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

Mark Denil

mark_denil_maps@hotmail.com

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]

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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.

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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 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.

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* 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).

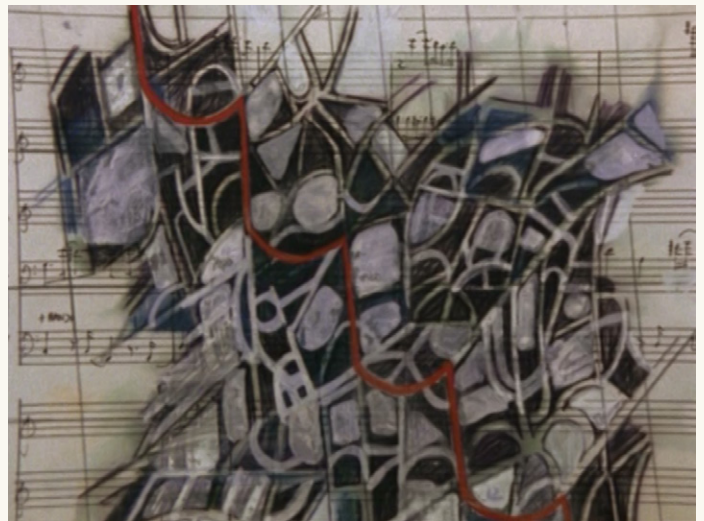**Figure 7.** Peter Greenaway. 1978. Map 27 detail. A fake Erhaus Bewler map.

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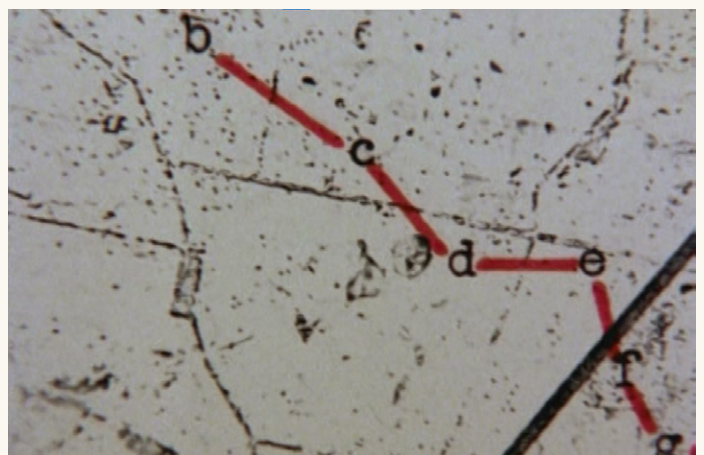

Figure 9. Peter Greenaway. 1978. Map 64 detail. This map was not especially clear.

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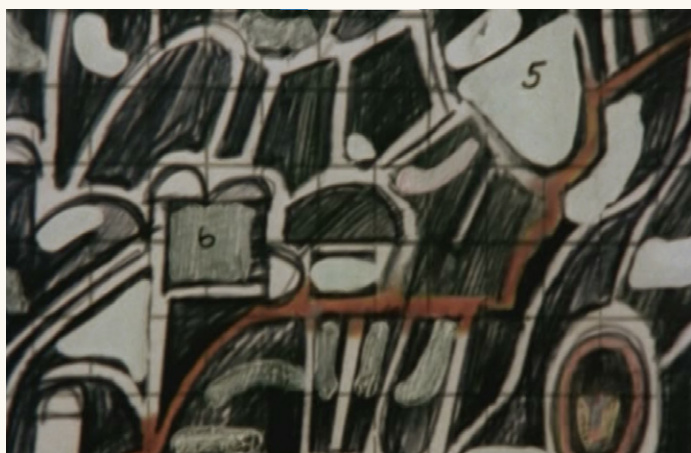
> This drawing was bought on my behalf from a traveler who said she had made the journey before. I'd paid a lot for it. I thought at the time that any journey she might take would be worth taking. The road was clearly marked, perhaps too clearly. As a map the drawing was worthless.*

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.

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

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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