sulcis perceived the post-industrial landscape, relating it to their memories of the past and hopes for the future.

3. Observe how the process of deindustrialization in Sulcis created different modes of considering their personal experiences and various expectations among unemployed people and how these are related to the territory.

4. Explore how we can use the practice of mapping to explore the process of reterritorialization conducted by unemployed people.

ON METHOD

Sebald's most important contribution to this work was his literary style; specifically, his literary montage. He makes many references to films and cinematic metaphors in his work. For example, in *The Rings of Saturn*, he refers to two films about industry and fishing that he remembers having seen as a child. In *The Emigrants*, he relates the experience of having a premonition inspired by seeing Werner Herzog's 1974 film *Jeder für sich und Gott gegen alle* (English title: *The Enigma of Kaspar Howe*) in a London movie theater. However, it is in his particular

narrative style as a literary montage that we can understand the profound relationship between Sebald's writing and the world of film. In *The Rings of Saturn*, he overlaps and mixes pieces from the memories of the characters, famous authors, and actual historical events, forging a connection between individual memories and past happenings. This particular narrative tactic is enhanced by the interaction between the text and images, creating a special type of montage in which he seems to draw from cinematic language. Frey compares Sebald's literary style with the notion of bricolage, following Lévi-Strauss, in which the elements collected respond to the principle that "they may always come in handy . . . and the decision as to what to put in each place also depends on the possibility of putting a different element there instead" (Frey 2007, 231). Taking inspiration from Sebald's literary style, I built a specific ethnographic methodology through which I could observe the territory, considering different contributions from the world of literature, art, and science and relating them to the memories, ideas, and thoughts of local people.

My methodology was also influenced by the relationship between images and text used by Sebald. He defined himself as a bricoleur, and juxtaposes and superimposes images and writings from different sources in his works. In some cases, he produced the texts and images himself, and "in other cases, he borrowed the works of other artists and just composed the two languages" (McCulloh 2003, 23). For example, in his novel *Schwindel. Gefühle.*, the texts are from greats of literature like Franz Kafka, Stendhal, and Vladimir Nabokov, accompanied by images from visual artists like Ernst Herbeck and literary visual artists like Konrad Bayer. In this juxtaposition of images, the two communicative forms prove hybrid and able to borrow fragments of communication from each other. Mark Anderson (2008) noted how Sebald's written texts aspired to take on a visual form and his photographs were intended as a form of writing. Sebald noted himself that photography inspired his texts: "While writing, you see ways of departing from the images or entering into them to tell your story, to use them instead of a textual passage" (Anderson 2008, 134). He also said, "Facts are troublesome. The idea is to make it seem factual, though some of it might be invented" (Anderson 2008, 136). In other words, photography seems to serve as an anchor that connects the pursuit of the past to factualness.

Drawing from this particular aspect of Sebald's literary style, I also used the relationship between the text and image to build my method. I interviewed people who had been affected by the deindustrialization of Sulcis, and we visited places that were significant to them. I photographed these places, and also asked interviewees to offer existing photographs that they considered meaningful (old photos of historical events, places, and family members). I then asked my interviewees to draw inspiration from these images, to consider their personal experiences. Making use of this particular interview form, I sought to explore how the visual perception of the places visited by the interviewees on the pathways that we took could stimulate new types of memories and imaginations in them. The visual stimulation that comes out of the photo elicitation process can give rise to memories, emotions, and intuitions that are not necessarily clear to the interviewer (or the person who took the photograph). This method makes for a triangulation between different sources of information (interviewer, interviewee, photograph) and can inspire many research ideas (Bignante 2010). Though it is not directly linked to Sebald's literary style, the photo elicitation technique suggests the combined use of texts and images adopted by the author in his works. Harris notes that Sebald includes visual images "not because they underscore the written narrative but because they present the reader with that which the text alone cannot" (Harris 2001, 379). In Sebald, the photos are employed as independent syntagmatic units—often literally in the middle of the sentence—that seem to suggest that the text and images are not heterogeneous and may come together on a common basis at a semiotic level. In some cases, the images support the text, in others, they contradict it, and in still others, they coexist in an associative relationship. While in terms of editing, "we might say that text and image are at times meant to be perceived directly, sometimes antagonistically," (Frey 2007, 236) and at times harmoniously, they create "a new kind of coherence, that of spectator-subject recording facts and desires" (Frey 2007, 236). Putting into relationship the texts from the interviews, I could observe the resignification processes of these places and how the experience of job loss had created a space-time reconfiguration of these places.

The third major aspect of my method involved the montage, and the particular way that I related the images and the texts emerging from the interviews. A particular source of inspiration was Chris Marker's film *La Jetée*, one of the most most influential films of the mid-twentieth century. Many film critics, as well as scholars of literature, semiotics, and psychoanalysis, consider it one of the most significant works for rethinking the theory of film

and representation. Like in Sebald's novel, in *La Jetée*, the urban territory of a metropolis (Paris) is used as a stage through which to travel through time. Here the character re-experiences his past with the help of scientists, shown to the audience in an unusual narrative form: a rapid sequence of still photos that tell a story. It has been noted that Marker uses a hybrid language between photography and cinema in an attempt to overcome the dichotomy between the temporality of the past and that of the present (Croombs 2017, 42). In giving movement to the static nature of still photos, the director suggests that the seeming fixity of the past can be put into motion in the present. This completely subverts the impression of reality. The screen is no longer a window on the world but a surface where images, objects, and people flow, and from which the viewer keeps a distance, little inclined to abandon themselves to a perceptual transfer onto effigies exhibiting such a weak degree of reality. This particular narrative choice leads the viewer to imagine movement and spatial continuity for images that are still and suspended in time.

Like in Sebald's work, the juxtaposition of images with text in Marker's film (both the text appearing on the screen and the voiceover) can be seen as a search for a particular time dimension. Roger Odin conceives of the role of voiceover in *La Jetée* as a tactic to restore the narrative's coherence and mark the nature of the work as fiction: "The narrative for the search of fiction (the fiction film's search) that characterizes the signifying operation of *La Jetée* is recuperated by the narrative (that is told), so the two narratives (narrative of the signifier and narrative of the signified) become one." (1990, 76) Yet, as Bensmaïa, Rowe, and Lyon (1990) have remarked, the conception of the voiceover as a stabilizing tool that can restore textual coherence seems oversimplified and cursory. According to these authors, *La Jetée* resists any comforting attempt to flatten its narrative within a formal cohesiveness. *La Jetée* is built on what is termed the drift of the fiction effect, not subjectivity, nor homogeneity, but a silent experience. Present and outside at once. The lack of pointing or naming specifically leads to choosing the idea of a pictogram: "Images escape from the text, and no words are able to name them" (Bensmaïa, Rowe, and Lyon 1990, 78). These images resemble confession images that have more the look and the power of aborted actions of speech. In the dissolves and fades, it is possible to say the unspeakable and to see the unrepresentable. Only by creating this new time, spatiality, and "idea," are we in a position to understand how the film tells us a story, "presents characters to us, makes us identify with them, and at the same time keeps us completely removed from it." (Bensmaïa, Rowe, and Lyon 1990, 79)

Drawing on Sebald's literary style and Marker's film montage, I built a specific style of ethnographic writing in which I juxtaposed images of the Sulcis territory with its inhabitants' reflections, thoughts, and memories. This pairing of images with text would allow me to observe the individual memories of the local people in relation to major historical events that had caused the process of Sulcis's deindustrialization. My ethnographic observations of people's daily movements and practical engagements with the territory created a particular form of personal and collective mapping through which to examine and understand the relationship between people's unfolding lived experiences and the territory.

Taking inspiration from Sebald and Marker, I also sought to observe how the people of Sulcis perceived the territory of the area after the process of deindustrialization by comparing, mixing, and overlapping their memories, desires, and imaginations with the major economic and historical events that had transformed the area. As in Sebald and Marker, the projection of separate times generated a new chronotopic dimension in which historical facts and imagination cannot be distinguished. This made it possible to observe the process of the area's reterritorialization in which historical rethinking, personal memories, shattered dreams, hopes, and illusions converge into a single process of rethinking the territory.

RETURN TO CARBONIA

RETURN TO THE PLACES OF CHILDHOOD AND DISCOVERY OF THE URBAN TERRITORY AS A MNEMONIC AND IMAGINATIVE SPACE

In October 2017, I went to Carbonia, a small urban center located in the Sulcis area. It had been many years since I had been to this city, to which I was strongly connected, having spent part of my childhood here. My first impression when I returned was to note the poverty and deserted streets. Since the 1980s, Carbonia has gone

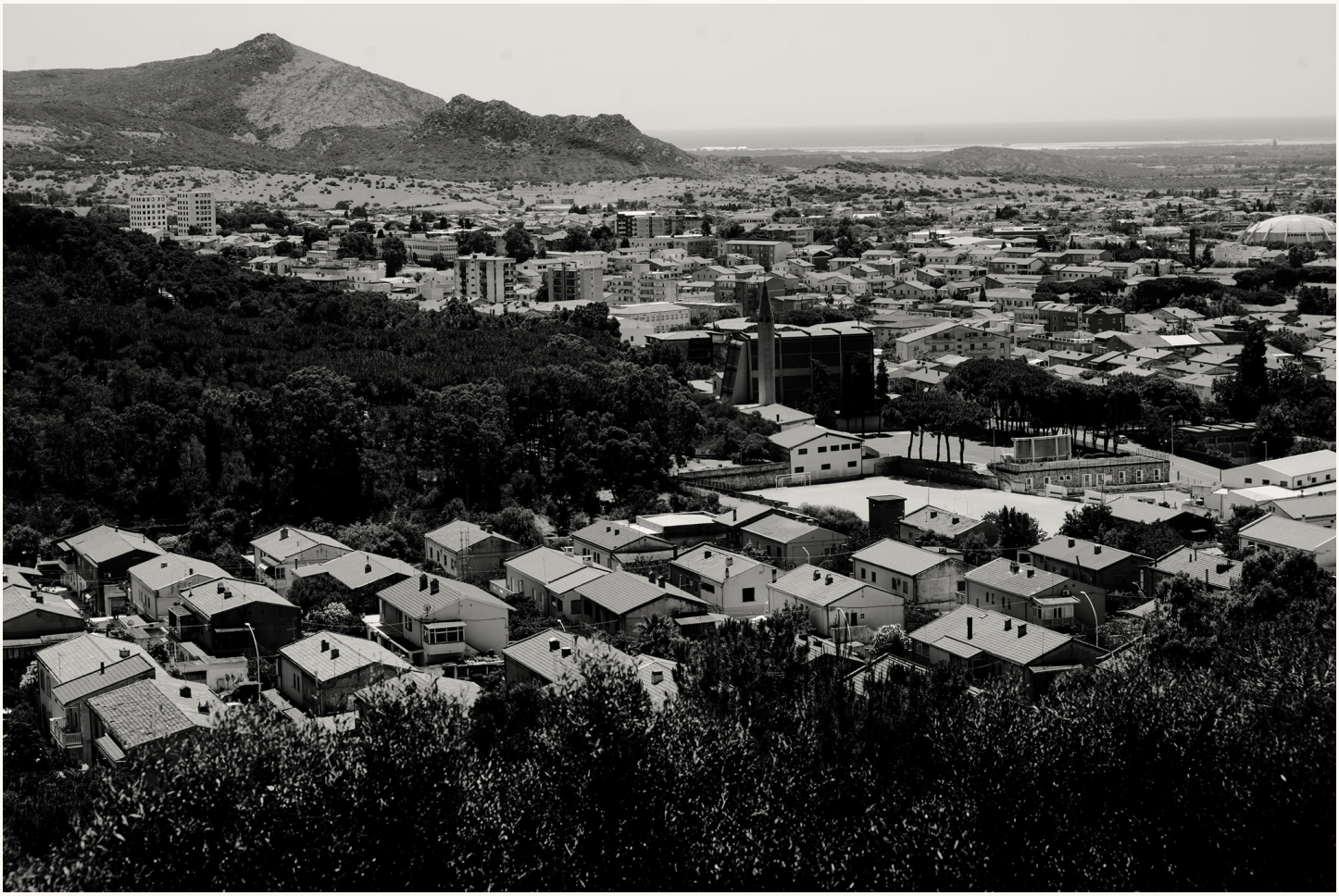

Figure 1. Carbonia.

through difficult periods, due to the closure of the mines and factories in the area and the Great Recession (2008). It became one of the centers of the worst economic and employment crises in Italy since the end of World War II. Wandering the streets of the city, my attention was drawn to the buildings, objects, houses, and urban scenes that reminded me of the time I had spent here. I walked down the dirt road that I used to walk with my parents. I stopped to look at the door of my house, from which I watched boys playing in a courtyard.

Figure 2. Rosmarino District.

Figure 3. Piazza Roma (Roma Square), Carbonia.

In front of the city's conference hall, I remembered having first been there to attend the presentation of a book written by a woman from the city. During my walk, I was also struck by the signs of a historical past that still shapes the urban architecture. I began, in this way, to juxtapose the memories of my personal experience with historical events that shaped the city's fate. Wandering through Carbonia, I saw the window (now walled up) of the Torre Littoria of Piazza Roma, from which Benito Mussolini had given a speech at the city's foundation, and then I walked down Via Gramsci, where protest marches were held by workers in the 1960s.

Then I walked down the desolate streets of the city center and looked at the bars where young people idled, evidence of the persisting unemployment crisis that had struck the city in recent decades. Observing Carbonia's streets, I tried to reconstruct a past made up not only of real images and events that actually happened, but also of novels that I had read, such as Sergio Atzeni's *Bakunin's Son*, the story of a young anarchist who took part in Sardinia's workers' struggles. I also thought of stories that I had heard as a child, such as those about elderly men who had accepted becoming ill with silicosis as long as they could have a permanent job in the mines. Only later did I start to understand how this spontaneous action of walking aimlessly around the city and letting myself be carried by my memories and imagination could be interpreted as an attempt to reappropriate my past.

Below, I present several examples of interviews I conducted, relating them with literary writings, photographs, and urban scenes that I encountered on my way through Sulcis. In the first case, I relate the novel by Sergio Atzeni *Passavamo sulla Terra leggeri* (1997) with the experience of Mario, a forty-year-old man from Carbonia, and a former employee of Alcoa. In the second case, I use the experience of Raffaele in relation to a photograph of his father in the mines. In the third case, I describe Serena's journey from Iglesias to Cagliari, drawing inspiration from the view of the landscape that she had seen from the train while she went to Cagliari one day and, having no money left, had to prostitute herself.

My interview methodology was as follows:

1. I asked interviewees to identify places that were related in various ways to their work and professional experiences, or connected to their layoff experience.

Figure 4. Torre Littoria, Roma Square (Carbonia).

Figure 5. Carbonia city center.

2. I asked them to go to these places and remember or evoke these particular moments. While they remembered things, I recorded and took notes on what they said.

3. Then I asked them to look at the photos and listen to environmental sounds recorded during the walk and draw new points for memories and imagination.

I pursued the following objectives with this approach:

1. Exploring how Sulcis's deindustrialization process had affected how its local people perceived the urban territory.

2. Observing how the personal experience of job loss affected residents' way of perceiving the territory.

INTERVIEWS

The following interviews have been translated by Miriam Hurley from Italian to English.

MARIO'S LIGHTNESS

> *"We passed through earth lightly as water, said Antonio Setzu, as water that runs, springs, down from the basin full of the fountain, slides and winds among moss and ferns, up to the roots of cork and almond trees, and goes slowly down, slipping on the stones, through the mountains and hills down the plane, from the springs to the river, towards the marshes and the sea, asked by the sun to become vapor and wind dominated cloud and blessed rain. Aside from the madness of killing each other for irrelevant reasons, we were happy."*
>
> (Sergio Atzeni, *Passavamo sulla terra leggeri,* 1997; translated by Miriam Hurley.)

In his novel *Passavamo sulla terra leggeri* (1997), the Sardinian writer Sergio Atzeni covers the history of Sardinia, taking a literary approach in which he overlaps two narrative voices. The first voice is that of the writer with whom Atzeni identifies, whose job it is to convey the memories of the ancients in a written form. The second voice is that of Antonio Setzu, an oral narrator who tells the history of the island, holding its memory, with emotional involvement and critical conscience. Taking this dual perspective and relating the two viewpoints, the author covers the history of Sardinia, intertwining and overlapping real historical events, myths, legends, and popular imagination. With this approach, the author creates a particular form of literary reconstruction in which the historical time of the island merges with an evocation of an idyllic time defined by the people's freedom and

Figure 6. Carbonia industrial area.

lightheartedness. I had never fully understood the need to seek an idyllic past that could contrast the sense of historical defeat until I met Mario, a former Alcoa employee who received official word of his dismissal in 2007. After he told me his story, Mario invited me to go with him to a nuraghe (an ancient megalithic stone tower, of which there are thousands in Sardinia) near his village, where he went often when he needed to think, and where he had gone the day he got the news that he had been laid off.

> The day I got the news about the layoff, I went to the countryside and headed to a nuraghe. This was not the first time that I had gone there to think and make important decisions. But that day, looking at the majestic construction rising from the hill, I started to think how our land had changed after the mainlanders came and put their stinking, polluting factories on our land, while in the past we had been able to build these structures. I spent a whole morning in the nuraghe, and I imagined the life and actions of these people that

we are descended from. I'd heard on television somewhere a scholar saying that we came from a lineage of warriors who had sailed the sea, fought other peoples, and, most importantly, proudly defended themselves from outside attacks. I felt proud to belong to this lineage. It was like vindication for what we have suffered in our times when everyone has come, imposed their rules on us, and treated us like puppets. And we have always been willing to bow our heads and obey. I wondered what had happened to that people and if there was still a trace of that pride and courage left somewhere. The fantastic daydreams of the battles, the actions of those people without masters, overlapped with the images of the factories, the smoke fumes polluting our land, of the lines of the workers punching the clock and all the humiliations we have had to bear.

In "*The Spectral Geographies of W. G. Sebald*" (2007), John Wylie borrows Jacques Derrida's concept of *spectrality* to analyze Sebald's literary styles and his particular approach to the past. Sebald's spectral way of writing suggests a precise phenomenology of being in the world and a model for a particular way of understanding places. Spectrality expresses itself in different ways in different places, and can complicate the linear sequential order of time conceived as a sequential succession of past, present, and future. Spectrality not only displaces places from themselves through ghostly memories but also displaces the self from the present. Even if past and present no longer exist or do not yet exist, they "still haunt the present and are in supplement relation to it, always coming back" (Derrida, quoted in Wylie 2007, 174). They are "that which secretly unhinges it, ensures the non-contemporaneity with itself of the living present" (Derrida, quoted in Wylie 2007, 174). The spectral constitutes an incessant thing that belies the origins and the end: uncanny. Moving through

Figure 7. Nuraghe. "I wondered what had happened to that people and if there was still a trace of that pride and courage left somewhere."

Figure 8. Industrial area. "The fantastic daydreams of the battles, the actions of those people without masters, overlapped with the images of the factories, the smoke fumes polluting our land, of the lines of the workers punching the clock and all the humiliations we have had to bear."

the Sulcis territory with Mario, when we came upon ancient monuments and architectures, the images of the past appeared in an uncanny way in the present. Like Atzeni, Mario also overlaps and intertwines the events of a historical time when Sardinians were defeated with the imagination and fantasies of a mythical time. Drawing on Atzeni's writings, I sought to express this overlapping of Mario's imagination, putting in sequence the images of the nuraghi and other archaeological finds from the Nuragic Age and the abandoned factories of the deindustrialized territory of Sulcis.

RAFFAELE'S PHOTO

Another interview important for my project was with Raffaele, a former employee of Portovesme who lost his job in 2010. One key aspect of this interview is the role played by a photo of his father, which he kept in his kitchen. Raffaele's father was a miner who had died ten years earlier from a lung disease he got on the job. The sight of his father's picture inspired Raffaele to think about the responsibility of an entire generation, which he considers guilty of having passively accepted the dictates set by the "masters" (the employers), and having "sold his dignity" in exchange for economic security. As Raffaele remembers the moments right after he was laid off, he mixes his feelings about his own situation with resentment towards an entire generation.

> The rumor that we were going to be laid off had been going around for a long time, but when the official communication came it was like being doused with cold water. It didn't seem possible to me that I had lost my job, and I understood the situation only when I got home. I realized that I wouldn't have to go to work the next day and that I would spend my time here in the days to come. I remember that I went into the room where my

Figure 9. Montevecchio mining village.

father had lived, and I felt a hatred for his memory. I thought of all the mistakes his generation had made, the wrong mentality they had instilled in us, trusting in the mainlanders who we thought of as those who could feed us. Their only aspiration seemed to be peace of mind, a stable job in exchange for our dignity. Every day I woke up, like he did, to go and serve the masters who, in exchange for our lives, had tossed us a few crumbs of their millions in earnings. I looked at the bed where I had found him dead a few months after his long-awaited retirement, and I felt tremendous anger. Now that the masters had gone, now that they had broken

Figure 10. Raffaele's House. "The betrayal was complete, and, along with any kind of security, our dignity had vanished too."

> their promise, I would no longer have any protection. The betrayal was complete, and, along with any kind of security, our dignity had vanished too.

In the interview with Raffaele, I considered the use of photography as a tool intended to create uncertainty about reconstructing the past. Looking at the photos depicting Sulcis's landscape, Raffaele reconstructed the events of his personal experience. The images were meant not as tools but as spectral presences suggesting new interpretations of the past. His relationship with his father mixes with the political conflict of an entire generation. His memories of unreturned love mix with the bleak scene of a land poisoned by pollution. As in Sebald, the use of images elicits in the memory an uncertainty when reconstructing the past, which is not developed only through a linear sequence of historical events that shaped a people's fate, as it is inserted in the midst of mazes of memory.

Figure 11. Raffaele's house, interior. "Every day I woke up, like he did, to go and serve the masters who, in exchange for our lives, had tossed us a few crumbs of their millions in earnings."

Figure 12. Landslide. "I looked at the bed where I had found him dead a few months after his long-awaited retirement, and I felt tremendous anger."

SERENA'S PATH

In December 2019, I met Serena, a 37-year-old woman living in Iglesias, Sulcis's second most populated city. When we met, Serena was employed as a domestic worker for several local families, but she had previously been unemployed for more than six years after the factory where she worked was closed. She told me how, before she found a stable job, she had worked as a store clerk and at a call center for €400 a month. When she had finally found a job in a major company, she had felt secure at last. But in 2010, she was laid off and felt "the world fall apart" on her. Serena and I decided to return to the most important places where she had gone after she heard the news. The first place we went was the Cala Domestica beach where she went after she got the news.

> The day I got the news, I came here, and I started to watch the sea. I thought about throwing myself into it because my life no longer made sense. I was thinking about what my life would be like the next day, sitting around the house, doing nothing. I remember that there was no one near, and I felt like I had rediscovered this place as if for the first

Figure 13. Road from Carbonia to Iglesias.

Figure 14. Serena's beach.

> time. At the same time, I thought how I could have ended it all, the different ways, like gas, heroin, or cutting my veins. It was a really strange feeling because, while I was thinking about how I could take my life, I started to appreciate things I had never noticed, such as the sound of the sea whose waves dragged pebbles on the shore, and the warmth of the sun on my skin. It was as if, at the very moment I had decided to take my own life, a higher power had shown its presence.

Next, we went to the mining village of Ingurtosu in Piscinas where she had broken up with her then-boyfriend.

> Not having a job was tearing me apart inside. At first, I was only afraid about the economic consequences, but then I started to see how losing my job would affect all aspects of life, including my relationship with Mauro. I felt like a failure, and I could no longer imagine my future. I had realized that it had been over between us for a while, but he kept on acting like nothing was wrong. One day we decided to come here to Piscinas where we often went to the beach. In the car, I told him it was over between us. I had expected him to start arguing and ask me for an explanation. But he stayed silent and kept on driving without saying anything about it. At that moment I understood that he had already realized everything a long time ago, and maybe he hadn't said anything to not add problems to my situation. I remember that the silence hurt even more and that this place I had loved started to seem horrible to me.

After Ingurtosu, Serena brought me to Masainas, a small town where she went with one of her friends after many months without work, and where, as she could not afford her living expenses, she had decided to prostitute herself.

> After a few months without a job, I started thinking about how I could survive. Nobody would give you a job. So, I decided that I would start selling my body. I didn't know how to start. Only later, talking to an acquaintance, did I see how to take the first steps. I put an ad on the internet and a man from Cagliari answered. So, I decided to take this step, and I understood that if I went to the meeting everything would change for me. The next day I went to the train station to go to Cagliari.

Figure 15. Serena's sky. "I started to appreciate things I had never noticed, such as the sound of the sea whose waves dragged pebbles on the shore, and the warmth of the sun on my skin."

Serena and I decided to re-take together the trip she had taken from Iglesias to Cagliari on that day.

> I remember that it was raining, and I started to look at the landscape through the foggy window. As the train sped on, I felt that my life was leading me to a new fate. Looking at the scene from my train compartment, I started to think of how, in a way, my island had had the same fate as me. They had come, they had exploited it, taken its natural beauty, and then they had thrown it away when it was no longer useful to anyone. The same thing had happened in my case. They had used me when I was useful and thrown me away when I was no longer useful to anyone. So, I wondered where this need for loyalty and demand for respect came from, even though I had never found it anywhere. I wondered why I was being asked to be respected if everything around me was based on the system of power and opportunism. I thought that maybe my fragility was pushing me to ask these kinds of questions.

Wandering in the places important to Serena, I encountered different objects, places, landscapes that aroused new memories in the young woman's memory. As in Sebald's works, each new pathway could provoke new memories in her, through which she constructed a new narrative. According to Weston (2011), how Sebald conceived the landscape can be compared to Derrida's concept of *supplement*, in which the idea of the organism as an object coexists with the representation of an entity in continuous transformation. Derrida considers the supplement to have the dual function of indicating a pre-existing reality on one hand (a natural reality subject to being represented) and transforming it on the other. In this instance, the supplement (representation) transforms into the thing itself, "implying a lack in the original" (Weston 2011, 179). Derrida considers it unthinkable to seek the original meaning before the surplus, as it is the process of signification characterized by a sequence of supplements, "an infinite chain ineluctably multiplying the supplementary mediation that produces the sense of the very thing: the mirage of the thing itself, of immediate presence, of originary perception. Immediacy is derived" (Derrida quoted in Weston 2011, 175). In this sense, the primary origin is always the imaginary. For Sebald as well, the observation of the territory is not considered the discovery of an immaculate organism but a supplement to a pre-existing narrative.

Figure 16. Ingurtosu. "I felt like a failure, and I could no longer imagine my future."

This aspect emerges clearly in Sebald's other works, such as *Vertigo* (1990), in which the memory aroused by images (the photo album) leads the author to conjoin the visual experience of the landscape with a mnemonic reproduction elicited by the photograph. "The low-lying cloud

Figure 17. Masainas. "Nobody would give you a job. So, I decided that I would start selling my body."

Figure 18. Masainas. "I didn't know how to start. Only later, talking to an acquaintance, did I see how to take the first steps."

Figure 19. Masainas. "I decided to take this step, and I understood that if I went to the meeting everything would change for me."

drifting in from the Alpine valleys and across that desolated country was conjoined in my mind's eye with a Tiepolo painting which I have often looked at for hours" (Sebald quoted in Weston 2011, 175). In this case, the sensorial perception of the landscape is mixed with a pre-existing representation and gives rise to a new interpretation of it. Likewise, Serena's sensory experience of landscape was considered a new stimulus through which she recalled new events, found new combinations, and created new reconstructions of her past.

CONCLUSION

In *Cartographic Cinema* (2007), Tom Conley examines the map's different forms and functions. Maps can be conceived as a tool for social control, a starting point for travel and adventure, a link between time and space, or a way to express unspoken memories. He builds his analysis by putting into relationship various modes of investigating and reflecting on the relationship between memory and places, through cartography and film noir. His analysis examines the different functions that maps can take on in relation to the territory, such as marking routes to be taken, establishing a link between space and time, and revealing hidden memories. Conley points out how cartography's influence within cinema can be considered in two dimensions: (a) the geographical and representational cartographies contained with the filmic diegesis, and (b) the affective form of mapping involving the relationship between the film text and the spectator in terms of their subjectivity, positionality, and becoming. But if both cartography and cinematographic practice are able to represent the territory from a detached point of view, capable of grasping the accumulation of visible, discursive formations that suggest how the world may be seen and deciphered (an atlas), and at the same time of assuming a mobile point of view in which space both arises from the relationship of the subject with the territory (a diagram) and is inextricably linked to the conformation of the territory, how do these two gazes relate to each other? And again, is it possible to imagine a particular form of mapping in which these two types of gazes relate and interpenetrate each other?

In order to answer this question, it is possible to draw inspiration from Sebald, and in particular from *The Rings of Saturn*. In this work, Sebald adopts a multi-perspective viewpoint that can show us the object of interest through different facets. Daniel Weston called this particular narrative tactic *situated perspective* where the term "situated" does not mean taking a stable observation point but, on the contrary, is used to indicate "the taking of one perspective among the myriad perspectives available" (Weston 2011, 173). Taking a situated perspective, Weston notes, Sebald takes over a set of analytical tools through which he develops his history: "The figure who variously observes, takes part in, and reports upon history is, in definite ways, spatialized and his or her perspective precisely situated" (173). Through the adoption of a situated perspective, Sebald is able to assume different perspectives on the territory in which a detached gaze alternates and mixes with a subjective gaze that "emphasizes its own subjectivity and fluidity" (173). In this sense, Sebald's novel can be seen as an extraordinary anticipation of the thinking and ideas that informed the debate within the post-representational current of cartographic criticism. One of the most defining aspects of this trend in cartographic criticism involves the creative and generative realm of the practice of mapping that emerges from a relationship with the territory. James Corner (1999) noted how the analysis of cartographic practice has long been anchored to an idea of it as representing the territory rather than producing it. In reality, the relationship between the map and the territory, according to Corner, should be seen as a co-constituted relationship. The map in this sense is not considered a mirror of the territory but an agent capable of making it and remaking it. Del Casino and Hanna (2005) conceive maps as fluid agents in constant evolution. They conceive the map not as a static agent but as one that is dynamic and ever-changing. Wandering the coasts of Suffolk, Sebald creates and recreates the territory, taking it as a mnemonic and emotional space in which memories of historical facts are intertwined with personal memories.

Bill Cartwright introduced the idea of the *theatre metaphor* (Cartwright 2009) to explain that the understanding of places through maps requires more integration of unconventional dimensions such as emotion, perception, and sense of place. The theatre metaphor is proposed to include these dimensions, taking the script as the environment in a broad sense: "the stage is the part of the landscape being depicted and the actors are the elements that act upon or move through the landscape" (Cartwright 2009,

29). The map, like the movie, can then unfold, revealing a world understandable through data and analysis, as well as through story and emotions. This map metaphor provides the user with facts, as well as with potential consequences and outcomes of a collection of events and situations in a narrative way. Drawing on this metaphor, we can conceive Sebald's landscape as a theatrical stage in which the people of a particular place are conceived as extras whose personal narratives develop in an often unexpected way through the relationship with the spaces.

In this article, I described how I built a cinematic map of Sulcis, taking inspiration from Sebald's literary style. Like Sebald, I observed the landscape through a view defined by multiple space-time perspectives, and by the embodiment of memory and imagination of its residents and the region's various spaces. By adopting this particular interpretative tactic, I sought, like Sebald, to observe the landscape as a chronotopic organism in which the memory of the historical events that had shaped the region's fate intersected, mixed, and overlapped with the individual memories and imaginations of its inhabitants. As in Sebald, the landscape of Sulcis was conceived as a theatrical stage in which the people reconstructed their personal experiences by rediscovering their own memories in the territory and new chronotopic forms through their movement. In addition to movement and mnemonic journeys, using the photo elicitation technique was key to this work. By using the photos of Sulcis's places as a source of visual stimulation, I asked my interviewees to retrace the most significant moments of their personal experiences. This let Sulcis's urban territory be explored as a mnemonic and imaginative space where the people reconsidered their memories and imagined their future.

Douglas Harper (2002) noted that the difference between interviews using images and text, and interviews using words alone, lies in the ways we respond to these two forms of symbolic representation. The origin of these differences has a physical basis. The parts of the brain that receive visual information are older than those for verbal information: "Thus images evoke deeper elements of human consciousness than do words; exchanges based on words alone utilise less of the brain's capacity than do exchanges in which the brain is processing images as well as words" (Harper 2002, 5). In this sense, juxtaposing images with text was not intended only as a stylistic solution but also as a full-fledged mapping methodological technique through which to investigate the process of signifying the territory through the memories (even the most buried ones) and the imagination of its people. Celia Lury considered recovered memory "an unstable amalgamation of the voluntary memory of representation, characterized by abstract time and the operations of consciousness, and the involuntary memory of invention or generation, characterized by discontinuity and the operation of the unconscious" (Lury 1997, 136). Through the process of photo elicitation, this type of memory can be fostered in which primary and secondary thought, imaginary and "real" reconstructions intertwine and mingle with each other. Unlike in Sebald, where the relationship between text and images played a role only during the literary montage of this work, the pairing of text and image played a role beyond the stylistic and expressive, becoming methodological as well. Rediscovering places through visual stimulation was meant as an additional form of mapping the territory (in addition to that arising from movement). As in Sebald, where the juxtaposition between text and images was an attempt to represent the territory through the unstable, discontinuous nature of memory, in my work as well, the photo elicitation process was taken as a form of mapping of the territory defined by a process of generating and regenerating places that constantly change and are renewed through the memory and imagination of their people.

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PEER-REVIEWED ARTICLE

Making Explicit the Implicit, Idealized Understanding of "Map" and "Cartography": An Anti-Universalist Response to Mark Denil

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This paper responds to Mark Denil's recent exposition in this journal of a conceptual theory of map. *Denil advances a universalist position, that there exists an essential character of mapness that characterizes all maps. A key element of Denil's essay is the dismissal of a straw man anti-universalism. This paper reasserts an anti-universalist understanding of maps and cartography to reveal the flaws in Denil's essay.*

KEYWORDS: anti-universalism; map concept; cartography

Mark Denil's recent essay in this journal is a paean to a universalist understanding of "the map." As Denil states in his conclusions:

> A *Conceptual Theory of Cartography* would be concerned with the map as *a thing in itself*: whatever its instantiation, however it is used, whyever it comes to be made. A correct conceptual theory will apply to any and all maps, without special cases or exceptions. (Denil 2022, 23)

There are *maps* and there are *not maps*, and Denil seeks to clarify and explain this demarcation. To do so, he pursues two intertwined lines of argument. First, he posits a cultural mechanism—his "conceptual theory"—through which readers identify *maps* and differentiate them from *not maps*. Second, he rejects a recent anti-universalist argument that denies that maps constitute a singular phenomenon. Unfortunately, both arguments are flawed. The first deploys a body of ill-defined terms, such as "*transfiguration*" and "*embodiment*," that do little to hide Denil's continual commitment to the modern idealization of the nature of maps and mapping. The second relies on turning my own recent work into a straw man that might be readily disparaged and rejected. In responding to the second argument, I engage with the inadequacies of the first and thereby affirm an anti-universalist understanding of maps and mapping. So as not to clutter this paper, further references to specific pages in Denil's essay are of the form "[x]."

I.

My book *Cartography: The Ideal and Its History* (Edney 2019) began as part of an attempt to answer the question, "what is the nature of cartography, such that we can tell its history in a meaningful way?" (in emulation of Smith 1996). Yet it proved difficult to come to terms with a concept as fundamental as "cartography," an endeavor that has great intellectual depth, multiple and varied functions, and tremendous complexities between and within cultures. As I wrote and rewrote the book over the best part of a decade, it turned into an analysis and history of the *a priori* preconceptions that dominate academic and popular commentaries about maps and cartography. The book ended up as an anti-universalist exposé of much that remains implicit about maps and cartography.

I identified ten general preconceptions and the more precise convictions that they support (Edney 2019, 52–55). Setting aside the following 110 pages of evidence-based discussion of the preconceptions, and of the varied factors that engendered them during the nineteenth and twentieth centuries, Denil dismisses my summary list as "fifty-eight hearsay 'convictions'" that together constitute

"a laughable, offensive, and pernicious caricature" [24]. Some of the discussion is indeed abbreviated, but it is evidently not "hearsay." Elsewhere, Denil states that I reject "*ex cathedra*" [11] a Neolithic wall mural as being a map, which is to say that I rely solely on my status to validate my argument, even though I discuss the complexities of the matter in some detail (Edney 2019, 69–70, drawing on Edney 2017b). Overall, Denil very much misapprehends my larger argument that the ideal of cartography comprises a web of often contradictory beliefs that provide a set of conceptual resources on which people draw not all at once, but only as circumstances require. I thus find discussion of "cartography" to be a game of intellectual whack-a-mole: as one preconception is dismissed, defenders and critics alike turn to another for reassurance and to maintain the commitment to cartography as a universal endeavor.

Furthermore, Denil [23] takes issue with my conclusions concerning the "death of cartography" (Edney 2019, 228–237). He offers a three-point summary of my argument that is quite wrong, both in content and in the assertation that my position is the same as that taken by Denis Wood (2003). In the first part, for example, Denil claims that I say that "cartography is a johnny-come-lately made-up word that was never wanted or needed." *Au contraire:* my whole point was that "cartography" *was* wanted and needed. The spread of systematic territorial surveys mapped onto projected coordinate systems meant that there emerged in about 1800 a *new* conception of the unity of maps and mapping that demanded its own, new term. Conrad Malte-Brun labeled the new term in 1808 (as *chartographie*), specifically to refer to a medium-scale map of Germany based on recent territorial surveys of the various provinces. The neologism initially failed to take hold, but it was adopted in Paris in the later 1820s to embrace all kinds of terrestrial mapping. The new conceptual unity was asserted in conjunction with what still seems to be the first instance of the neologism in English, within an ambitious curriculum created by Francis [Franz] Lieber, a Prussian immigrant to the United States. Among the kinds of drawing to be taught, Lieber specified:

> 3. Drawing of maps or *chartography*, (at least I believe we might use this word, formed after the French *cartographie*, which comprises the drawing of geographical and topographical maps, charts, and all the drawing of mensuration). (Lieber 1834, 98; original emphasis)

Lieber combined in one concept what had previously been understood as distinctly different kinds of mapping: geography, topography, marine charting, and property and engineering mapping ("all the drawing of mensuration") (Edney 2019, 117–119). Thereafter, a wide range of factors—ranging from photography to set theory to the personal mobility afforded by the bicycle—contributed further dimensions to the ideal of "cartography" as a supposedly universal endeavor.

What I did not necessarily make clear in the book is that mapmakers have worked hard to make the ideal, real. Since the ideal took firm hold within Western culture over the course of the later nineteenth century, practitioners and academics have sought to live up to it; this effort only intensified when digital technologies held out the potential perfection not of the map but of a spatial database mapping the world at 1:1. The ideal is thoroughly aspirational. This is why, again *contra* Denil's universalism, "cartography," with all its unexamined intellectual baggage, is a thoroughly anachronistic lens through which to study the history of maps and mapping, other than in the context of the West after about 1800.

The ideal of cartography does not well define or describe how people go about making and using maps. This is why I stated in the very first paragraph of *Cartography*,

> The actual behavior, what people do, is mapping. The idealized behavior, what people think they do, is cartography. (Edney 2019, 1)

Denil [7] derides my identification of the modes of mapping, the several constellations of spatial conceptions, functionalities, and institutions within which maps are broadly made and consumed. He does not engage with my discussion of the manner in which such modes are a coarse heuristic and are open to interpretation, no matter how stable they might seem to my own analysis. Mapping modes help with understanding the major differences between substantially different kinds of mapping that have been carried on without regard for one another. I used the example of property mapping versus regional/geographical mapping, but many more contrasts might be readily adduced.

The only empirically reliable unit of analysis is what I call "spatial discourse," which is to say a very precise circuit within which mapping occurs, and within which maps

circulate among producers and consumers in order to share knowledge of spatial complexity for specific ends. Within such circuits, "maps" take on particular forms according to the conventions formulated within each circuit in conjunction with all other kinds of texts that the circuit generates; maps variously integrate words, gestures, numbers, physical monumentation, and graphics. As such, maps cannot be limited to only material artifacts (Edney 2019, 26–49). There is thus no functional distinction between maps and any other kind of text, whereas Denil [5] insists that maps and written texts are necessarily distinct.

"Circulation" is *not* simply equivalent to the map trade, as Denil asserts [7]. The distribution of maps through the marketplace is a major form of circulation, to be sure, but is by no means the only one. Circulation is the communicative process that binds mapmakers to map users. Academic cartographers are thoroughly wedded to the distinction between the two communities, of makers *and* users, but from a processual perspective producers and consumers participate within the same spatial discourses.

By the way, I call this a processual approach because it directs attention not to the forms of maps but to the processes by which maps were produced, circulated, and consumed. Maps are only ever epiphenomena of those processes. Variability of map type is a function not of form or content but of the underpinning processes that produce maps within specific spatial discourses. Denil rejects the "so-called processual theories" that address the production, circulation, and consumption of maps, because "none of these theories can be used to separate the maps from the not-maps" [7]. Here, Denil is correct, for the simple reason that a processual approach to maps and mapping specifically advances an anti-universalist position.

II.

Denil's argument for a universalist conception of *map* as distinct from *not map* returns to a topic that he has previously debated in this journal with Denis Wood: maps and/as art (Denil 2006; Wood 2007). Thus:

> It is widely understood that any artwork exists *only* as a conceptual construct that is applied to an object or composition. This means that an artwork is a work of art only for *particular* persons in *particular* places at *particular* times. It is also clear that a map is a map in exactly the same way, and through exactly the same mechanisms, as an artwork is a work of art—and thus maps can be explored through exactly the same sort of conceptual analysis as lies at the heart of Conceptual Art. [9; original emphasis]

There is much to be said in favor of this perspective. Ernst Gombrich (1961; 1963) argued that the default mode of human art is conceptual rather than mimetic and that art functions by a psychology of metaphorical substitution, in the way that the stick of a hobby horse stands in for a horse through a functional, rather than mimetic, similarity. The artistic quest for naturalistic mimesis characterizes only certain cultures in certain eras. Gombrich (1975) further suggested that maps function in the same manner as conceptual, non-figurative art; by contrast, individual elements of figurative art are not readily broken down and isolated in the manner of map signs. If one is going to work towards a universal theory of *map*, then this certainly seems a good way to go about doing so.

The heart of Denil's conceptual theory is that maps, like conceptual art, must be recognized as maps in order to be interpreted as maps:

> Any person encountering such an artifact [Felix Gonzales-Torres, *Untitled (Perfect Lovers)* (1991)] *must,* to see it as an artwork, be properly prepared to discover specific types of meaning in specific types of artifact. A twenty-first-century art viewer *knows* how to engage an artifact like this that they have decided—for reasons they also *know*—is an artwork, and how to read meaning into it by interpretation of clues *they know how to find and read*. So too must a map reader recognize and decide to engage an artifact *as a map*—something they do in a way analogous to the way an artwork is recognized—and to then employ their map-reading skills to find and interpret the clues *they know how to find and read into a map*. [10; original emphasis]

The recognition and interpretation of an artifact as a map—the granting to the artifact of a special status akin

to that accorded to artworks—is a process that Denil variously terms *transfiguration*, *apotheosis*, and the *embodiment* of meaning. He does not, however, clearly define these terms; nor does he explain why the process is inapplicable to written texts. The special status accorded to *map* as opposed to *not map* depends, like so much of the rest of the Aristotelian philosophy on which Denil bases his conceptual theory, on a mystical sense of noumena.

For Denil, the recognition and interpretation of a work of art is at once idiosyncratic, in that an individual must learn to read conceptual artworks, and cultural, being dependent on broader contexts of viewing, aesthetics, and "art." Those cultural conditions inevitably change:

> First off, this is *not* a totalizing theory. It describes how maps are recognized in artifacts in an abstract manner, one that is *not* contingent upon any particular set of map features or requirements, but that *does* recognize that cultural communities do indeed rely on such requirements—requirements that come into currency for complex reasons and that can evolve over time and circumstance. [9]

Thus, "artifacts are transfigured into maps by map readers" [22], map readers are "created and constrained by norms" [15], "the concept of map allows maps to exist," and "nothing can be a map without an interpretation that constitutes it as a map" [19]. Yes, absolutely! These points are in line with my own arguments, although Denil and I seem to differ in why maps are recognized as maps. While I see cultural norms of mapness as utterly malleable and unfixed, being defined only within spatial discourses and therefore variable over time and within and across cultures, Denil insists that there is nonetheless some core, universal concept of mapness.

Despite the absolute significance of the reader in *transfiguring* an artifact into *map*, as opposed to *not map*, Denil must still reserve space for the intellectual work of the mapmaker. Artworks are artworks because artists intended to create them, even as the artists established the conditions within which viewers are able to recognize them as artworks. Similarly for maps: there can be no maps unless mapmakers intend to make them. The challenge in mapping thus lies in

> the manufacture of an artifact that will not only be recognized and willingly transfigured, but that will reliably guide that transfiguration so that whatever meaning(s) the maker needs/desires the viewer to read into/onto the map, will prevail. The maker usually wants to discourage—or hide the possibility of—unguided, deviant, or improvisational readings, but there is only so much the maker can do. The usual tactic is to stick closely to the current version of cartographic appropriateness, making an artifact that—as [Catherine] Delano Smith [(1987)] put it—appears spontaneously recognizable. [16]

This position is completely in line with the dominant agenda of modern academic cartographers, who have consistently sought to limit and control the ability of map readers to interpret maps. This was the aim of postwar psychophysical experimentation, which sought to understand how people see and comprehend color, shape, and size and how to refine map design accordingly (Petchenik 1983, 38; Montello 2002, 285–288; Tyner 2005; McMaster and McMaster 2015, 2, 5). It was also the aim of Jacques Bertin's (1967) semiotic approach to designing information graphics as agglomerations of rigidly monosemic signs (MacEachren 1995, 229; Palsky 2019, 191). Denil concurs with academic cartographers' adamant claims that the intellectual labor of cartography is the preserve of the mapmaker.

Denil's arguments reveal the ongoing influence of the ideal of cartography and in particular its persistent preconceptions of individualism and materiality. The preconception of individualism holds that both the making and using of maps are cognitive acts pursued by individuals. This is obvious, even trite. The issue is that the preconception further holds that maps are externalized expressions of an individual's neurological schemas and that an individual modifies their own neurological schema to accommodate what they read in the map. Denil's process of *transfiguration* might be ill-defined, but it certainly occurs within the individual mind of the map reader. As acts of human cognition, this individualism requires *map* to be universal to *homo sapiens*. Yet maps are ineluctably cultural works: they are concerned with the communication and interrogation of spatial knowledge and concepts and as such are determined by cultural conditions. The issue is that the preconception of individualism "naively" transmutes cultural processes into individualistic ones (Wood 2007, 5–6).

The preconception of materialism—the requirement that maps are defined and delimited by their nature strictly as

artifacts—only reinforces the separation of mapmakers from map users. The existence of the map artifact creates two epochs: the epoch of the making of the map, and the epoch of the using of the map (Figure 1). Several scholars have recently recognized that this division is an essential characteristic of the sociocultural interpretation of maps and other graphic images (Cosgrove 1999, 9, as noted by Edney 2019, 74–75; Rose 2001, as noted by Lois 2015; Jacob 1992, 137, as noted by de Rugy 2021, 5). Denil accordingly shifts back and forth between the two elements: on the one hand, the artifact of the map as *a thing in itself*, the product of *craft* and intent; on the other, the act of *transfiguration* in which the *what* of *map* is recognized. Indeed, he is led to subvert his conceptual theory of transfiguration by redirecting it to the map artifact: the "key to such a conceptual theory is the ability to establish a clear division between the map and the map artifact—differentiating a map's what-ness from its thing-ness" [9].

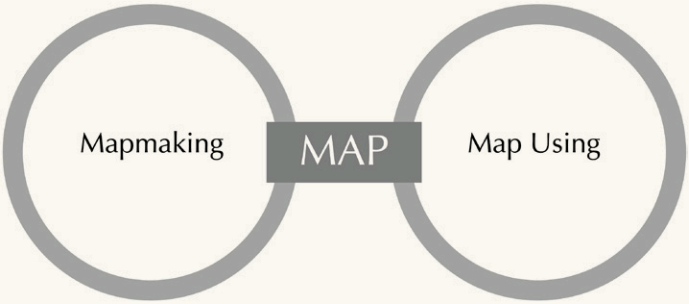

Figure 1. The two epochs separated by the material map: mapmaking vs map using. Given how this model locks analysis into predefined avenues, I personally think of this as the "handcuff model."

III.

Denil's conceptual framework cannot reconcile the concern for the mapmaker's intentional limitation of interpretation in creating a map with the apparent autonomy of the map user to recognize and interpret a map. This is evident from his misunderstanding [12] of the argument by Rob Kitchin, Martin Dodge, and Chris Perkins (2011) that a map's meaning is "constantly becoming" as it is read and reread by its readers (also Kitchin and Dodge 2007; Dodge, Kitchin, and Perkins 2009; Kitchin, Gleeson, and Dodge 2013). The map is infinitely interpretable, yet the set of maps is manifestly limited to the works created by mapmakers that implicitly relate to the earth's surface. I do have to wonder how Denil understands the phenomenon of "found art"—works that are interpreted as artworks by viewers but were never intended or curated as art—and the performative art of people who seek to navigate city X using maps of city Y. And what about the whole phenomenon of "cartocacoethes," works interpreted as maps that were not created as maps (Krygier 2008)?

This is the point where the question of circulation becomes crucial. It is not a question of the circulation of knowledge, as studied by historians of geography and science, but the circulation of the maps themselves: how maps move between producers and consumers. The issue here is that producers and consumers are all part of the same communicative system, the same spatial discourse; they

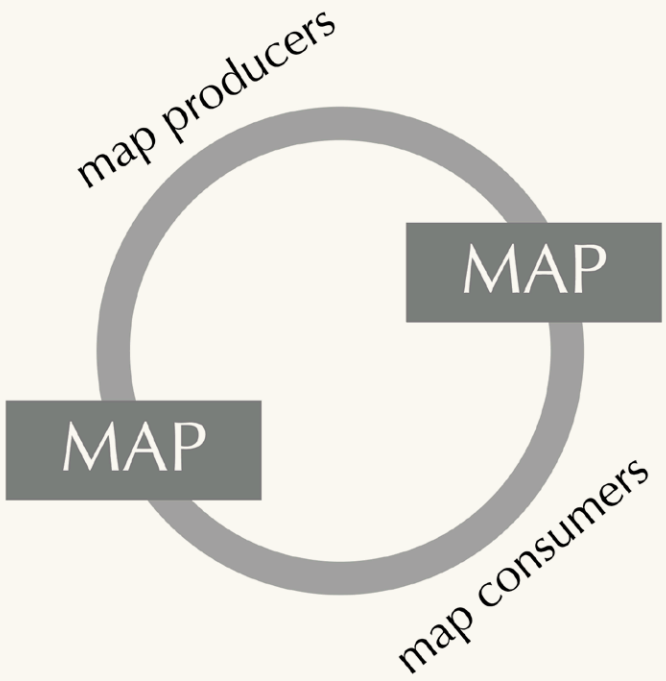

Figure 2. Maps circulate between producers and consumers within spatial discourses.

are bound together by the circulation of maps rather than being divorced by the map artifact (Figure 2). The analogy here is with a linguistic community, which comprises speakers and listeners, and writers and readers; there can be no *artificial* separation of one side of each pair from the other. And just as with linguistic communities, spatial discourses might contain just a few participants in a tight circuit, or they might be large and dispersed. Producers are themselves consumers, and they are as much a part of the ongoing discussion of the nature of maps as those people whose participation is more oriented to consumption.

For example, there developed in antebellum Portland, Maine, a very specific manner of mapping that city in which residents presented the city to other residents in printed works that were not intended to circulate beyond the city (Figure 3). The peninsula of the city ran across the page to maximize space, requiring a north arrow set in the Fore River; the far shore of the river was included to emphasize the extent of the port that undergirded the city's wealth; the key features of the city (churches of many denominations and legal, commercial, and educational institutions) were identified in hierarchically structured legends also set out in the river; the title was placed in the Back Cove. Such maps make a significant contrast with those that were made by people from away, who worked within a different culture of national standards created as part of the ongoing professionalization of civil engineers, who oriented the map with north at the top, who marked and labeled buildings on the map itself, and who perhaps sought to give the map a local flavor by adding a few vignettes paid for by certain subscribers (Figure 4). The different sets of maps might seem to be the same, but their respective balancing of community (*civitas*) with

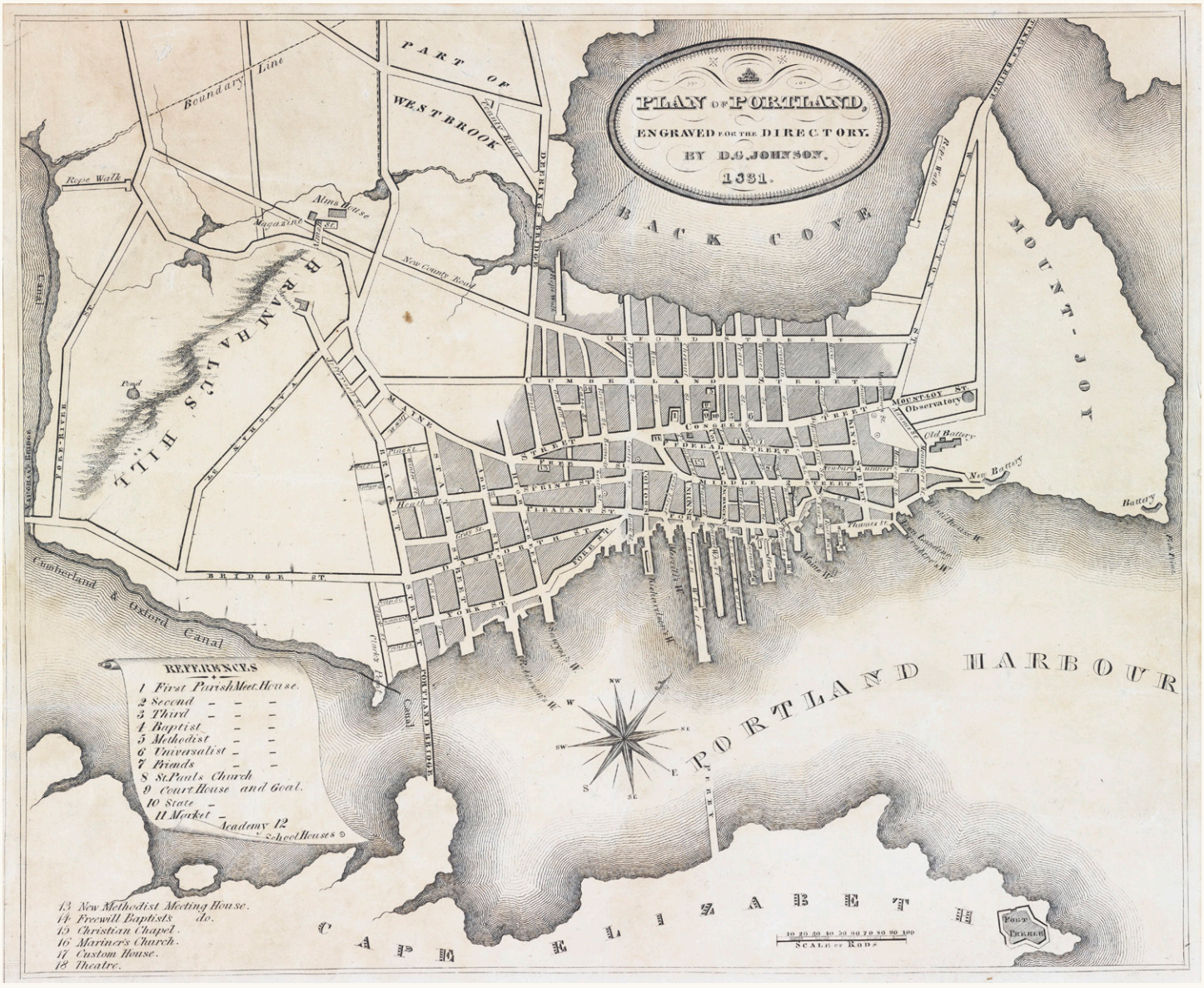

Figure 3. D. G. Johnson, "A Plan of Portland, Engraved for the Directory," in *The Portland Directory, Containing Names of the Inhabitants, their Occupations, Places of Business, and Dwelling Houses. With Lists of the Streets, Lanes and Wharves, the Town Officers, Public Offices and Banks* (Portland: S. Colman, 1831). Copper engraving. Courtesy of the Osher Map Library and Smith Center for Cartographic Education, University of Southern Maine (Osher Collection); available online at oshermaps.org/map/12023.0001.

Figure 4. Henry F. Walling, *Map of the City of Portland, Cumberland County Maine, from Original Surveys* (Philadelphia, 1851). Hand-colored lithograph, 74 × 88 cm. Courtesy, David Rumsey Map Collection, David Rumsey Map Center, Stanford Libraries. Available online at searchworks.stanford.edu/view/10453700.

built environment (*urbs*) manifest different social relationships between producers and consumers. In one, the maps were produced and consumed within a constrained marketplace, in which the producers and consumers were all part of the urban community; in the other, the circuit was much larger, joining Philadelphia producers and Portland consumers, recasting the map and its interpretive potential (Edney 2017a; see Kagan 1998).

Some circuits are tiny, some huge. On the tiny side, Denil [18–20] discusses the artwork *This Way Brouwn*, in which Stanley Brouwn repeatedly asked strangers to draw directions in an urban landscape. The circuit is tiny, at any moment comprising just Brouwn and one other person; the maps collected are pencil on paper, but it is evident from a photograph of one of Brouwn's interrogations (reproduced by Denil) that pedestrians also gave running, spoken, and gestural commentaries that Brouwn did not record but that must be considered as integral to the mapping event. The representational strategies for mapping align with the nature of the circuit. By contrast, Brouwn repurposed the maps he collected by excising their verbal and performative components and situating the graphic components within art installations and art books, which is to say within a much larger, more indeterminate, but still circumscribed circuit of communication, within

which consumers interpreted the map images anew and not necessarily as maps.

Within each spatial discourse, producers create maps in a manner expected by other participants; producers are themselves consumers. Participants also interact with and take part in other spatial discourses, sharing concepts and practices, rejecting others. Larger threads of discourses have similarities by which they can be analytically grouped; but as one shifts analysis from discourse to discourse, from thread to thread, it becomes apparent that there are fundamental differences in just what are considered as "maps." There is no commonality to *map* or to *not map*; they are what they are within the precise scope of each spatial discourse. Map studies are properly studies of the glorious multiplicity and variety of ways—processes—by which people construe and communicate spatial complexity.

IV.

All told, I am in complete agreement with the spirit of Denil's paper, of making implicit concepts explicit. I disagree, however, in suggesting that the process of explication must be extended to analytical fundamentals, not only of "map" and "cartography," but also of "scale" and "the history of cartography." As a historian of maps and mapping, I have come to seek to understand the incredible diversity in mappings across cultures and how and why mapping processes change over time. And it is impossible to insist on universals when empirical evidence demonstrates that analytical categories are not constant across time, between cultures, nor even within cultures in the same period. What people pursue now, here in North America and elsewhere in the industrialized world, is not the coherent and timeless practice of cartography, but a series of specific endeavors that contribute to the formation of modern Western culture. It is not that maps and mapping "reflect" culture, or are cultural "constructs," or are otherwise simply the products of culture. Following Bruno Latour (2005), maps and mapping constitute social and cultural relations; the mapping processes of today are integral to the formation of society and culture today, but not of the past. Other societies and cultures have been constituted in part by other, different mapping processes. The study of maps must therefore proceed from an anti-universalist position.

By contrast, Denil seeks to preserve the universalist position that there exists a universal mapness, not only within modern European cultures but within all cultures. Rhetorically, he structured his essay around two arguments, one justifying his universalism with Aristotelian philosophy (Platonic philosophy being manifestly inadequate to the task [13]), the other deriding a crude caricature of an anti-universalist position. What Denil seems not to have done is to ponder the *why* of his universalism. Universalism might seem valid from academic and professional perspectives, in which scholars are deeply immersed, but only at the cost of ring-fencing both "cartography" and "the map" and thereby dismissing other kinds of images as, for example, "map-like objects." Yet as soon as one starts ring-fencing, one must admit that there are more than one kind of map and of mapping.

Empirically, universalism is a self-defeating position. The challenge for map scholars is to admit that what they study and produce constitutes only one kind of mapping. Many spatial discourses, indeed entire threads of discourses, adhere to very high scientific and technical standards and require a great deal of intellectual and creative effort, but not all do. In arguing that map scholars should abandon "cartography" as a concept, I encourage them to discard the preconceptions that come with the ideal of cartography and to reflect instead on what they do as one kind of mapping that constructs and is delimited by non-technical factors. That is, an anti-universalist processualism encourages all of us to constantly identify and examine concepts and ideas that we take for granted.

AUTHOR'S NOTE/ACKNOWLEDGMENTS

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Making Maps by Hand

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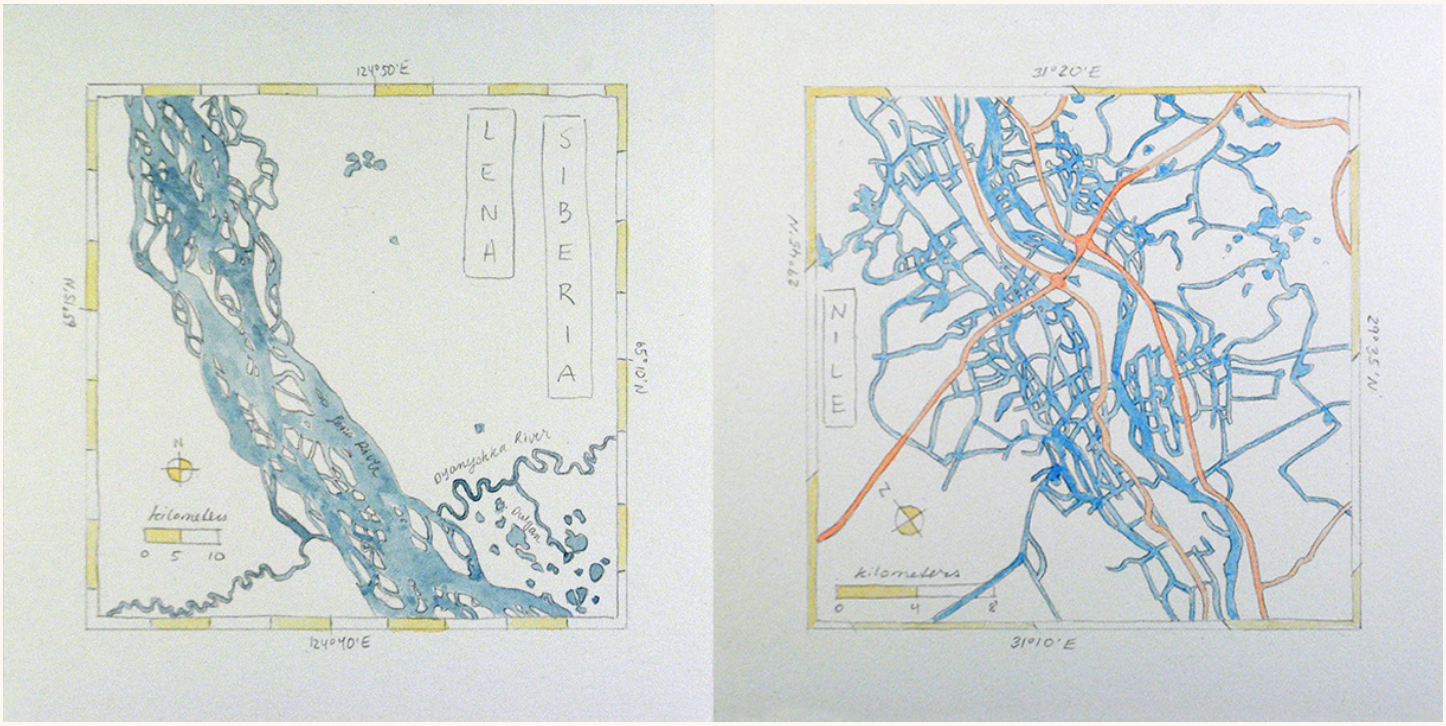
A few years ago, I began creating some small maps on paper, each one 5×5", drawn in faint graphite and delicate watercolour. This project was casual, with the maps made quickly and even carelessly. The results were unpolished and sometimes even illegible, but they maintain a freshness that every map I've made since has been envious of. Half of the maps were of highway interchanges, the other half of rivers. I was very taken with the similarity in shape between large highways and large rivers. Artificial and natural travelways, both intent on uninterrupted flow.

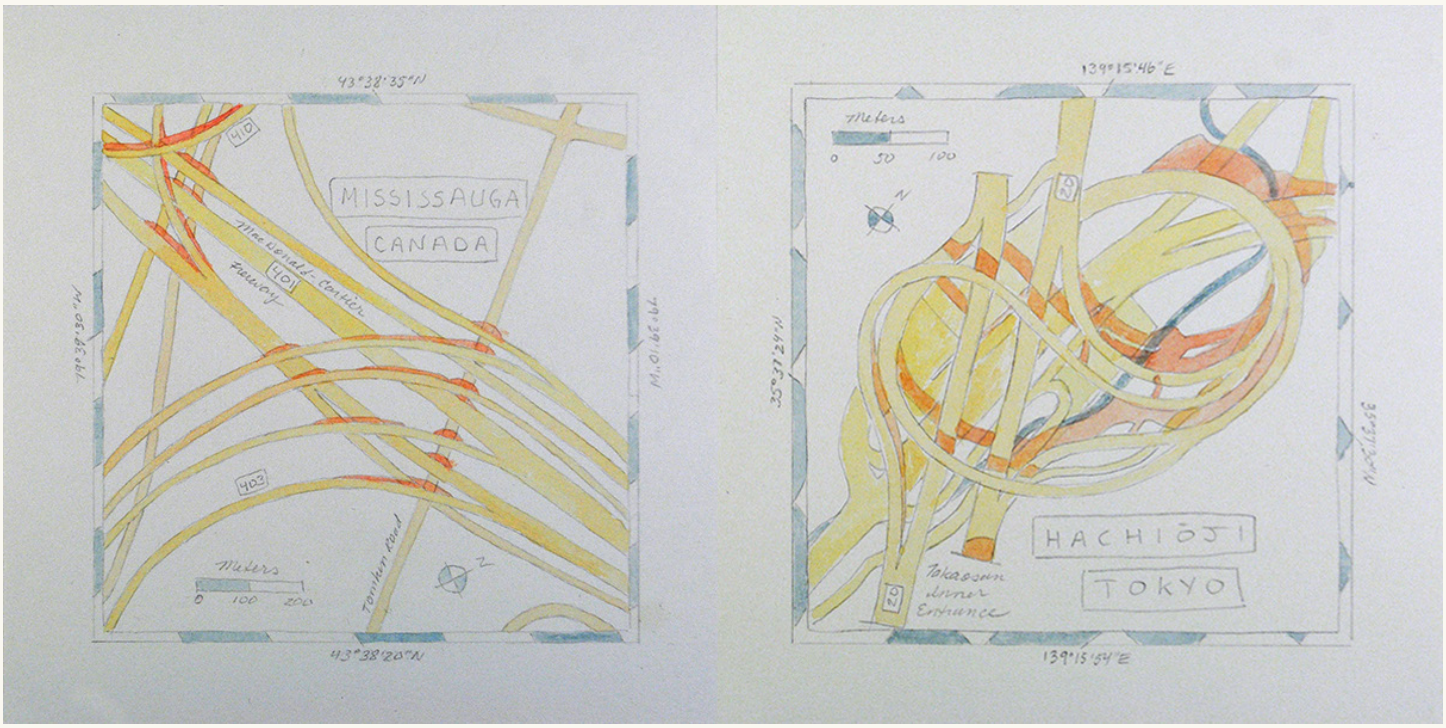
Drawing these maps led to many thoughts, observations, questions, and comparisons. Compare, for example, the wide loose braid of the Lena as it spreads over the taiga lowlands, to the artificial spreading of the Nile through a dense network of irrigation channels. Or an open cross-hatch of highways in Ontario to an uncomfortably tight knot of converging roads in the mountains of Japan.

There are cultural and historical differences to be observed as well as physical restrictions. Four-leaf clovers abound in North America, while loops and whirlpools are common in China. I am confident that the interchanges of Dubai were designed to appear elegant from the sky.

Cities like New York, which were well established before the rise of car culture, crowded in their on-ramps and off-ramps wherever they could fit them, while cities like Houston, which grew up alongside the automobile, walled themselves in behind wide moats of road.



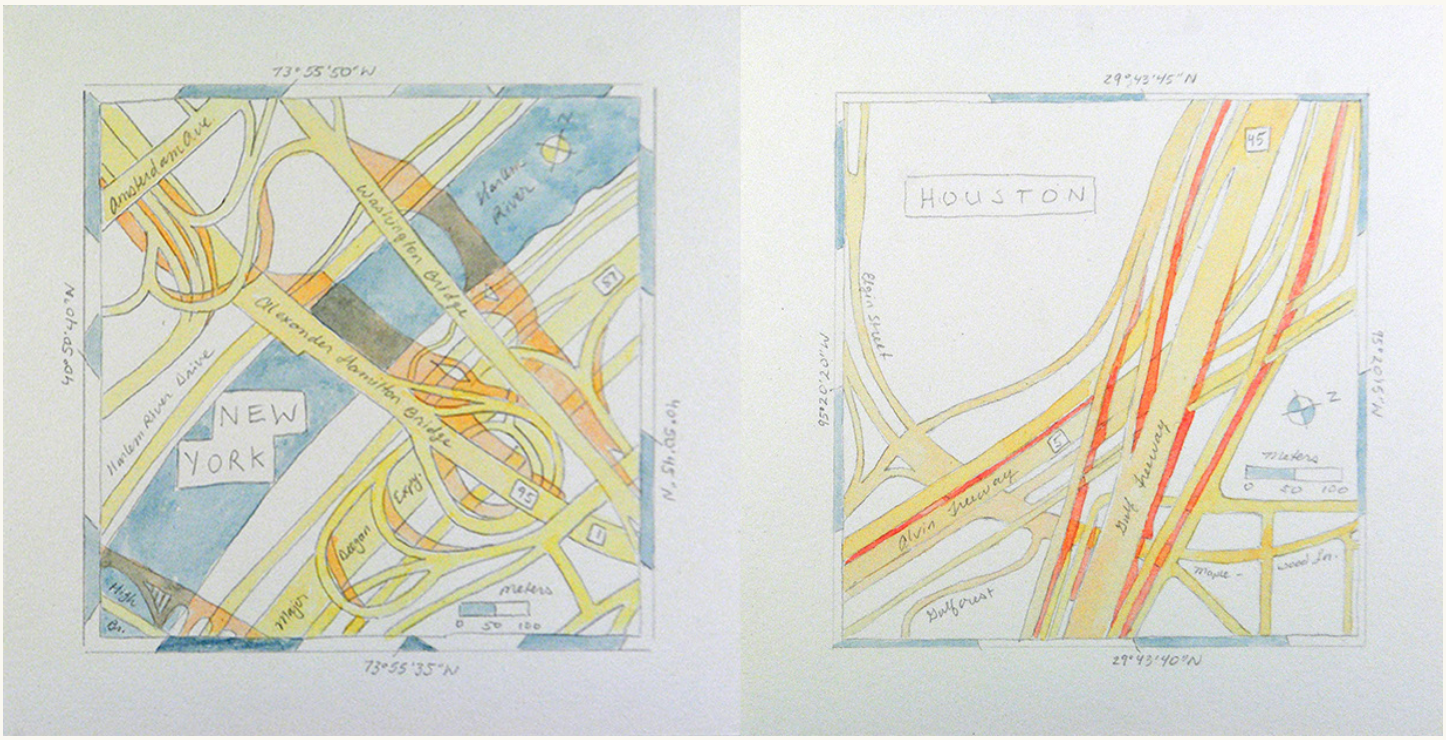
The braid of the Lena and the channels of the Nile.



Crosshatching roads in Ontario and knotted roads in Japan.

These are all observations that I doubt I would have come by if I hadn't made these maps by hand. When you draw a map with software, you decide the symbology of a layer.

When you draw a map by hand, you consider every mark, if only for a moment, and you spend time with the shapes of things. Associations have time to evolve.



Highway interchanges in New York and Houston.

Hand-drawn maps, and maps with hand-drawn elements, delight the viewer with their imperfections and individuality. But they also offer advantages to the cartographer:

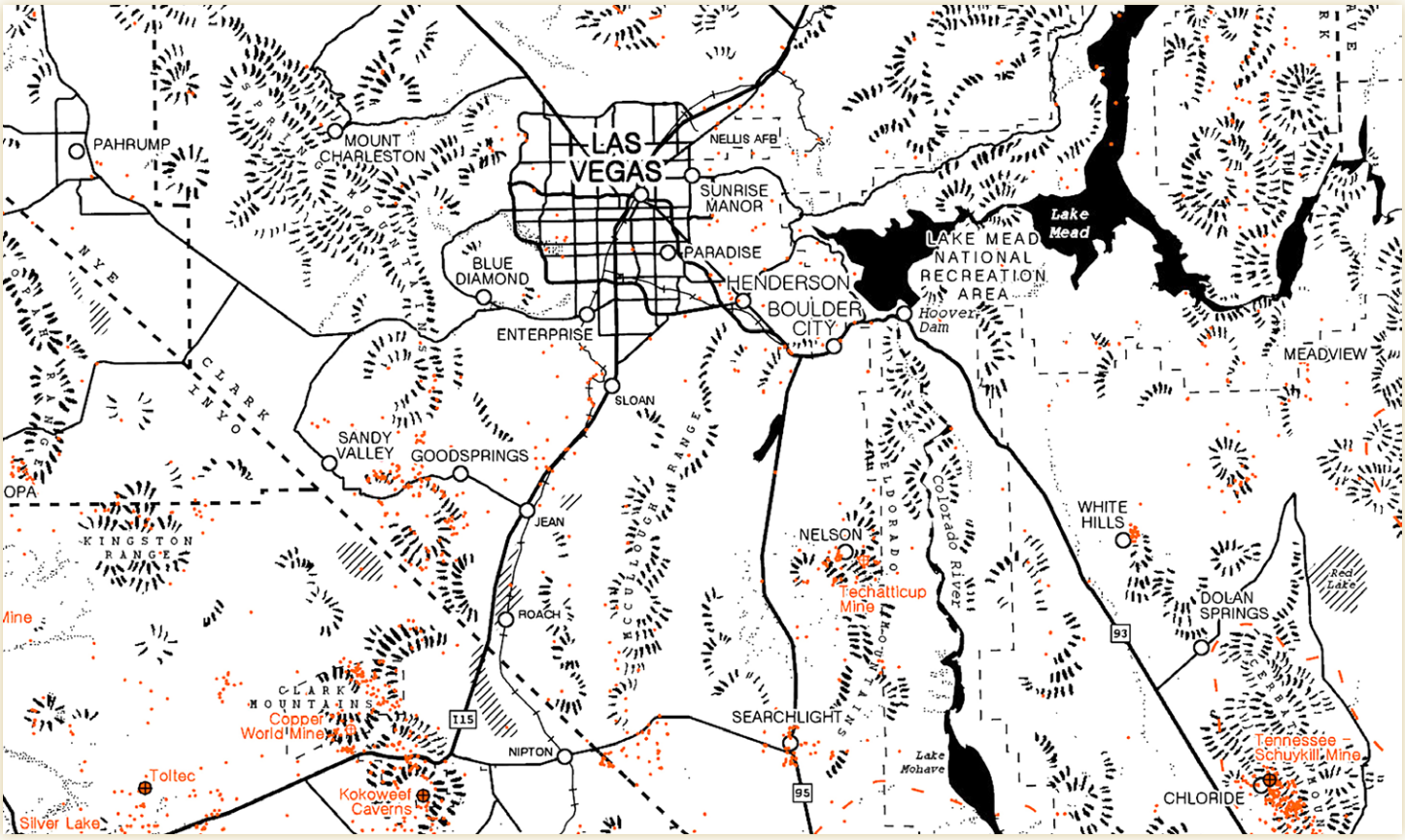
- Simplicity and clarity of design is more strongly enforced, especially in media like woodcut or embroidery, where thin lines are not possible.
- A closer and more natural integration of map and illustration is possible.

When I decided to pursue cartography as a career, most of my artist friends commiserated that "you probably don't get to make maps by hand anymore."

I thought that was very silly. Maps had to be detailed and accurate. I could easily imagine spending hundreds of hours painstakingly drawing roads and rivers and labels, only to jump at the sound of the doorbell and smear ink all over the map. In a painting, I might be able to creatively work that streak into the final piece. Not so the map. I hadn't made any maps yet, but I was pretty convinced that I'd prefer to make them with computers.

Embroidered map of the Lena River, 12×18″

Woodcut map of Algonquin Park, 18×11.5″



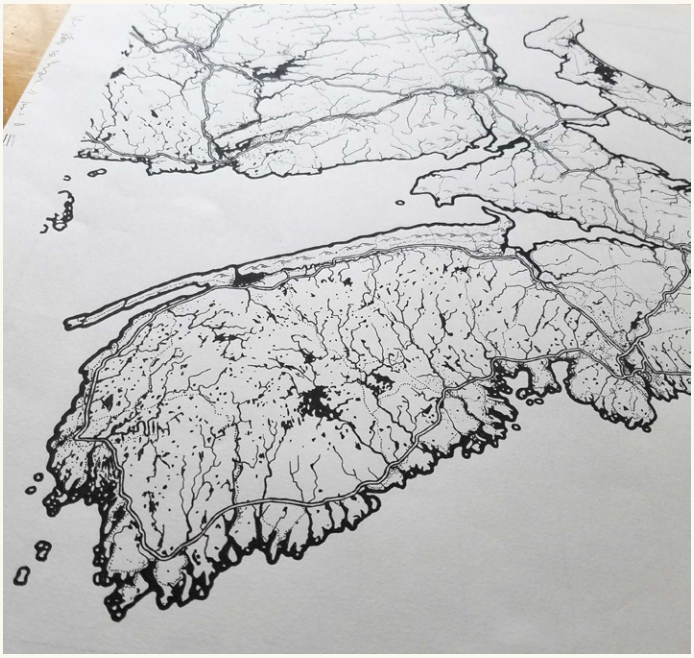
Detail of a map of mines in the Mojave Desert. Hachures were drawn by hand, and all other elements were created in ArcGIS Pro.

Fast forward seven years and I'm still very happy that I don't have to make maps by hand. This is work, after all, and efficiency matters. But making maps by hand has enhanced this work, and in particular, I've found that mixing the two techniques gives me the best of both worlds: with a pen I have the flexibility and variability to draw mountains and textures that bring the map alive, and with software I have Ctrl-Z, blend modes, and projections.

My current approach to this work goes something like this:

1. I plan the map using GIS software such as ArcGIS Pro. I choose the layers, scale, extent, projection, and rotation of the map. I also plan out symbology, but execute it only in broad strokes, in black and white, since multiple colors can make the next step difficult.

2. I tape some paper to my computer screen and trace the map. Some symbols I trace directly from the draft map, while others I draw in with new



Hand-drawn map before any post-processing.

Details of a map drawn for National Geographic, after processing in Photoshop, before labels and other text were added by Christina Shintani.

patterns. In some cases (pictorial mountains), I merely mark a location to draw on later.

3. I scan the map, and use Photoshop and Illustrator to clean up mistakes, re-colour lines, and add labels.

Last winter I worked on a commission for National Geographic of the ten longest rivers in the world, which gave me an opportunity to hone this technique. I used QGIS to plan the layout. Getting projections and scales correct and making sure all ten rivers could fit on the same page would have been a nightmare to plan on paper. But the individually-formed mountain drawings, tapered rivers, and stippled cities would have been frustrating to draw with software. Finishing the drawing in Photoshop and Illustrator allowed me to make the edits required without (always) having to redraw by hand.

I have mentioned a few of the aesthetic benefits of mapping by hand. However, I believe that the greater benefit is the experience and knowledge gained by the cartographer during the long, slow process. When you draw with software, the entire layer appears at once, and you merely decide the symbol properties. When you draw by hand, you decide each mark, and this is where I experience the true delight of geography. Without drawing every mark I never would have reason to consider why a road is depicted in one reference but not another, how some rock barrens streak across a peninsula in a particular pattern, how settlement patterns on one side of a border differ from those on another, or even just the loveliness of the shape of an unnamed lake.

When I draw geographies by hand, I'm forced to slow down and become acquainted with them. Driving through your town may be convenient and even necessary. But you'll only get to know the place if you walk.

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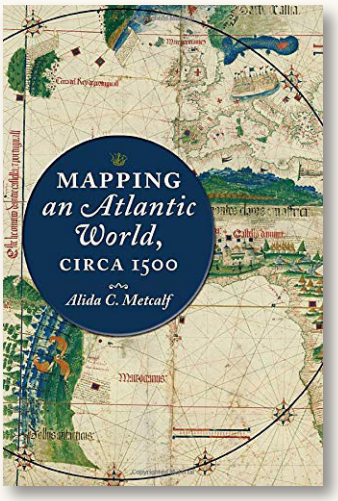

MAPPING AN ATLANTIC WORLD, CIRCA 1500

By Alida C. Metcalf

Johns Hopkins University Press, 2020

224 pages, 36 b&w and 12 color illus.

Hardcover: $54.95, ISBN 978-1-4214-3852-8

Review by: Jörn Seemann, Ball State University

When Christopher Columbus set foot on the shores of the Caribbean island of San Salvador on October 12, 1492, he not only sparked the exploration and exploitation of the Americas by the European powers, but also provoked changes in how the entire world was depicted on their maps. The addition of a fourth continent, a "New World," led them to reconceptualize the world map over the following centuries. Before Columbus's first voyage, the world known to Europeans was limited to Asia, Africa, and Europe, and the complete extent of Africa had only recently become known, when the Portuguese navigator Bartolomeu Dias rounded the Cape of Good Hope in 1488. The spaces west of Europe and east of Asia remained blank or literally off the map—effectively beyond the edge of the Earth. Martin Behaim's famous *Erdapfel* terrestrial globe, constructed a short time before Columbus returned, illustrates clearly the concept of a spherical world without the Americas. The globe shows only a few islands (Canary Islands, Cabo Verde, the Azores, Madeira, and the imaginary islands of Saint Brendan and Antilia) scattered in the dark blue Atlantic Ocean. Empty spaces are filled with lengthy comments, the coats of arms of the Spanish and Portuguese crowns, several sailing vessels, and depictions of harmless-looking sea creatures. The first land encountered to the west of Europe is Cipangu, the present-day Japan, and even that is erroneously located in the latitude of the Tropic of Cancer (Ravenstein 1908). An animated version of the *Erdapfel*, based on Ravenstein's facsimile edition, can be found at the **David Rumsey Map Collection**.

This sets the scene for *Mapping an Atlantic World, Circa 1500* by Alida Metcalf. As a "social and cultural historian [stepping] into the world of historical maps" (xxii), she investigates the first years of map production in Europe after Columbus's first voyage as a specific cartographic moment in time. She aims to understand not only how the first post-1492 maps depicted the Atlantic and the Americas, but also how these maps conveyed knowledge about the ocean and became "powerful and persuasive arguments about the possibility of an interconnected Atlantic World" (1). For Metcalf, the persuasive discourse of cartography was a decisive moving force that drove merchants, soldiers, navigators and adventurers into "exploring, developing, and risking lives and fortunes in the distant lands of the western Atlantic" (2). The ocean was suddenly transformed, cartographically, from an open, infinite sea without boundaries into a complexly bounded, intercontinental, Atlantic World. Knowledge of the existence of a fourth continent in the West—albeit initially mistaken for eastern Asia—continually changed the look and design of world maps during the sixteenth century as more and more information about the New World was brought in by navigators, sailors, and other informants. The focus of this book is on two handfuls of maps drawn or printed between 1500 and 1507 that document and illustrate the cartographic emergence of a wholly new transatlantic realm. Reading the scarce and unique maps from that time, and delving into the stories of their making, reveals the gestation of a new worldview that, in Meltcalf's words, depicted *an* Atlantic World rather than *the* Atlantic World.

Each of the six chapters of the book chronologically and thematically approaches specific aspects of the cartography of the Atlantic world circa 1500. Chapter 1 presents a brief history of the mapping of the Atlantic Ocean from ancient Greece to 1492. Metcalf points out that throughout the period, the Atlantic remained a peripheral feature on maps. A prominent example is the medieval T-O *mappa mundi* based on Isidore of Seville's seventh-century encyclopedia. Although they understood the world to be spherical, European mapmakers showed the landmasses as floating islands framed by a circular, encompassing ocean. At the time, most world maps centered, variously, on the three known continents, on the Mediterranean Sea, or even on the Indian Ocean, but never on the Atlantic. This can be seen in such cartographic representations as the *Atlas Catalan* (1375) by the Majorcan mapmaker Abraham Cresques and the *mappae mundi* produced by Fra Mauro (1450), Henricus Martellus (ca. 1490), and Nicolò Germano (1466)—the latter map being very similar to the many fifteenth century versions of Ptolemy's cartography.

In Chapter 2, Metcalf takes a close look at the year 1500 as the "tipping point" (8) of the Atlantic Ocean reconceptualization. The years between Columbus's first voyage and the turn of the century resulted in anything but a feverish production of new world maps, and indeed, if any maps reflecting the Columbian discoveries were made before 1500, they have since disappeared. Even after that date, though, cartographic changes happened only slowly. The oldest known of these new charts is Juan de la Cosa's Portolan-style *Carta Universal* (1500), drawn on two pieces of calfskin. Hispaniola and Cuba are prominently positioned among a score of unnamed islands, and place names—written in red ink—extend southward along the South American coast, but there are almost no names on the shore to the north. The barrier of the continental landmass of the Americas (the west coast of which would only be seen by Europeans—in the person of Vasco Núñez de Balboa—in 1513) is shown as an anonymous expanse of dark green terra firma, divided by a portrait of Saint Christopher, the protector of mariners and travelers. Metcalf also guides the reader through several other early maps—for example, the Cantino Planisphere (1502, with images of trees and parrots positioned in what is today's Brazil), the King-Hamy Portolan (1502, showing the Americas as a simple thin line with a few named places), the so-called Contarini-Rosselli map (the first printed map showing the New World), and Martin Waldseemüller's *Universalis Cosmographia* (1507), the first map with the label "America" on it.

Chapters 3 and 4 provide further insights into the contents of the maps, and the production processes and techniques involved in their making, as well as the lives and work of the fifteenth- and sixteenth-century mapmakers, cosmographers, and artists who made them. This was a time when manuscript map production was giving way to printing, and the change was a major factor in spreading ideas about the New World. Metcalf makes some interesting comparisons between the manuscript and printed maps—side-by-side comparisons of features (such as coastlines) and furniture (such as compass roses)—and observes that the printed products were notably more generalized and simplified. The new mass-produced maps were accessible to a broader population, but lost parts of their artistic character and their preciousness, and were easily discarded when out of date. The story of Waldseemüller's *Universalis Cosmographia*—a prominent example of the survival of a single copy of a printed map—is discussed at length in Chapter 4.

The last two chapters are dedicated to the pictorial elements on these early sixteenth-century maps and seeks to address how their visual language conveyed a specific idea of an Atlantic World through the use of colors and symbolic images. Metcalf compares the images of parrots and trees in different maps and discusses how and why these depictions evolved over time. In Chapter 6, she pays special attention to scenes of cannibalism, both as visual codes and as decorative fillers to transmit a stereotypical idea of the native population in the Americas.

In her conclusion, Metcalf speculates about reasons for the scarcity of early maps of the New World and further contends that it was the chartmakers and mapmakers, rather than the state, that "were [the] historical actors—often anonymous—who left a remarkable imprint on world history" (141). This was despite the fact that "there was not yet an accepted paradigm for how to place the Atlantic Ocean within the geography of the world, or even how to represent the world on a map" (141).

The book sheds light on different events and processes in the cartographic world "circa 1500." The author attempts to connect themes such as Atlantic history, the cultural history of mapmaking, and cartographic biographies to transmit an idea of the social, economic, and political

contexts of the period. Admittedly, the idea for the book is nothing new. As Metcalf herself affirms, "almost all of the maps are available as high-resolution digital copies that can be consulted online through the websites of the libraries, archives, and museums that hold them" (xv). They are also well-known staples in many other books on the history of cartography—for example, Peter Barber's (2005) *Map Book* or Susan Schulten's (2018) *A History of America in 100 Maps* (reviewed in **Cartographic Perspectives 92**). Too, some of the cartographic stories presented in this book are "old hat" and have been discussed thoroughly, notably: pre-1492 cartography (Edson 2007; **reviewed in Cartographic Perspectives 68**) and the Waldseemüller map (Schwartz 2007; Lester 2010). Specifically, the early period mapping of the Atlantic World and the Americas has already been studied by Ravenstein (1908) in his biography of Martin Behaim, and by Fernández-Armesto (2007), who provides a detailed list of pre-1530 manuscript maps that show the relations between the Old and the New Worlds.

To be fair and frank, retelling cartographic history is not a mere repetition of facts and events. The most promising potential of Metcalf's book lies in its educational value. It could, for example, be used as an introductory read in undergraduate courses on map history or Atlantic history. Despite the existence of only a small number of historical cartographic sources, the author was able to draw a comprehensive picture of early sixteenth-century cartography and the mapping of the Atlantic World, though the limitation of the "circa 1500" time frame leaves the reader with a feeling of incompleteness. Akin to Chapter 1 ("The Atlantic on the Periphery"), which sets the stage of the book's theme by discussing maps before 1492, I can perfectly imagine a Chapter 7 that could engage briefly with map production after the first decade of the sixteenth century, when both the Atlantic and the Americas gradually gained their shapes.

The bibliography features a list of the maps mentioned in the book, along with internet links to the libraries that own them. I found this resource very useful, although the longevity of URLs is never guaranteed. The author has also created a web page (**acm5.blogs.rice.edu**) that contains all 36 figures and 12 color plates, along with brief comments on their contents and contexts, although this repository is not mentioned in the book itself. This very user-friendly website allows the reader to access the maps without wasting a lot of time on internet searches, and the online copies allow panning and zooming—a real advantage in exploring these large, complex, historical maps.

The book is an easy read, but I felt it did not expand quite enough on the discussion of some of its central ideas. When I read about the author's aim to frame these maps as powerful arguments for the creation of the concept of an interconnected Atlantic World, I was unsure in what direction the argument would lead, or how this hypothesis could be corroborated. Was it these maps that sparked a scramble for the Americas, or were the maps the result of a scramble? Were the individual mapmakers the true forces behind the map production, or were they simply entrepreneurs responding to an opportunity? Metcalf's stress on the contributions of individual mapmakers downplays the role of governments and their power of knowledge, but does not provide wholly convincing answers to the questions she raises. I was expecting more on the shaping of the Atlantic rim as a new geographic entity, with maybe an analysis similar to what Lewis and Wigen (1997) have called the "myth of continents." How, for example, did this particular area gain the status of a uniquely identifiable region? Some have written that, in the case of the Americas, this was not a result of simply adding the New World to the maps, but instead required a dramatic shift in European cosmography—a shift that did not happen overnight.

Once Europeans crossed the Atlantic, they gradually discovered that their threefold continental system did not form an adequate world model. Evidence of what appeared to be a single "new world" landmass somehow had to be taken into account. The transition from a threefold to a fourfold continental scheme did not occur immediately after Columbus, however. First, America had to be intellectually "invented" as a distinct parcel of land—one that could be viewed geographically, if not culturally, as equivalent to the other continents (Lewis and Wigen 1997, 25).

In conclusion, *Mapping an Atlantic World, Circa 1500* is a light and entertaining read, especially for those who are not familiar with the cartographic history of the Renaissance. Reading through the pages, I became quite obsessed with the role of cartography in the invention and establishment of geographic concepts, and how both the maps and the concepts gained contents and substance over the years. The maps Alida Metcalf examines not only confirmed the existence and presence of a fourth continent, but also helped to consolidate the idea of a world centered

on the Atlantic Ocean and based on Eurocentric and ethnocentric worldviews—a view that remains alive and well in the twenty-first century.

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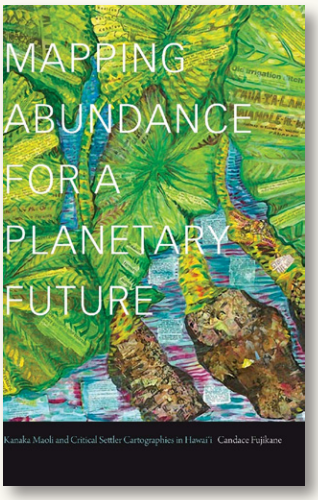

MAPPING ABUNDANCE FOR A PLANETARY FUTURE: KANAKA MAOLI AND CRITICAL SETTLER CARTOGRAPHIES IN HAWAI'I

By Candace Fujikane

Duke University Press, 2021

279 pages, with maps, artwork, and photography

Softcover: $27.95, ISBN 978-1-4780-1168-2

Review by: Daniel G. Cole, Smithsonian Institution

I CANNOT BEGIN THIS REVIEW without addressing the book's title. Because so little of this book relates to planetary affairs and is instead concerned with issues of environmental justice and the conflicting beliefs, practices, and cartographies (both cognitive and practical) of the Kanaka Maoli (or Native Hawaiians) and the immigrant settlers, I would have suggested that the subtitle *Kanaka Maoli and Critical Settler Cartographies in Hawai'i* was a complete title in itself. The author is a professor of English at the University of Hawai'i and appears well versed in both colonial/Native Hawaiian history and in current local affairs. Her extensive use of Hawaiian words, however, while no doubt appropriate, can make for heavy reading for anyone unfamiliar with the Indigenous terms. I was surprised that she didn't include a Hawaiian/English glossary, something that the Native Hawaiian cartographer Renee Pualani Louis provided in her 2017 book, *Kanaka Hawai'i Cartography*.

In her Introduction, Fujikane quickly establishes a clear dichotomy between Indigenous and capitalist cartographies, writing that whereas "The procession of mo'o[1] teaches us cartographic principles of the pilina (connectedness) of the myriad ecosystems," the "cartographies of capital are processes of mapmaking that often rely on insistence rather than substance, on force and will rather than on ground truths." In contrast to the former, she argues that the latter "cartographies do not therefore merely depict the systems of a planet laid waste . . . but are themselves a primary driving force of climate change" (3). She further argues that "cartography as a methodology is critical to growing intimate relationships with 'aina (land and waters who feed)[2] in ways necessary to our planetary future" and that "mapping abundance is a profoundly decolonial act" (4), in contrast to cartographies of capital that "enclose and domesticate Indigenous places" (5). The one map appearing in this section is *O'ahu: Pre-Mahele Moku and Ahupua'a* (20), from the Hawaiian Studies Institute (1987), showing the island divided into areas of access to resources. She then extends the cartographic work of Beamer and Duarte (2009), Beamer and Gonschor (2014), and Louis (2017) by incorporating Indigenous cognitive cartography with public participation mapping in a pursuit of environmental justice.

In Chapter 1, "Mo'o'aina as Cartographic Method," the author complains about a developer's plans to desecrate Maui, and focuses on their use of maps to dismember the land into small, fragmented plots that can later be rezoned for light industry. The developers, following the lead of many land speculators on the American mainland, begin by declaring lands not "productively" in use to be "wasteland" in order acquire or steal legal control over them. They then use gridded land divisions to explode a spot that is special to Native Hawaiians into isolated fragments, in a manner much like the way the United States Public Land

1. The mo'o are mystical beings, involved in a procession across the landscape.

2. 'Aina are those lands and waters from which a person draws sustenance.

Survey System (PLSS) was used to disenfranchise mainland Native American residents. Research carried out by Fujikane and her compatriots on documents identifying lands formerly farmed by Native Hawaiians, as well as on a number of historical maps (cropped portions of which are shown on pages 47 and 58), amply illustrate the way the neocolonial settlers used artificial lines to divide the landscape, ignoring and denying its interconnectedness.

Fujikane foregrounds the need for Kanaka Maoli (Native Hawaiians) and empathetic settlers to look beyond conventional two-dimensional maps in Chapter 2, "Maps in Motion," calling for maps to be set into motion by leveraging all four dimensions of space and time. By way of illustration, she discusses some good examples of the use of public participatory cartography to deal with various environmental injustices inflicted upon Native Hawaiians by military, commercial, industrial, and agricultural interests. She cites cartographic work by unidentified "Concerned Elders" that uses "the land itself as a map to render visible the abundance of the valley" (84) and contrasts it with the use of aerial photos and maps by commercial interests to differentiate "highly productive" from "not productive" lands solely by the presence of irrigation (82–83).

For Chapter 3, "Mo'oinanea's Waterways on Mauna a Wakea," Fujikane delves into the history and repercussions surrounding construction of the 13 observatories currently on the peak of the dormant volcano Mauna Kea, also known as Mauna a Wakea. The discussion contrasts Hawaiian beliefs, rooted in intergenerational knowledge, about the sacredness of the landscape, with the almost complete disregard with which mainlanders have treated these concerns. To the American surveyors since the late 1800s, and to the telescope planners since the 1960s, Mauna Kea was, and remains, an empty wasteland, and it is notable that no treaty or consent to transfer the land was ever made (or even considered necessary), and even today no actual title to the land exists. It is as if, officially, Mauna Kea exists in a vacuum. This limbo is illustrated by a schematic map (105) from the University of Hawai'i that ignores the local hydrogeology and shows only one side of the mountain.

Chapter 4, "Kupuna Pohaku on Mauna a Wakea," recounts the period from the 1893 US invasion and overthrow of Queen Lili'uokalani, through the 1959 declaration of statehood (with the attendant transfer of trust land from federal to state control), up to the present. It features a description of the vigorous, nonviolent protests that began in 2014 to oppose the construction of the Thirty Meter Telescope (TMT) on Mauna Kea. While the TMT Conservation District Use Application included maps that show the site as "empty space," these are contradicted by an intricate "star" map (Plate 11) that incorporates all of the many sites included in an archaeological inventory of historic shrines surrounding the mountain. One ethnologist noted that "a fundamental problem in archaeological studies [used by organizations like TMT]; the failure to evaluate individual sites as parts of regional complexes" (126).

In Chapter 5, "Vertical Maps of Subterranean Waters in Kalihi," the author tells us that the "the US Navy stores 187 million gallons of jet fuel only one hundred feet above the Southern O'ahu Basal Aquifer" (144–145). From the chapter title, a tradition-minded cartographic reader might expect to see a 3D map of the hydrogeology of O'ahu. Instead, Fujikane provides a storyboard sketch map (172) of the waters that feed Ke'ehi (a large lagoon in west Honolulu, near Pearl Harbor) which gives an Indigenous view of the hydro-environment of a portion of O'ahu.

Near the beginning of Chapter 6, "Mo'o'Aina Cascades in Waiahole and He'eia," is a reference to Plate 13, which is a photo of flowering shrubs alongside a road. Because the plate is titled "Mapping Hau (mea)," a reader might think that this photo is mislabeled, or perhaps the caption refers to a field mapping location. Unfortunately, Fujikane does not provide much of an explanation. Somewhat less mysteriously, she presents the history of water diversion on O'ahu: in 1916 for commercial sugar production (ending the Indigenous practice of kalo [taro] farming); in 1973 as part of an attempt to evict farmers for residential development; and finishing with a 1993 proposal to restore some diverted waters. This last agreement ended with nearly half of the diverted waters being returned in 1995, allowing for the restoration of historical fish ponds. The chapter ends with a discussion of the importance of coral for the health of local marine life. In this chapter, she provides three examples of cartographic art by Mealaaloha Bishop (Figure 6.3 on 186, and Plates 14 and 15) with watersheds and streams symbolized as the veins of kalo leaves, and with numerous place names.

The Conclusion provides a painting (209) of the demigod "Maui, the great navigator of the Pacific, wayfinding according to the laws of the akua, looking to the elemental

forms and their signs for guidance" (210). Fujikane also gives us a reduced copy of Ashley Hunt's poster map *A World Map: In Which We See…* (Plate 16) describing it as "a dazzling and intricate schematic of globalization and the implosive demise of capital" (211). Unfortunately, it's too small to read and no close-ups are given.

Overall, in spite of the problems noted above, Fujikane provides an interesting presentation on the environmental issues facing Native Hawaiians, and on how they perceive their environment in contrast to the controlling government and settler activities. I don't know if I can recommend this book to cartographers, but it surely can be recommended to anyone working on environmental justice concerns with Indigenous peoples. If she follows this book up with a later edition, as I hope she does, I recommend that she include a glossary and some close-up copies of the maps. I also suggest she put some more thought into the title. Lastly, I would be interested in seeing her reaction to the recent (29 June 2021) webinar on the management of Papahānaumokuākea Marine National Monument, hosted by National Oceanic and Atmospheric Administration (NOAA)'s Office of Hawaiian Affairs. For information on this, see the websites: **New guidance document to integrate Native Hawaiian culture into management of Papahanaumokuakea** and **Integrating Native Hawaiian culture into management of Papahanaumokuakea**.

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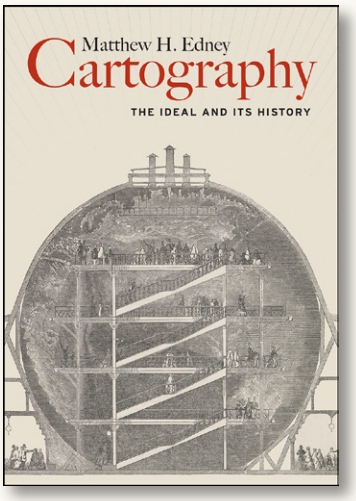

CARTOGRAPHY: THE IDEAL AND ITS HISTORY

By Matthew Edney

University of Chicago Press, 2019

309 pages

Softcover: $30.00, ISBN 978-0-226-60568-5

Review by: Jack Swab, University of Kentucky

Thirty years after J. B. Harley's *Deconstructing the Map* (1989) changed the study of maps, Matthew Edney's *Cartography: The Ideal and Its History* sets out to deconstruct the larger enterprise that is cartography. In it, Edney powerfully argues that the very concept of cartography—the historical systems of thought that undergird the study, creation, and practice of maps, and that comprise a paradigmatic *Ideal*—is not only ill-suited but detrimental to the modern study of maps. Focusing on this ideal allows Edney to show that cartography, in all of its various forms and modes, has been obsessively preoccupied with its own output (the map); thus missing a much larger picture. The result, he argues, is that cartography as an endeavor has become moribund—stuck in an intellectual rut of its own design—in essence analyzing itself to find its own solutions.

In *Cartography*, Edney traces the development of the conceptual cartographic ideal from its inception in the eighteenth century, through its integration into popular Western culture in the late nineteenth century, its formalization in twentieth century academic cartography, to its slow decline in the late twentieth and early twenty-first centuries. It would be wrong, however, to assume that this book is a chronological retelling of the history of cartography. Rather, the work takes a Foucauldian approach: it is a systematic study of cartography as a productive and intellectual endeavor. Towards this end, Edney argues that cartography as an intellectual endeavor is dying, and that it has been dying for quite some time. While the prognosis he delivers is distinctly negative, he does not rush to issue cartography's death certificate, as have other scholars such as William Rankin (2016), Denis Wood (2003), and Timothy Barney (2015) over the past fifteen years. Edney argues that it is not the map itself that is dead, but rather that cartography, as an endeavor rooted in a specific history and tradition, is no longer relevant to today's world. This powerful statement, sure to attract as many critics as it does supporters, is the culmination of the author's more than thirty years of study and writing about maps.

In his book's six chapters, Edney argues the need for a new paradigm of map studies, one that systematically dismantles cartography and analyzes its underlying characteristics. In Chapter 1, he sets the scene, introducing his conception of modern cartography, its limits, and how his postulated ideal of cartography has left the discipline in an intellectual rut. Chapter 2 explores how sociocultural critiques of the ideal have addressed some of its problematic aspects but failed to address it in its entirety. Chapter 3 identifies and examines a variety of preconceptions Edney sees as integral to the cartographic ideal that have long dominated thinking about maps and regulated other facets of cartography as well—who, for example, is qualified to call themselves a cartographer, what topics can legitimately be studied, how maps should be examined, etcetera. All of these preconceptions, he argues, are completely wrong and therefore hinder our ability to fully understand maps.

Chapter 4 uses a traditional history of cartography framework to examine how the ideal came to dominate discourse, lodging itself invisibly in society. The discussion in Chapter 5 is centered on the ways in which a single innovation, the numeric scale ratio (1:24,000 for example), was co-opted by the cartographic ideal—fundamentally tying all potential maps and map-like objects to their scalability, often in problematic ways. Finally, Chapter 6 summarizes the argument that it is time for scholars to move on from cartography into a new, more flexible paradigm.

Edney points out that much of the power wielded by the cartographic ideal is rooted in its control of terminology, and he makes a considerable effort to carefully define, clarify, and explore a whole slew of map-related terms. Much of his overall argument rests on deconstructing these terms and exploring the ambiguities and flaws in their definitions—he argues, for example, that the perceived differences between maps, charts, and plans are reflective of the limits of the ideal. By overturning the received vocabulary and pointing out the contradictions in them that traditional cartography has failed to acknowledge or address, Edney clarifies and advances his argument for the obsolescence of the ideal. His expansion, creation, and rearticulation of various cartographic terms also provides him a language for envisioning future map scholarship.

While the author illustrates his points with historical maps, the framework he lays out is applicable to the study of *all forms* of geographic information, not just finished maps. The approach he advocates requires scholars to think about mapping primarily as a process—one where each individual decision comes to bear on the "final" product and ultimately on its impact on the world. This approach borrows heavily from the field of the history of the book, as well as those of visual arts, critical cartography, critical geography, history, and social theory. But, Edney argues, marrying these diverse viewpoints with cartography, as it is traditionally perceived, raises questions that cartography and the history of cartography cannot properly answer. To remedy these issues, Edney proposes an abandonment of *cartography* for a new field termed *map studies*. As he envisions it, map studies encourages a holistic view of the map as geographic information, one that is specifically grounded in the people, places, and technologies that create maps and other forms of geographic information. As such, it also asks scholars to consider different formats—ones that go beyond the traditional visual map to include textual, performative, and gestural maps, among others (236).

If we accept the proposition that cartography is either dying or dead, and that a new intellectual understanding of maps is on the rise, then it follows that the map community is also in some form of transition. Yet one of the weaknesses of this book is that it is difficult to ascertain where exactly in this transition we are or where Edney feels we are. While the map community has certainly moved on from many of the problematic preconceptions listed in Chapter 3, one is left unsure of what it means for cartography to have moved on from some of these preconceptions without having rejected the ideal. In other words, one is left wondering about changes in the ideal itself. Certainly, the past few decades have seen an immense amount of scholarship—in critical cartography, critical GIS, critical data studies and science; along with more practically oriented efforts to diversify the map community and make it more inclusive—that has both challenged and overthrown many of the preconceptions Edney had identified as integral to the ideal. If the cartographic ideal is a monolithic intellectual system that the map community labors under, unaware of what they are supporting, then how is it that some of these preconceptions are no longer central to cartography? Although Edney does provide some cover for this—arguing that sociocultural studies of the map have often run up against and critiqued parts of the cartographic ideal—there seems to be a mismatch between the idea of the cartographic ideal and the practice of cartography as conceived of by individuals. Then again, while this could be part of the whole point of the book, it is never explicitly stated or explored. Perhaps it is supposed to be up to future map studies scholars to determine and articulate their own understandings of this transitionary period in the study of maps.

The book's construction is first-class, with wide margins for copious notes and annotations. Edney has heavily cited and footnoted his sources, as the bibliography of forty pages illustrates, and his twenty-eight-page index provides a highly useful resource. The figures in the book are only in black and white, often on a half or quarter page, but they are sufficient for the thoughts Edney is advancing. For an academic text, the book is surprisingly accessible and free of excessive jargon, although the general public might still find it a bit too verbose for their tastes. Finally, the examples from map history are well integrated into the

text, and with Edney's larger argument, without bogging the reader down in unnecessary details.

In light of the numerous attacks on cartography, Edney's *Cartography*: *The Ideal and Its History* may perhaps be the nail in the coffin of cartography as we now know it. It would be an understatement to say that the book makes an important contribution to our understanding of maps as an intellectual endeavor. Edney's work lays out a plan for what map studies might become (and perhaps is already becoming) in a period of cartographic fervor both in and out of the academy. Simply put, all those interested in the future of the map, of map studies, and cartography should purchase a copy of this book, read it intently and with an open mind, and take its ideas seriously.

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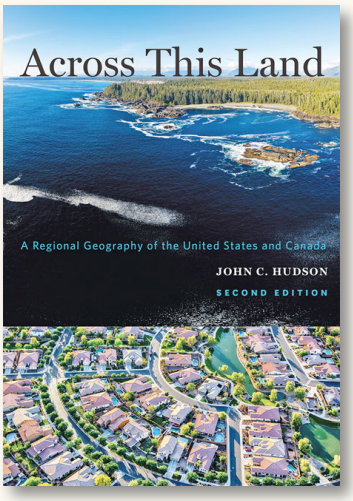

ACROSS THIS LAND: A REGIONAL GEOGRAPHY OF THE UNITED STATES AND CANADA, SECOND EDITION

By John C. Hudson

Johns Hopkins University Press, 2020

529 pages

Paperback: $69.95, ISBN 978-1-4214-3758-3

Review by: Russell S. Kirby (he/him), University of South Florida

Textbooks on regional geography were once a staple of undergraduate geography education. There were several to choose from in the 1970s, most covering a single continent or country, and all with a familiar, uniform organization and approach. Most focused on the relatively current scene, with recent photographs and illustrations, statistical tables from government data sources such as the US Census Bureau, and text written in a style more like an encyclopedia than narrative prose. Little changed over the next few decades. There were plenty of choices, but little variety or excitement, and although the field has thinned a bit in the intervening years, the reading has hardly gotten livelier.

Imagine my joy then, in 2002, when I received a review copy of the first edition of Hudson's *Across This Land*. This regional geography of North America, focused on the United States and Canada (though not Mexico), provided a refreshing contrast to the available offerings, with an idiosyncratic organization reflective of the author's appreciation for physical and historical geography, and engagingly integrating academic research with his personal experience teaching courses on this subject for thirty years.

Move the clock forward to today, and we now have a second edition of this textbook. Hudson has changed none of the features that made the initial book so distinctive. As previously, the text is separated into ten regionally focused Parts, each comprised of two or three thematic chapters, of which there are twenty-seven in total. In turn, each chapter addresses a varying number of particular topics. The ten Parts—"Atlantic Canada and Quebec," "The Northeast," "The Upland South," "The Lowland South," "The Middle West," "The Central Plains," "The Western Plains and Rocky Mountains," "The Intermountain West," "The North," and "The Pacific Realm"—are grouped primarily by physiography or major patterns of economic activity. Meanwhile, the focus of the chapters is on areas with distinctive features in their history, social fabric, or patterns of land use: for example, "Chapter 19. The Northern Rocky Mountains and the Columbia–Snake Plateau," in "Part VIII. The Intermountain West." While a few are restricted to a single political/administrative unit (such as "Chapter 26. California"), or a group of units ("Chapter 3. The Maritimes"), this occurs only in places where the administrative unit broadly corresponds to some sort of homogeneous region.

"Chapter 15. Prairie Wheat Lands," can serve as an example of the organization and focus of the others. It consists of eight topics—the Central Plains environment, the winter and the summer wheat regions, the Red River valley, the Parkland belt, the Prairie Provinces, Alberta's oil industry, and the Peace River district—each receiving three or four pages, including illustrations, and the chapter concludes with a brief list of key references.

What makes this textbook such an intriguing read is Hudson's ability to capture the "sense of place" that contributes to the distinctiveness of the various North

American regions. The basic information found in an instructor-led course on the geography of the United States is there, but much more than that is captured in these pages. Distinctive land use patterns, housing, and other cultural landscape features are mentioned throughout the text, accompanied by useful maps and illustrated with judiciously selected photographs. One might be tempted to say that this book has it all.

Tempted, perhaps, but there are some shortcomings. It is noticeable that, while Hudson pays some attention to the geography of native peoples, his primary focus is squarely on the settlement following European colonization. His references, too, could be more comprehensive, comprised mostly of materials referenced in the previous edition with only minimal updating. While there is a chapter on Hawaii, and two pages on US Pacific island territories, Puerto Rico receives little coverage. Perhaps befitting a text organized around regions, broader themes in economic and population geography receive limited attention. For example, patterns of internal migration, differences in regional demographic composition, cultural differences in diet, linguistics, religion, and spatial aspects of structural racism are among the topics not discussed. But should they have been? Maybe, or maybe not. While the book does what it set out to do, for those readers wishing for more, most chapters have at least a dozen references for additional reading. Given the organizational framework for the book, Hudson does an admirable job weaving a complex tapestry of physiography, climate and meteorology, cultural landscapes, and key aspects of economic activity, while inserting historical tidbits along the way. An instructor teaching a course on regional geography could supplement this text with any of the topics I've mentioned—using readings, photographs, videos, and lecture materials—to round out the picture.

Across This Land is an excellent resource on the geography of North America. It is suitable for undergraduate courses, but easily stands on its own for the casual reader who wants to know more about the structures that tie the United States and Canada together as nations, and about the distinctive features of each complex regional tapestry. Any well-read North American should have read or have access to a copy, and it can be used by parents to inspire their children to realize that geography is more than memorization of lists of state capitals, major cities, rivers, and other physiographic features. *Across This Land* provides an effective introduction to the field of geography, through the lens of a well-traveled, highly accomplished scholar and educator. I heartily recommend it to all!

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Robinson, Arthur H., Joel L. Morrison, Phillip C. Muehrcke, A. Jon Kimerling, and Stephen C. Guptill. 1995. *Elements of Cartography, 6th Edition.* New York: John Wiley & Sons.

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Peterson, Michael. 2008. "Choropleth Google Maps." *Cartographic Perspectives* 60: 80–83. http://doi.org/10.14714/CP60.237.

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Danzer, Gerald. 1990. "Bird's-Eye Views of Towns and Cities." In *From Sea Charts to Satellite Images: Interpreting North American History through Maps*, edited by David Buisseret, 143–163. Chicago: University of Chicago Press.

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