

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, wherever 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



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“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 assertion 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

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

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.

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].

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

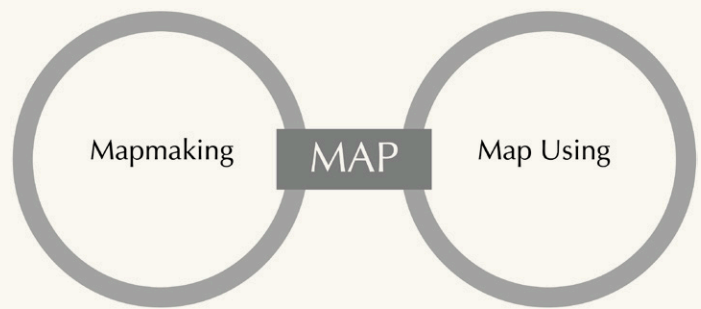


Figure 1. The two epochs separated by the material map: mapmaking vs map using. Given how this model locks analysis into predefined avenues, I personally think of this as the “handcuff model.”

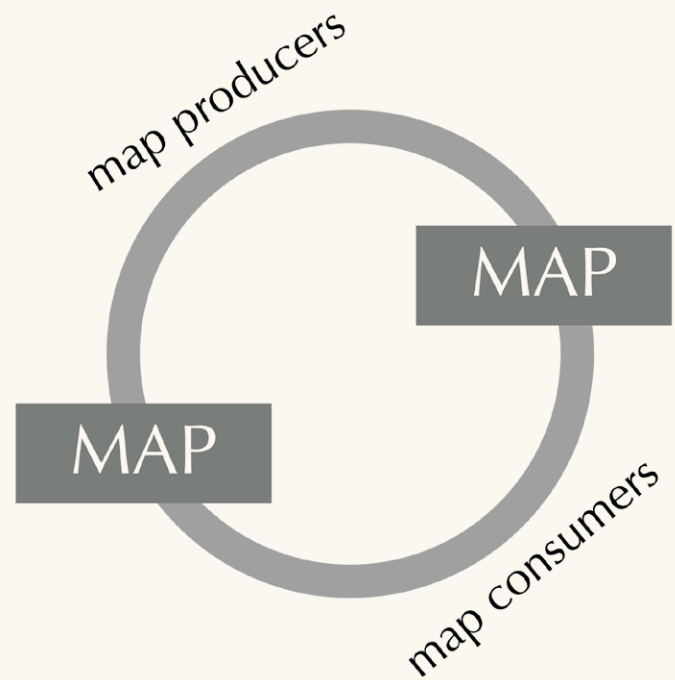


Figure 2. Maps circulate between producers and consumers within spatial discourses.

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 explanation 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.

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