CONTRIBUTIONS TO MAP HISTORY

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Contents

"CARTOGRAPH"

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> **update 23 Feb 2020:** I have cleaned up some of the language, and to clarify some of the argument. As my brother noted, the insomnia was evident in some of the writing. I also happened to find, yesterday, an old to myself with a couple of neologisms coined to do the same work as "cartograph."
>
> **update 22 March 2020:** It occurs to me that I should be absolutely clear that this post refers only to usage in the English language and has nothing to say about words in other languages (such as the French term "cartographe" for a cartographer).

I'm currently enjoying a recently published science-fiction book: Arkady Martine's *A Memory Called Empire*. It is grand space opera of the political intrigue variety, sort of like Anne Leckie's *Ancillary* series. The book's plot is irrelevant to this post (so don't worry, there are no spoilers!). I'm reacting only to a particular character's name, which leads me to expand on and clarify a paragraph in *Cartography: The Ideal and Its History* (Edney 2019, 219), and to develop some further thoughts about how people have reacted in the twentieth century to the ideal of cartography and its normative conception of maps.

The Prompt

The space empire in *A Memory Called Empire* is based loosely on pre-hispanic Nahua (Aztec) culture and uses a Nahua-style system for naming its citizens. According to one very early Spanish account, from as early as 1527, Nahua children received a name based on the particular day on which they were born or on which they were named soon thereafter. The 260-day calendar contained twenty cycles, each of thirteen days and each associated with a variety of symbolic emblems; children were named by the number of the day and one of the relevant emblems. Thus, "All new-born children received the name of their birth day such as One Flower, or Two Rabbit, etc." Nahua received other names too, and some of these further naming practices appear in the book as well. But the primary name of every imperial citizen is a number and a noun (animal, plant, concept, etc.) given by their parents. Early in the book, the protagonist (the newly arrived ambassador from a system beyond the empire) bonds with her imperial cultural liaison over their mutual amusement at the name chosen by a newly domiciled citizen who doesn't quite get the concept: Thirty-Six All-Terrain Tundra Vehicle. Also, there are diminutives derived from the substantive part of the name. Thus, the cultural liaison, Three Seagrass, is called Reed by a friend, Twelve Azalea, whom she in turn calls Petal.

What caught my attention is the name borne by the son of a political aide to one of the emperor's inner circle: "Two Cartograph." The aide further refers to her son affectionately as "Map." (In chapter six, at location 135/462 in the kindle version I'm reading.)

"Cartograph" as a Back Formation

A back formation is a new word—a new part of speech or a new meaning—created when a real or supposed affix (generally a suffix) is dropped from an existing word. The verb "edit" is, for example, a back formation from the noun "editor": the Latin verb *ēdĕre*, to put forth, has the past participle *ēditus*, from which derived both editor and edition via the French; the verb "edit" was not coined until ca. 1800. Because English commonly adds suffixes to verbs in order to make nouns, it is logical for speakers to presume that nouns which bear such suffixes were derived from a verb, so that the verb can be readily recreated, even when the verb form does not actually exist. Whereas most back formations seem to be verbs like "edit" that have been intuited from nouns, cartograph is a noun derived from another noun.

The complicating factor is that there are two common suffixes derived from the same ancient Greek verb γραφειν (graphein), to write. First, -graphy means "writing [on|with]" or "description." Second, -graph, which was originally used to mean "that which is written," appearing in such old words as "autograph." (There is a third suffix, originally rare, -grapher, for the person doing the writing, as in "geographer").

The *Oxford English Dictionary's* entry on -graph has not been revised since 1900 and is a bit confusing. It suggests, however, that nineteenth-century practice created many pairs of nouns, ending respectively in -graphy and -graph. The first suffix was adopted for processes. -graph was then used in one of two senses: either (sense 1) instruments "that write, portray, or record," such as "phonograph"; or (sense 2) the product of the processes, such as "photograph" or "lithograph." It is clear from Twyman (1970, 4–5), for example, that "lithograph" and "lithography" were coeval. Lithograph and photograph, etc., are *not* back-formations.

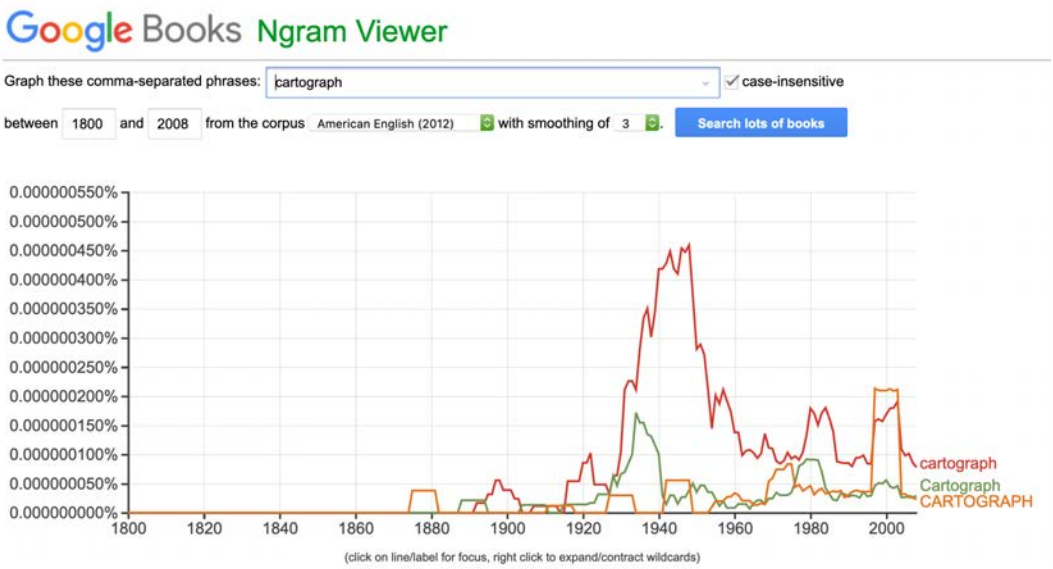
The dropping of the -y from cartography creates such a noun pair: cartography, the process, and now cartograph the instrument or product of that process. The ease with which "cartograph" has been created and recreated, perhaps independently, stems from the apparent naturalness of the pairing. A -graphy calls for and perhaps even requires a complementary -graph.

> (In line with the predominate function of back formation to create verbs, there has been something of a tendency after 1800 to form verbs by dropping -y from -graphy. Earlier -graph words are resolutely nouns. There is no verb "geograph" but in modern usage we do find "calligraph" as a back-formed verb when early forms were limited to calligraphy, the practice, and calligrapher, the person doing the process. I am sure that someone in phase 3 or 3a [below] has used cartograph as a verb; if so, they should stop doing so, at once!)

We know that cartograph is a back formation, unlike lithograph or photograph, because of the

history of its use. "Cartography" itself was adopted in the 1820s, as if it were akin to the Greek word "geography" (lit. earth writing [description]). The neologism was coined specifically by Conrad Malte-Brun to refer to the emergent idealization of a single, universal endeavor of map making, in the sense of "writing maps" (Edney 2019, 114–20). Instances, in English at least, of "cartograph" are only a twentieth-century phenomenon.*

Usage of the back formation of cartograph has not been consistent. More careful consideration of its usage, in light of the two senses in which -graph has been used in the modern era, suggests that cartograph has passed through three phases of usage, phases that can be seen in the following graph of the word from Google's n-gram viewer:



Google n-gram for "cartograph" in the American English corpus. Fundamental problems in Google's metadata and OCRing mean that the n-gram is valid only as a general indication of frequency and cannot be interpreted with any degree of precision (Nunberg 2009)

Phase 1. Instruments in the early 1900s

In the early twentieth century, cartograph was used to refer to a variety of technical innovations, in the *OED's* sense 1: a new kind of alidade for plane tabling, a photogrammetric machine, a device for reading road maps as one drives (Edney 2019, 219). I have also encountered it in the name of an entire

* A new search via Google's n-gram viewer has revealed an 1856 filing for an English patent by a Frenchman (Jean Baptiste Jules Hypolite d'Auvergne) for a portable writing desk that he called a "cartograph"—i.e., an instrument on which to write documents (*carte* in its generic French meaning); the patent application made no reference at all to maps.

publishing company, the Cartograph Publishing Company of Philadelphia, about which I know nothing, but which seems to have been active from 1898 through 1914, and probably into the 1920s.*

Phase 2 (1928–1960): Cartographs are pictorial maps

The use of cartograph in the *OED's* sense 2 is unwarranted. After all, there is already a word for the product of cartography: map. The use of the back formation in this sense implies an abnormality sufficient to preclude reference to "the map."

Specifically, cartograph seems to have been coined by Ruth Taylor Watson in 1928, to refer to her pictorial maps of Arizona, the Grand Canyon, and the American West (Griffin 2013, 7–9). Her work, which blended maps with cartoons, needed a label that permitted variety and nuance. The word caught on rapidly in the US, as in this Depression-era promotional work published by an agency of the Ohio state government (fig. 1).

In phase 2, cartograph was coined anew and adopted specifically to refer to spatial imagery that are clearly too abnormal to be properly considered as maps. The normative conception of maps is of truthful, accurate, and objective images that hide and obscure the people who made them (Wood 1992). They might as well be the works entirely of machines. But then this (apparently) new kind of image arises, whose playful character proclaims to the world that an artist had directly intervened in the cartographic process. These images did not just depict the landscape, they made arguments about the social and cultural nature of places and regions. Such images are sufficiently different from the normative map that they can't even be thought of as qualified maps, as "pictorial maps," but require their own special term: cartograph.

Originally, I daresay Taylor Watson used "cartograph" to claim standing as an innovative designer; such works were *her* idea, *her* invention. Yet its rapid adoption across the USA, by private designers and government agencies alike, indicate a wider anxiety that these highly effective images were nonetheless not genuine maps. The back formation inherited the authoritative mantle of "cartography," assuaging such anxieties.

* Google's n-gram also threw up a 1927 curriculum from Long Beach, California, for Social Studies in grades 7 through 9, which suggested that geography should be taught in a room equipped with a map of the world, and map of the USA, a "Cartograph map of the United States," and a "Cartograph map of the world."

Figure 1. Ohio Commission to A Century of Progress International Exposition, *Being a Cartograph of Ohio: The Oldest State West of the Thirteen Original Colonies; now the Fourth State in the Union in Population; Third in Manufacture; Sixth in Minerals Mined; and among the Foremost in Agriculture* (1934). Osher Map Library and Smith Center for Cartographic Education, University of Southern Maine: http://www.oshermaps.org/map/45556.0001.

The limited application of "cartograph" to one kind of map entails a moderate critique: it subverts the normative map, but affirms the ideal of cartography. The segregation of pictorial maps as a special category of image served only to highlight the fact that the great majority of maps were indeed "real" and produced in adherence to scientific norms.

Phase 3 (1980+): Cartographs are the products of cartography

After 1980 there developed a further, more general usage of cartograph according to the *OED's* sense 2. I think that this phase entailed the coinage of the word anew, perhaps several times, as scholars in a variety of fields increasingly rejected the normative conception of "the map."

In this phase, cartograph has been used for many different kinds of map that do not adhere to the standards of cartographic science and the mechanistic depiction of landscape. I have found cartograph being used for maps by indigenous peoples, maps by landscape artists, maps of statistical surfaces, and so on (Edney 2019, 219). Such usages invert the previous relationship of cartograph to map: rather than cartographs being an abnormal kind of map that requires its own term to salve anxieties about their use, there now developed an idea that "the map" is itself too limiting a concept and that an alternative is required for the kinds of representations that image social and cultural phenomena that normative maps cannot show.

This sentiment is part and parcel of the subtle critique, evident for example in New England transcendentalism, of the inherent limitations of science. As Herman Melville famously began chapter six of *Moby Dick* (1892): "Queequeg was a native of Kokovoko, an island far away to the West and South. It is not down in any map; true places never are."* The attitude became a staple of anti-war/anti-science/anti-nuclear politics and academics in the 1960s and 1970s. As scholars across the humanities and social sciences began to ponder the nature of maps, there seemed a sense that modern, scalar maps were implicitly limited in showing cultural and personal impressions of place, and that they are inequitous tools of government. This is what Martin Brückner (2008, 3) called the "maps are bad syndrome."

The expanded usage of cartograph manifests a tension within a major strand of map scholarship after 1980. Much work has been critical of the apparently monolithic practice of cartography. One of the many paradoxes built into the ideal of cartography is that cartography is understood to be, at once and without contradiction, (a) a universal endeavor carried on in all societies with a degree of economic sophistication, and (b) a particular formation of the West in the early modern and modern eras. As modern Western cartography continued to be criticized for its excesses, and as maps by pre- and non-Western peoples were increasingly accepted as sophisticated cultural works even if not meeting Western standards, "map" no longer is sufficient. "Map" stays restricted to being a product of modern Western cartography, so a new word is needed to refer to all of the huge array of spatial images that subsumes maps *per se*. And thus "cartograph" gets coined once more, for any product of cartography (a), because the particular products of cartography (b) are still called "maps" *per se*.

> **update 23 Feb 2020:** the need to differentiate maps from other spatial images led Karen Pinto (2016, 2) to coin an alternate to cartograph, namely "carto-ideograph."

* According to Google Maps, there is one Kokovoko in the world: a restaurant by that name in Zemst, Belgium.

update 23 Feb 2020: Phase 3 suggests a further stage in the meaning of "map":

> before 1800: "map" (or *carte géographique* or *Landkarte*) was used specifically for graphic works of geography, in distinction to *chart* or *plan*.
>
> after 1800, the emergence of the ideal of a universal endeavor of cartography led to the adoption of a totally generic conception of map that encompassed all kinds of spatial imagery. Thus, the British Cartographic Society's (1964) gloss on its definition of cartography: "In this context maps may be regarded as including all types of maps [!], plans, charts,…."
>
> phase 2 of cartograph implies that the generic conception of map is not all-encompassing, and phase 3 implies that the generic map has become limited to the products of modern cartography and the mechanistic determination of landscape, so that there is a still greater and *more* generic conception of "map" that encompasses all spatial imagery.

In other words we have the lexical formation, over time, of a series of concentric circles: the center, created before 1800, the geographical *map*; the middle ring, created in the 1800s, the normative *map*, the product of cartography; and the outer ring, created only after 1980, the set of all maps.

A Phase 3a?

I now have to wonder, reading *A Memory Called Empire*, whether a further dimension to "cartograph" is emerging, a phase 3a or perhaps sufficiently distinct to constitute a phase 4. Rapidly developing digital technologies have exploded the old technical limitations of mapping. The visualizations being created with big data are pushing practices in new directions, opening up new vistas of imagery. We can imagine systems far grander, far more complex than a simple, flat map. (And remember, there are still some people who say globes are not maps because of their three-dimensional form.) In a science-fiction context, the need to map the weirdnesses of five-dimensional space becomes a task far beyond the capacity of "the map."

> **update 23 Feb 2020:** the proliferation in digital environments of "map-like representations" or "map-related" products" led Gyula Pápay in 2005 to coin the alternate neologism of "cartoid" (*kartoid*), as reported by Azócar and Buchroitner (2014, 62).

This is the context of Martine's use of cartograph. When the ambassador encounters the five-year-old child, "Two Cartograph," known familiarly as "Map," he is playing with a holographic model of a solar system. There are other references in the book to star charts in the form of plane images, artistic sculptures, and holographs. In this respect, "cartograph" encompasses all factual, normative representations but in forms other than the traditional. It makes sense for a star-spanning empire to

have such celestial models—it is a volumetric polity, after all—and it makes sense for an early twenty-first century writer to use cartograph for the whole ensemble of spatial representations, leaving map as a cute diminutive referencing an outmoded and perhaps obsolete form.

(This is not a total departure from phase 3: Martine also has a Melville moment: "Ignore the map; leave it behind. No maps are adequate for what has happened here..." [151/462].)

Conclusion

The back formation cartograph thus appears as a natural complement of cartography, but with overtones far more complex than with common, coeval -graphy/-graph pairs.

Usage of cartograph in the *OED's* sense 2 has not been consistent. This usage depends on changing concepts of "map," against which "cartograph" is implicitly contrasted. The existence of "map," in its generic sense as a product of cartography as an idealized endeavor, requires that cartograph take on subversive aspects. In phase 2, the map is unequivocally the normal product of the cartographic process, so cartograph is used for abnormal products: images that are sort of maps, but not quite. In phase 3, as scholars challenge the normality of the map, so cartograph was recast as a super-category encompassing all forms of maps regardless of the cultural norms that shaped them, as opposed to the maps of modern Western culture: "there are more things in heaven and earth, Cartography, than are dreamt of in your philosophy." Phase 3a is thus a sign that the academic critique is reaching beyond academia and has taken hold within lay culture generally.

My problem is that all these usages of cartograph cannot break away from the idea that there is a characteristic, essential Western "map." Even as it seeks to subvert that idea, the use of "cartograph" serves only to perpetuate it: without the normative conception of the map, there would be, there could be, no cartograph.

What happens if we ditch the normative conception of the map? This is the argument of another major strand of critique in map studies. As map historians and some contemporarily minded map scholars actively embraced works that, before 1980, were rejected as irrelevant to the study of mapping and map history—works such as Taylor White's pictorial maps and other phase 2 cartographs—they have broadened and softened the concept of "the map." It is now impossible to define "the map." From this perspective, to which I adhere, "map" encompasses the myriad products of all different spatial discourses. (Maps are, after all, epiphenomena of mapping processes.)

There is no need for "cartograph"; "map" is fine. There is no need to use a term that is implicitly set up in opposition or distinction to "map," suggesting that "map" is some special, normative category. There is absolutely no need to base this oppositional term, this term that has come to be expansive and unrestricted, when it is a back formation of and implicitly paired with a term (cartography) that is itself the embodiment of everything that "cartogram" rejects. Cartography, alas, is still calling the shots.

This essay has been brought to you by insomnia.

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A ROMAN MAP OF BRITAIN?

Originally posted: 12 April 2020

https://www.mappingasprocess.net/blog/2020/4/12/a-roman-map-of-britain

updated 23 Jul 2020 with some material on Stukely's reaction to the map, cut from *MCH*

Here's a fun little tidbit about which I got rather confused. I needed to write it up to get it all clear in my head, and I thought I'd share it.

William Stukeley (1687–1765) was a prominent British antiquary, remembered as a pioneer in archaeology. He dug and mapped a number of sites of pre-Roman Britain, notably the great stone circle at Avebury. He bought a number of documents from an English expatriate in Copenhagen, Charles Bertram (1723–1765), one of which was a 1338 account, *De situ Britanniæ ("The Description of Britain")*, by one Richard of Westminster, who Bertram and Stukeley conflated with the known medieval scholar, Richard of Cirencester. The "Description" included a map of Britain that Bertram indicated was derived from a Roman original.

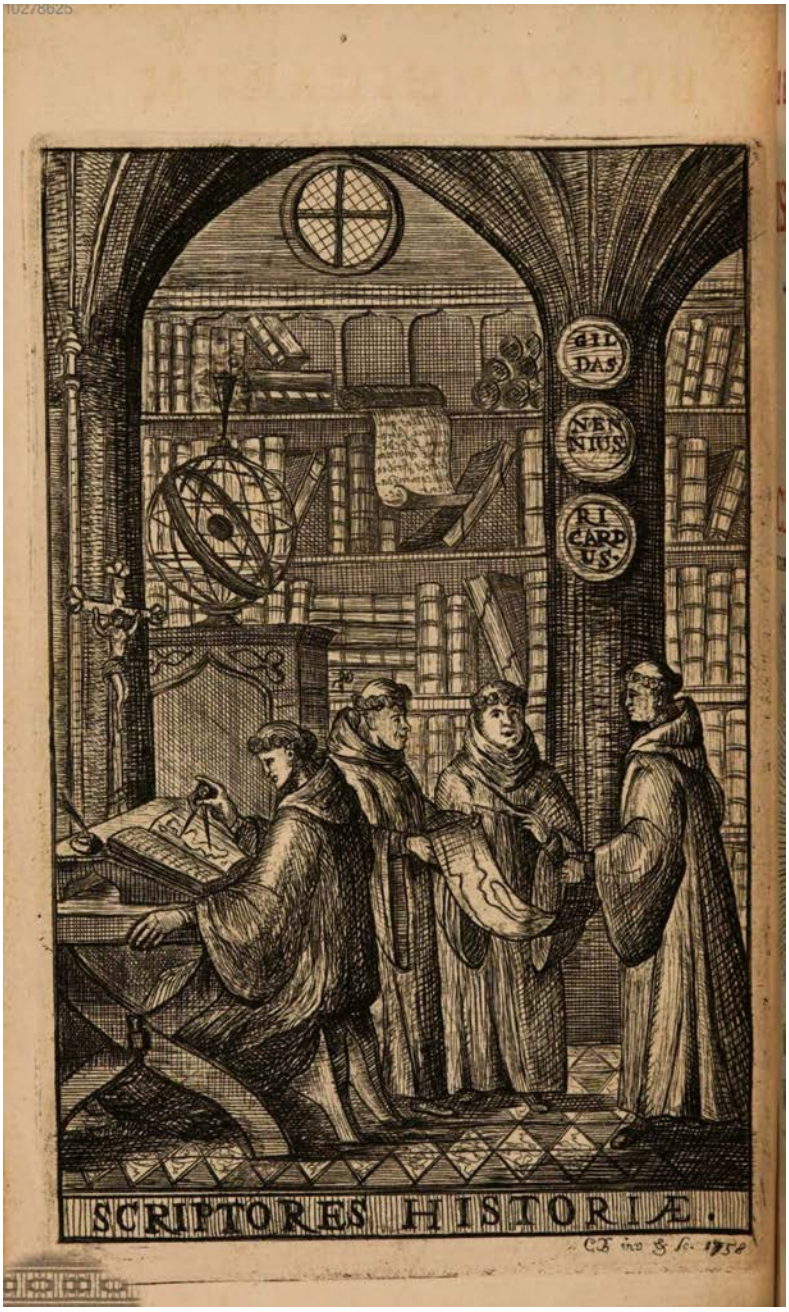
The map included a hundred toponyms previously unknown to Stukeley, and looked very much like the Ptolemaic map of Britain, with the eastward turn of Scotland, as Stukeley had seen in several editions of Ptolemy from 1482, 1513, and 1540. Not only did Stukeley think those maps depicted the island in a "poor" and "jejune" manner, even Mercator's and Ortelius's maps were still erroneous, so that he thought that Richard's map "exceeds them all, beyond compare. And the more we consider it, the more we approve." The map's geographical outline and content were even better than on William Camden's analytical map of Roman Britain, first published in the third edition of Camden's *Britannia* (1600) (Stukeley 1757, 12–13, 20–40, esp. 21 [quotations]).

Shame, then, that the manuscript and the map turned out to be a fake! (Piggott 1950, 154–63). Stukeley, however, believed it to be real, and popularized the work.

There are two basic versions of this map.

(1) East-Oriented

Bertram published *De situ Britanniæ* (Bertram 1757; actually printed in 1758 according to the colophon) in Copenhagen within a collection of three medieval tracts on Britain, whose frontispiece featured an imaginative image of medieval monks making and using geographical maps:



"Scriptores historiæ," designed and engraved by Charles Bertram, frontispiece to Bertram (1757)

The map itself, which Bertram engraved himself, and which he already dedicated to Stukeley, was bound at the end of the first book of *De situ Britanniæ* and before the beginning of the second (Bertram 1757, opp. 48):

"Mappa Brittaniæ facie[i] Romanæ secundum fidem monumentorum perveterum depicta | Tabulam hanc geographicam antiquitatis patriæ Cimelium celeberrimo viro Gulielmo Stukeley. M.D., C.L.M., F.R.S., etc. observantiæ testandæ ergo D. D. Carolus Bertramus 1755 | C. Bertramus ipse delin: ab orig. & Sculpsit" – Wikipedia (original should likely not have been colored).

(2) North-Oriented

Bertrem sent a copy of the map to Stukeley in late 1749 or early 1750, either a manuscript or perhaps an early impression of his copper-plate engraving (Shirley 1990). Stukeley reconfigured the map, orienting it north, for publication in his publication of *De situ Britanniæ* (Stukeley 1757):

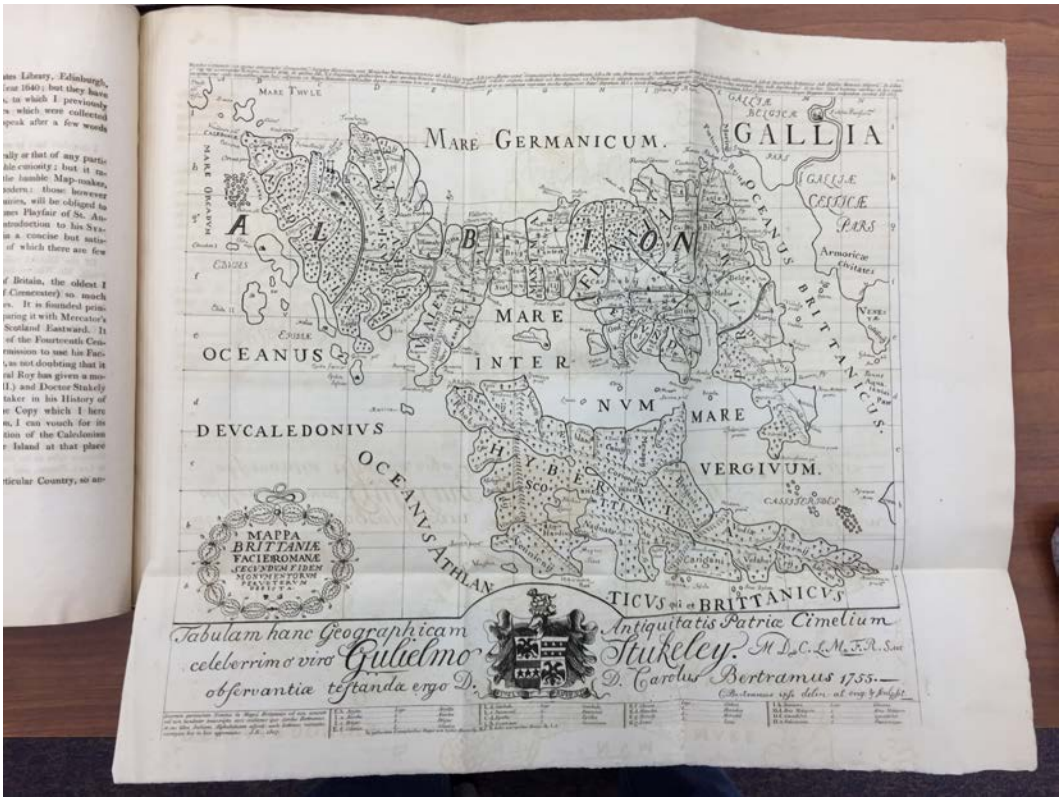
"Mappa Brittaniæ faciei Romanæ secundum fidem monumentorum perveterum depicta"

Further Copies

Subsequent authors further reproduced the east-oriented version of the map, all from separately engraved copper plates. Stukeley himself used that version in the second edition of his *Itinerarium Curiosum* (Stukeley 1776).

A translation of *De situ Britanniæ* by Henry Hatcher included a copy of the east-oriented map (Bertram 1809); a copy of this impression is currently for sale by Barry Ruderman Antique Maps; it keeps Bertram's imprint but adds the copyright indication, "Printed for White & Co. Horace's Head Fleet Street June 1, 1809."

And the geographer Aaron Arrowsmith included a further derivative in his *Memoir* on his 1807 map of Scotland, now with a textual note across the top, an index to the placenames across the bottom, and index guides added to the map itself (A..N across the top, a..i along the sides) (Arrowsmith 1809, opp. 22):



"Mappa Brittaniæ faciei Romanæ secundum fidem monumentorum perveterum depicta"

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MAPS IN FANTASY BOOKS

Originally posted: 25 April 2020

https://www.mappingasprocess.net/blog/2020/4/25/maps-in-fantasy-books

I think of the presence of maps in genre fantasy novels as a function of needing to establish that the fundamentals of physics are the same in the particular fantasy realm as in the real world. Yes, the fantasy realm has magic and gods and demons and what have you, but if it can be mapped it can't be *that* different from our own world! The map indicates to the reader that they're not going to have to work too hard to understand the system of the fantasy realm.

And, of course, the map indicates that the author has done the appropriate world-building work, and that the social and cultural forms will be worked out with a similar degree of detail.

In the previous post I cited an online essay about maps in fantasy novels. I thought people might like to read some other commentaries. So, here's a download from the database of works I've noticed over the last decade. First, online essays about maps in fantasy novels (I hope the links all still work):

Aaronovitch, Ben. Raising Steam by Terry Pratchett. *The Guardian*. 27 November 2013.

Anonymous. Grown Man Refers to Map at Beginning of Novel to Find out where Ruined Castle of Arnoth Is Located. The Onion. 25 April 2014. ** short, but sweet **

[**update 50 May**] Cep, Casey N. 2014. The Allure of the Map. New Yorker. 22 January 2014.

Crowe, Jonathan. The Territory Is Not the Map: Critiques of Fantasy Maps Have More to Do with the Shortcomings of Fantasy Worlds than the Maps that Depict Them. The Map Room. 27 September 2017.

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[update 26 April] Greenlee, John Wyatt, and Anna Waymack. In the Beginning Was the Word: How Medieval Text Became Fantasy Maps. Historia Cartarum: Meditiations on the Historical Production of Spaces. 2019.

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Mitchell, David. Start with the Map: A writer's lessons in imaginary cartography. New Yorker. 13 September 2018.

O'Conner, A. J. On Maps in Fantasy Novels. BookRiot. 24 August 2015.

Tam, Nicholas. Here Be Cartographers: Reading the Fantasy Map. Ntuple Indemnity. 18 April 2011.

[update 13 May] Vargic, Martin, and Rachel Dixon. 2020. Fantasy map-making: "I like vintage style with a modern twist." Guardian. 13 May 2020.

Whitehead, Alan. Maps in Fantasy. Atlas of Ice and Fire. 21 February 2016. ** one blog entry within a site dedicated to the maps of the Game of Thrones series **

And, for those who might still have some library access, some works in print as well:

Crowe, Jonathan. 2013. "Here Be Blank Spaces: Vaguely Medieval Fantasy Maps." *New York Review of Science Fiction* 25, no. 12/300: 14–16.

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[update 13 May] Waymack, Anna Fore, and John Wyatt Greenlee. 2020. "In the Beginning Was the Word: How Medieval Text Became Fantasy Maps." *Studies in Medievalism* 29: 183–99.

Enjoy!

THE MAP'S THE THING

Originally posted: 9 May 2020

https://www.mappingasprocess.net/blog/2020/5/9/the-maps-the-thing

I just encountered an interesting set of metadata that usefully illustrates a pervasive and thoroughly problematic mind set encouraged by the ideal of cartography. In short, it exemplifies how the map image is accorded an existence that is distinct from its material manifestation, a problem that is only exacerbated by the online proliferation of imagery.

> [**update 14 May:** I've made a few changes, to incorporate further information received from Gijs Boink, the Nationaal Archief's head of maps and prints. Any continuing errors are my own fault!]

The Trigger

Something I was just reading mentioned the 1614 "figurative map" of New Netherland, generally attributed to Adriaen Block, which is available for viewing in the digital archives of the Nationaal Archief in The Hague (fig. 1). The map is a frequent element in the histories of Europe's early colonizing of North America (e.g., Schmidt 1997, 557–58) and of Dutch imperial mapping (e.g., Schilder 2017, 502–7). The map is untitled, other than the prominent toponym "Niev Nederlandt," which could be taken for a title; the officers of the New Netherland Company called the map the "figurative caerte" in a petition to the States General, and the name has stuck (Schilder 2017, 502n3).

But the essay I was reading provided a link not to the above image of the original but to thee one in fig. 2. What raised my hackles was the manner in which this second image was catalogued by NYPL's print curators. When one first goes to the image, the screen looks like fig. 3. Prominent in this initial view is the field among the summary metadata, "DATE CREATED" with the value "1614." One then has to scroll past a large section of technical information, relevant only to NYPL staff, explaining just where the work is located within the archival hierarchy of collections. (Have NYPL's digital gurus not learned Edward Tufte's basic argument that institutions tend to structure information around institutional divisions and not user's needs?) Although, to be honest, the metadata does provide thumbnails to entice a grazing reader to look at something else (fig. 4).

As one scrolls further down to the "Item Data," we get the repeated insistence under "DATES/ORIGIN" that this work was created in 1614 (fig. 5).

Figure 1. The "figurative map" of 1614. Nationaal Archief, Kaartcollectie Buitenland Leupe, 4.VEL 520. NA has declared this to be in the public domain.

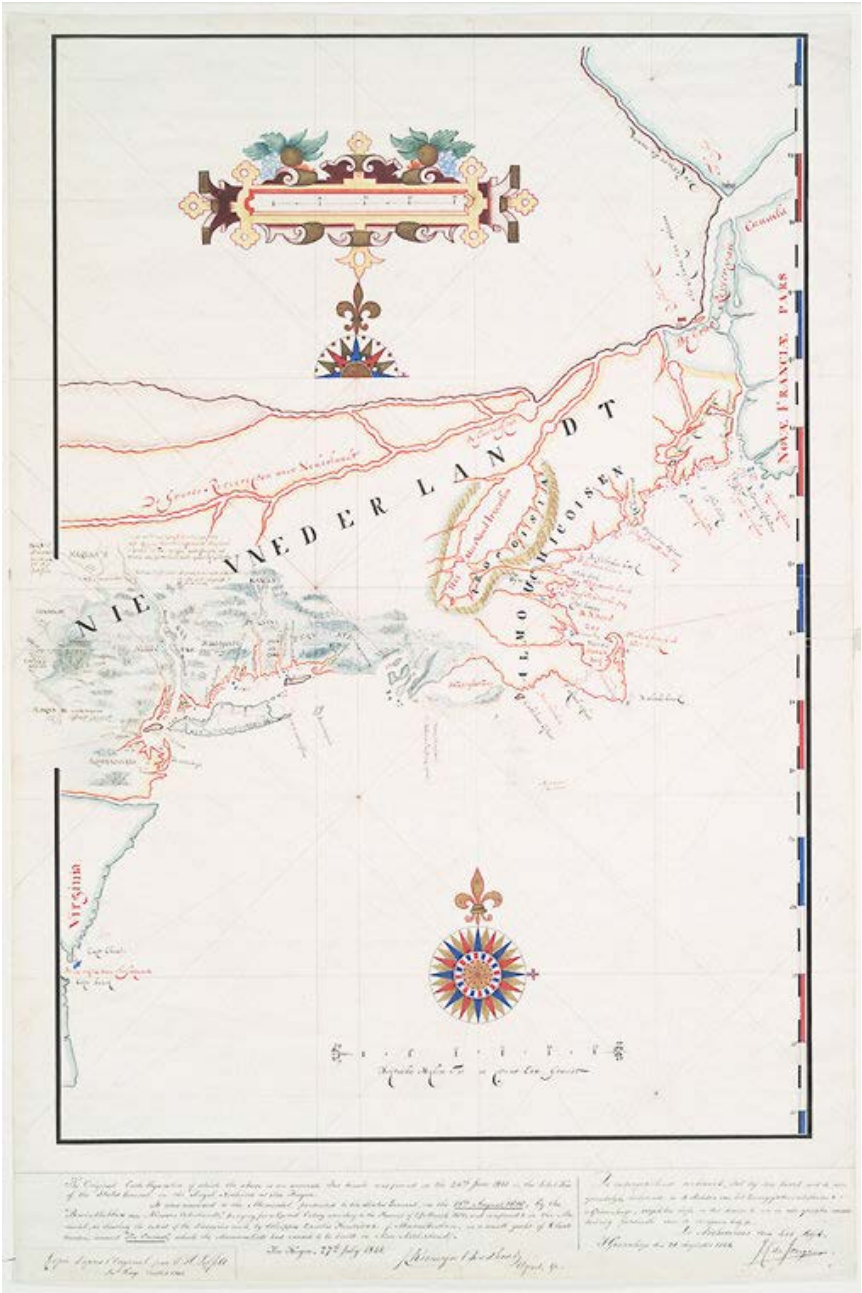

Figure 2. New York Public Library, The Miriam and Ira D. Wallach Division of Art, Prints and Photographs: Print Collection, Stokes 1614-B-5. Described as being a water-color drawing, 66 x 49 cm. NYPL as declared this to be in the public domain. https://digitalcollections.nypl.org/items/510d47d9-7bf7-a3d9-e040-e00a18064a99

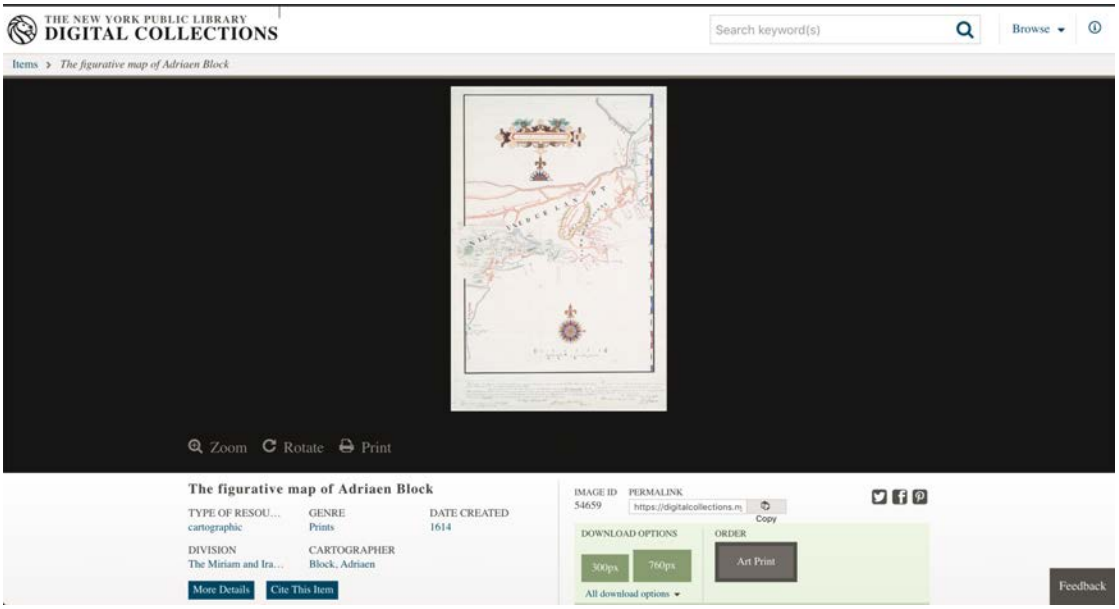

Figure 3. Screen shot, 9 May 2020.

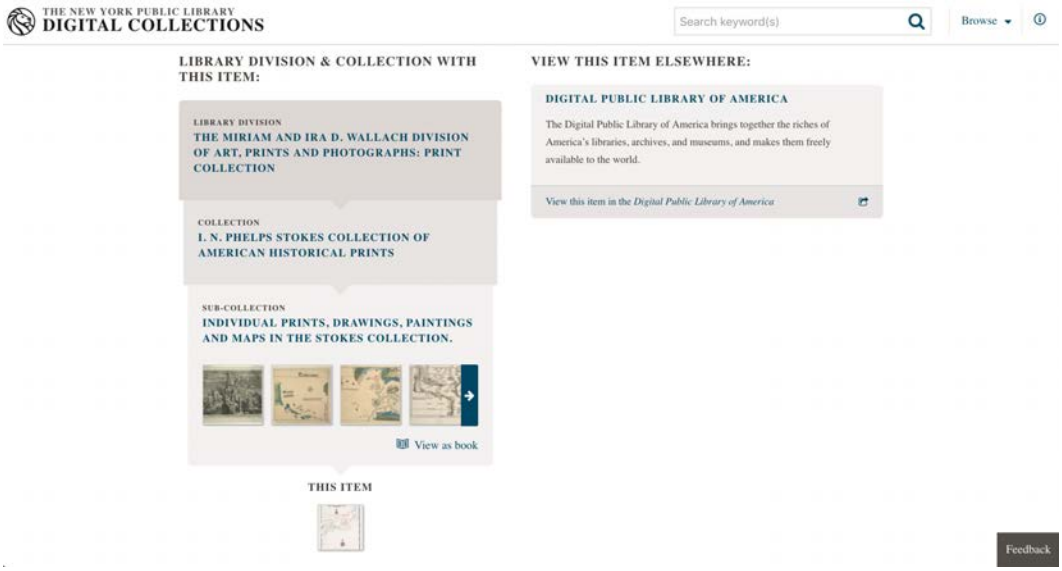

Figure 4. Screen shot. 9 May 2020

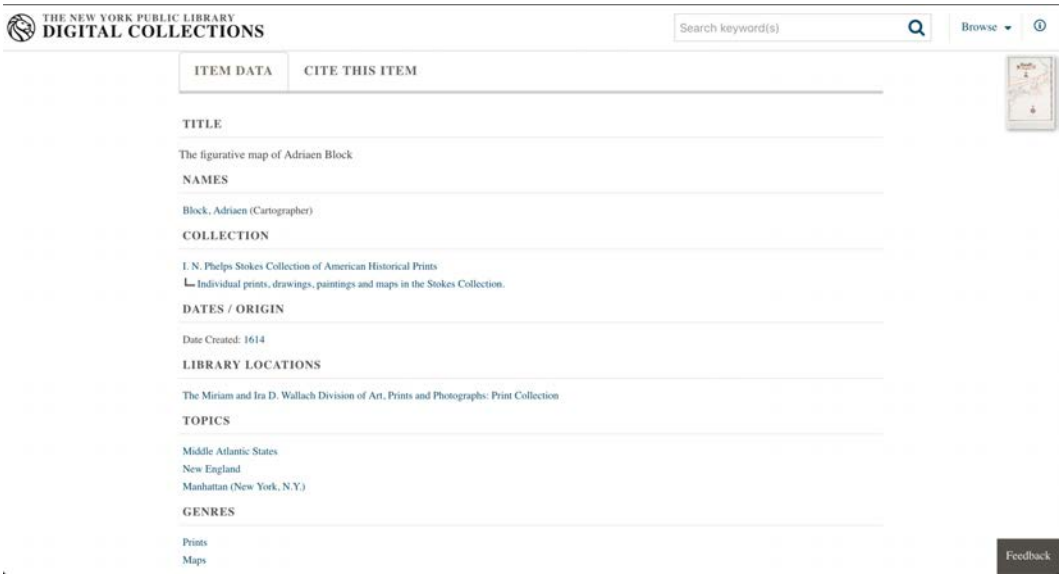

Figure 5. Screen shot, 9 May 2020

Finally, scrolling still further, we find under "NOTES" the recognition that this work is in fact a nineteenth-century copy of the original work in the Rijksarchief (which actually was merged in 2002 with other archives to form the Nationaal Archief, just as the UK's Public Record Office became The National Archives in 2003). This recognition is counteracted by the presence, at the end of the metadata, of a cute little, automatically generated, "ITEM TIMELINE OF EVENTS" which runs from "Created" (1614), to "Digitized" (2015), to "Found by you!" (2020):

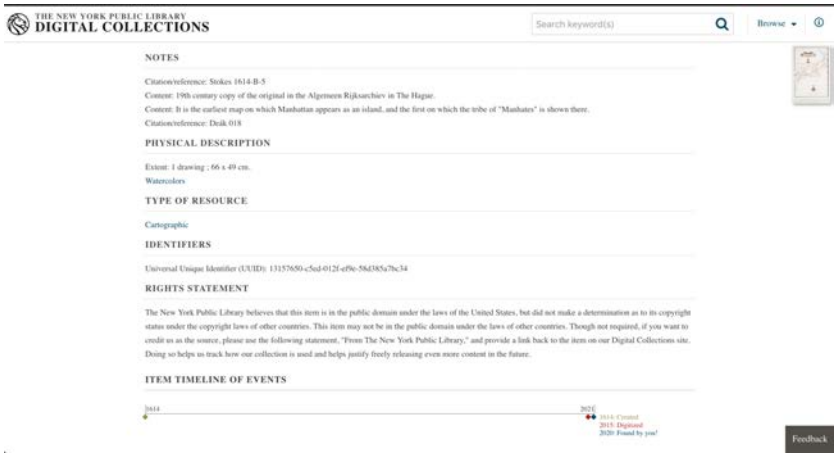

Figure 6. Screen shot, 9 May 2020

The Issue

Why is this an issue? Because the work imaged by NYPL was *not* created in 1614.

The NYPL curators have followed the common practice of dating maps by the date of the image/data and not by the date of the item's creation. This manifests a complex body of beliefs that have long held sway within the ideal of cartography: maps are algorithmic reductions of the world ("depleted homologues," per Fremlin and Robinson 1998); maps are repositories of spatial data; maps are equivalent to the archive of spatial data that they graphically reproduce; "the map" is thus a graphic presentation (*not re*-presentation) of the archive of spatial information. Map–archive–world exist as a conceptual entanglement.

The entanglement has only worsened with the application of digital technologies to mapping. When computers were first used to store spatial datasets, there was a tendency to call such datasets "maps." One practitioner gave a presentation in June 1989 to the New England Map Organization in which he explicitly argued that maps are no different from the digital databases on which they are based (Cooke 1989; see Woodward's 1992 complaint). Several editions of the *Dictionary of Human Geography* (1st, 1981; 2nd, 1986; 3rd 1994) thus contained an entry entitled not "Map" but rather "Map Image and Map," which began:

> The map image is a structured cartographic representation of selected spatial information. The image becomes a map when represented physically (e.g. classical topographical map, or braille), virtually (e.g. on a computer screen), or linguistically (e.g., verbal or written spatial instructions) (see *Cartography*).
>
> The encoded real-world conception of a cartographer (or others such as a national mapping agency) is transmitted to a map reader through the map image, itself the result of processes such as generalization, *symbolization* etc. … (Blakemore 1994, 355; italics recreate cross-references in the text that were typeset in small caps)

Even as this commentator was very much open to a sociocultural approach to studying maps—to multiple representational strategies and, as he continued, to the idea that maps do not have to be "scientific"—he remained wedded to the older entanglement established by the ideal of cartography.

Facsimiles offer a variation on this theme, beginning with the origins of the ideal of cartography in the 1820s (Edney 2019, 114–20) and of the organized practice of the "history of cartography." Pioneer historians of cartography treated early maps as repositories of geographical information and were not necessarily careful about going back to the original. Consider, for example, the eight-sheet facsimile of Fra Mauro's famous *mappamundi*, ca. 1450, that the second viscount of Santarém published in 1854 as a lithographic line drawing. Santarém had taken his tracing not from the original work housed in Venice's Biblioteca Marciana, but rather from a full-color manuscript reproduction that a group of British worthies had commissioned and then deposited in the British Museum in 1807 (Barber and Harper 2010, 52–53). Angelo Cattaneo (2006) demonstrated this sequence of copying because the

British copy curiously relocated Fra Mauro's depiction of Paradise from the lower-left corner of the original to the lower-right corner, a change perpetuated by Santarém. Map historians throughout the nineteenth century collected their own tracings of maps, whether from originals or from those already taken by other scholars, sometimes publishing them. Adolf Erik Nordenskiöld unabashedly took many of the facsimiles of early marine charts in his *Periplus* (1897) from previously made facsimiles.

What to my modern and digitally familiar mind appear to be acts of historiographical indiscrimination were actually a matter of pragmatic necessity. Before the improvement of photography and printing in the twentieth century, the *only* early maps that scholars could examine were the originals scattered across Europe's libraries and archives, the few originals that came on the market and that one could afford to acquire, or tracings, whether or not published. And this is the context in which Phelps Stokes "collected" the figurative map as a watercolor copy as part of his collection of early prints, drawings, and maps showing Manhattan. [19 May: the following sentence corrects an initial misstatement] Although, what Stokes reproduced in his *Iconography of Manhattan Island* appears to be a monochrome photography of yet another tracing of the original (Stokes 1915–28@2: C pl. 23) (fig. 7).*

Moreover, if the purpose of historical study is to be able to assess the quality and extent of a map's geographical information, so as to place the map in a progressive sequence of maps of the world or of particular areas and thereby demonstrate the rise of Western civilization or of one's nation—as was the case from the 1840s into the late twentieth century—then it seems permissible to study early maps through facsimiles.

But as map scholarship increasingly moved into a sociocultural mode, starting in the 1980s, scholars have continued to reproduce facsimiles as if they were the originals. Some examples:

- Denis Wood (1992, 23) reproduced a mid-nineteenth century facsimile by Edme François Jomard's facsimiles as if it were *the* Beatus-style *mappamundi* from a twelfth-century manuscript held in Turin;

* Gijs kindly pointed me to two chromolithograph facsimiles of the figurative map in the Nationaal Archief's collections, numbered 4.VEL 521A and 521B, made with the permission of R. C. Bakhuizen van den Brink, general state archivist (1856–65), the two states differing only slightly in the address of the lithographer Elias Spanier (1821–1863). They can be viewed, and downloaded from http://proxy.handle.net/10648/9e0481ee-af94-1c96-a42f-44a522935d3b and http://proxy.handle.net/10648/c46b7b98-bd3c-f17d-bff4-1166fc872693. At the same time, Gijs noted that it is possible to download a high resolution version of the Stokes facsimile from the NYPL website, from which one can see that it was made in 1841. The monochrome image in Stokes (1916) has a prominent network of rhumb lines, lacking on the Stokes facsimile; also the lettering is much stronger than on the original. But the two chromolithographs, like the Stokes facsimile, have much different content for the area of loss in the original, just below the red "Groote Riviere van nieu Nederlandt" at the far left. Either that loss occurred after the facsimiles were produced, or the facsimiles were all modified.

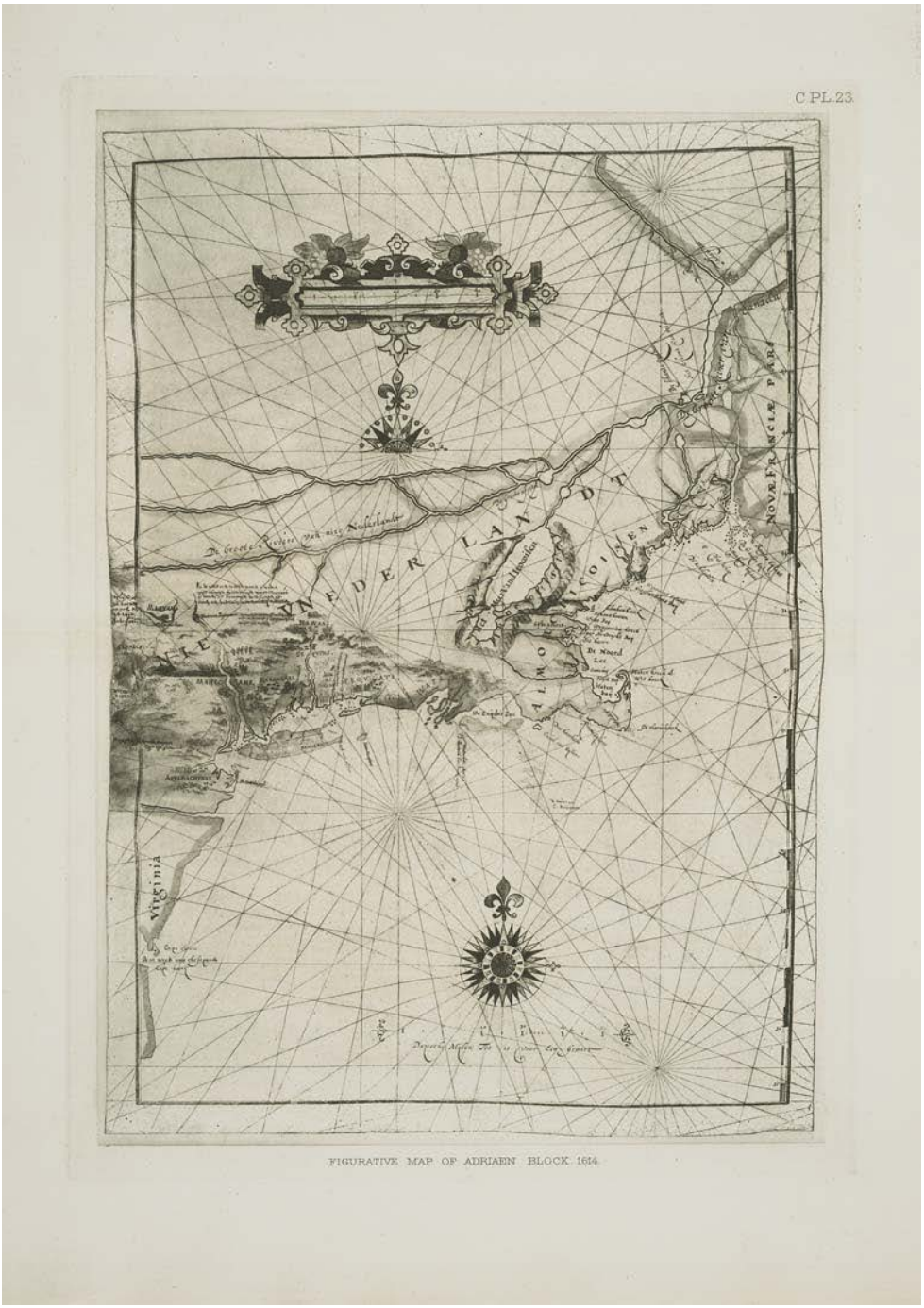

Figure 7. Monochrome reproduction of the original figurative map in Stokes, *Iconography*, vol. 2 (1916).

• Liam Mouritz (2018, 114) reproduced Jomard's redrawing of the thirteenth-century *carte Pisane*, properly admitting the image was of a nineteenth century facsimile, but then he also reproduced color photographs of two other early marine maps, so why not the *carte Pisane*?

• The morning after I encountered Mouritz's essay, I received an email advertising a forthcoming public talk at a major US university map collection, in which the banner image comprised four small facsimiles of globes and hemispheres (one quite misattributed) taken from late-nineteenth or early-twentieth century works, presumably because these simplified and edited images captured the progression in the depiction of South America more effectively than would have images of the originals themselves.

• Biedermann (2019, 225) listed the 1989 facsimile reproduction of the viscount of Santarém's 1849–54 facsimile atlas under "published primary sources."

These examples—and now the NYPL's print collection's cataloguing of the Figurative Map—all indicate the degree to which the modern ideal continues to hold sway, even in the minds of the most sophisticated scholars, such that it is permissible to treat the facsimile as being directly equivalent to an original.

Facsimiles Are Mediated Documents

There is, in fact, no distinction to be drawn between the "map image" and the "map." They are *both* physical in nature: whether a map on paper or vellum or as radiation from light-emitting diodes. In the era of photography, it is possible to put the same image on different media: think of how the famous London underground map appears on the walls of underground stations, in online images at tfl.gov.uk, which also offers other formats for the consumer, both color and monochrome (fig. 8).

And, the same map appears on coffee mugs and t-shirts and shopping bags and postcards as a touristic symbol for London. But are all these the "same map"? No. Because the map is the image-and-material together. The underground map on a t-shirt is consumed in a quite different manner and in quite different contexts (away from the trains!) than the "same map" on a wall in a tube station. The former is a cultural statement of personal status, the latter is an instrument to be examined carefully by tourists and ignored by the daily commuter. As maps are translated from one medium to another, from one archival context to another, from one spatial discourse to another, they change.

The act of copying a map is a process of mediation, a process that necessarily entails modification and reinterpretation. We have come to think of "facsimiles" as exact copies—although never so exact as to be able to be mistaken for the original, in which case they would be forgeries! The mark of the forgery is the attempt to recreate the "aura" of authenticity possessed by original works of art, the noumenal quality stemming from their physical character, situation, and history (Benjamin 1969). No matter how exact, facsimiles eliminate or downplay certain elements in order to emphasize others. Compare the digital images of the original figurative map and of Stoke's watercolor copy (fig. 9).

Figure 8. Screen shot, 9 May 2020.

Figure 9

Immediately, one can see the results of the choices made by the copyist. The rhumb lines have been markedly lightened even as the text has been darkened for emphasis, the green-blue adjusted to be less green (although that might be a function of the digital imaging of the two works), the addition

of several certificates of accuracy at the bottom of the copy. More important, the copy is manifestly on paper and has lost the visual feel of vellum.

The rule that no copy is unmediated applies equally to digital reproductions. Color is a persistent issue, and great pains must be taken to match the color models used in processing images to the displays one uses to view the images. Also, viewing images of maps on digital screens play havoc with the reader's sense of the original's size.

In using facsimiles of early maps—as we must, whether digital or hard copy—we should never, ever confuse the original for the copy. The task for the librarian is to catalog the thing, not the image. To do otherwise is to fall back on the utterly misguided convictions of the ideal of cartography that, somehow, map data exist separately from the map, that the map is nonetheless solely to be understood as a data repository.

The map's the thing.

(rant over)

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WHO WAS MATTHÄUS/MARTIN BRAZL?

Originally posted: 11 May 2020

https://www.mappingasprocess.net/blog/2020/5/11/who-was-matthusmartin-brazl

Anyone who's spent the time to follow citations back through the literature knows the game of academic "post office." When they don't take care, scholars subtly shift meaning. Statements slowly mutate as they pass from work to work, sometimes to the point of incomprehensibility. Facts morph, conjecture can become certainty.

Here's an example I ran into last November. (I just re-encountered my file of notes while cleaning up notes-to-self about the current project, so I thought I'd write it up.) I found, in reading a short, summary account of the history of geography by Philippe François de Le Renaudière, secretary general of the newly formed Société de géographie (founded 1820), a long list of map and chart makers from the thirteenth through fifteenth century whose works, La Renaudière thought, would shed light on medieval and early renaissance travels by Europeans into Asia. 1828 was still relatively early in the history of discoveries, and I was impressed by the number of map makers that Le Renaudière cited:

> C'est en réunissant leurs découvertes partielles et leurs différens itinéraires, que les géographes de ces diverses époques essayèrent de tracer l'ensemble de la terre. C'est à l'aide de ces matériaux incomplets que les Martin Sanudo, les Pietro Visconti, les frères Pizigani, les Giroldis, les Pareto, les Bianco, les Bedrazio, les Benincasa, les Martin Brazl, les F. Mauro, les auteurs de la Carte des voyages des frères Zeni et de Marco Polo, et quelques autres géographes dont les noms sont inconnus, dessinent ces cartes grossières, sur lesquelles on trouve réunies et les indications récentes et les idées des anciens, dénaturées par l'ignorance et accommodées au besoin de remplir des lacunes ou de servir des hypothèses bizarres. (La Renaudière 1828, 42–43)
>
> It was by bringing together the partial discoveries and the different routes [of early travelers] that geographers of these various eras attempted to trace the whole of the earth. It was with the help of these incomplete materials that Martin Sanudo, Pietro Visconti, the Pizigani brothers, the Giroldis, Pareto, Bianco, Bedrazio, Benincasa, Martin Brazl, Fra Mauro, the authors of the map of the voyages of the Zeni brothers and of Marco Polo, and several other geographers whose names are unknown drew those rough maps, combining the recently acquired information with ancient ideas [of geography] that had been distorted by ignorance and altered to fill in gaps [in knowledge] or in service to bizarre assumptions.

Many of the map makers in this list can be readily identified from Tony Campbell's (1986) census of early charts (also Campbell 1987). Martin Sanudo was Marino Sanudo and Pietro Vesconti and the Benincasas are well known to modern scholars.

But who were "Bedrazio" and "Martin Brazl"?

Bedrazio: according to William Babcock (1920, 114; 1922, 151), this was a spelling used by Alexander von Humboldt in 1837 for the last name of the chart maker Battista Beccaria. However, given that La Renaudière wrote almost a decade before Humboldt published, and four or five years before Humboldt was writing, it is likely that the misreading was made by an earlier scholar. [Google also revealed a recent study which carried the misreading forwards, to give "Bedario (or Bedrazio)" instead of the correct Beccaria (Levin Rojo 2014, chap. 4, at note 64).]

Martin Brazl: I initially found this name in the first volume of Conrad Malte-Brun's *Précis de la géographie universelle* (1810), as well as almost all of the other names given by La Renaudière. (But not Bedrazio; still don't know the source for that spelling.) I should have known! Malte-Brun is rapidly emerging as the crucial figure in conceptualizing the birth of modern cartography and the history of discoveries. *Much more needs to be done with his archive!* In particular, his *Précis* includes a great deal of commentary on specific early maps and their contributions to understanding the history of geography as the history of discoveries. La Renaudière's essay, it turns out, was a synopsis of Malte-Brun's extensive history. In the earlier work I found the statement:

> Tous ces indices obscurs pourront être renforcés par quelques cartes encore ensevelies dans la poussière des bibliothèques, telles que celles qu'avait composées, en 1471, Graciosus Benincosa d'Ancône (3), ou celles qu'avait tracées, en 1486, Martin Brazl, allemand (4). (Malte-Brun 1810, 428)
>
> All these obscure clues can be reinforced by a few maps still buried in the dust of libraries, such as those which had been composed in 1471 by Grazioso Benincosa of Ancona (3), or those which had been drawn in 1486 by Martin Brazl, German (4).

Malte Brun's note 4 simply stated, "Hist. du chevalier Behaim, p. 12."

The note cites Christoph Gottlieb von Murr's biography of Martin Behaim (Murr 1778, esp. 12), which was translated into French (Murr 1787, esp. 326; 1803, esp. 9). In his introduction, Murr quoted a note added in 1448 to a manuscript collection of travel accounts:

> In einem Bande von des Marco Polo, S. Brandans, Mandevilla, Ulrichs von Friaul, und Hanns Schildpergers geschriebenen Reisebeschreibungen auf hiesiger Stadt bibliothek (Cat. Bibl. Solg. I, n. 34) meldet vorne der Besitzer Matthäus Brazl, kurbayerischer Rentmeister, 1488 unter andern dieses: "Und ich hab di genennten puecher darumb ersamlet und zumsamen verfuegt, durch ein vast amstige auch kostliche Mappa, di ich mir hab lassen machen mit gar grossem und sunderm Viens, umb des willen. …" (Murr 1778, 12)
>
> In a volume of travel accounts written by Marco Polo, Saint. Brendan, Mandeville, Ulrich von Friaul, and Hanns Schildperger, at the local city [Nuremberg] library (*Cat. Bibl. Solg.* I, n. 34), the owner Matthäus Brazl, rent collector for the elector of Bavaria, wrote in 1488

> this note, among others: "And I collected the above mentioned books and put them together, because of a vastly official[?] and also expensive world map, which I had had made with great and special care. …"

The map itself was unknown to Murr and his contemporaries, but it did not stop others from writing about Matthäus Brazl and the large map he had made (rather than commissioned) (e.g., Sprengel 1792, 229–30).

The rent collector Matthäus [Matthew] Brazl became, in French translation, Matthieu (Murr 1787, 326) and then Martin (Murr 1803, 9). From Murr, the reference passed to Malte-Brun; Malte-Brun's history of geography was copied extensively in the early- to mid-nineteenth century, and Martin Brazl with it. Brazl ends up as a map maker in the same breath as Fra Mauro, Marino Sanudo, and others whose works were actually known and studied. At some point in the middle of the nineteenth century, Brazl fell out of map historical accounts because, I presume, he could not be associated with any surviving map.

The presence of Brazl in the works of Malte-Brun, La Renaudière, and others stands as a testament to the tensions within historical practice in the late eighteenth century and early nineteenth century. Murr was a Nuremberg lawyer and local historian, very much in the vein of the antiquaries who celebrated the history and character of particular places. Antiquaries were avid collectors and reproducers of relics and manuscripts; by 1800 they were becoming archaeologists and museum curators, librarians and dealers. At the same time, the practice of history was becoming increasingly grounded in empirical sources. (Murr also discussed over several pages the work of William Robertson, the Scottish minister and teacher who, with Edward Gibbon, was a leading proponent of fact-based rather than literary history.) In this period of intellectual flux, scholars had yet to acquire any sophistication in their use of sources. So, Murr presented some archival evidence, transcribing a quotation from 1448, from a manuscript in a local library; others then copied that evidence. In the process, the evidence was simplified and its significance reconstrued, until Brazl's name is turned into a rather hollow pointer that would be repeated until, finally, the larger corpus of map historical evidence accumulated sufficiently for historians to finally see the emptiness of the reference and drop it.

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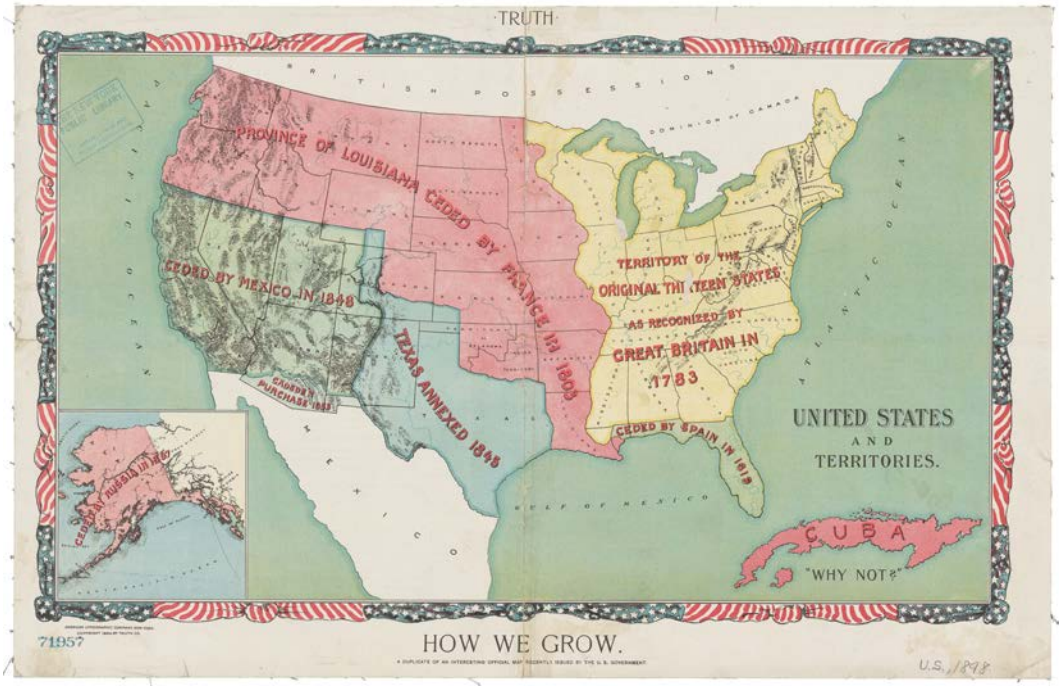
WHAT A DIFFERENCE A CAPTION MAKES

Originally posted: 27 May 2020

https://www.mappingasprocess.net/blog/2020/5/27/what-a-difference-a-caption-makes

The NYPL Map Division just tweeted a picture of a remarkable map, included in a 2018 blog post by Artis Wright about an NEH-funded project to catalog and image pre-1900 maps of the USA (Wright 2018). Here 'tis:



"United States and Territories" *Truth* (1898). NYPL. Click on image for full catalog record and image.

The magazine *Truth* was apparently published in New York by Truth Co., between 1886 and 1906 and seems rather ephemeral, at least from the lack of catalog records in WorldCat and other online resources. This image (I don't know about the whole magazine) was printed by the American Lithographic Co.

The Map

At first sight, the map was very recognizable as one of a common genre of geographical maps that displayed the territorial growth of the USA. Such maps can be found in official publications (statistical atlases based on the US Census, reports of the General Land Office, and so on) and in many commercial publications as well. So, an aesthetically grabbing rendition of a common image for a popular audience.

And then I saw the captions added above,

TRUTH

and below:

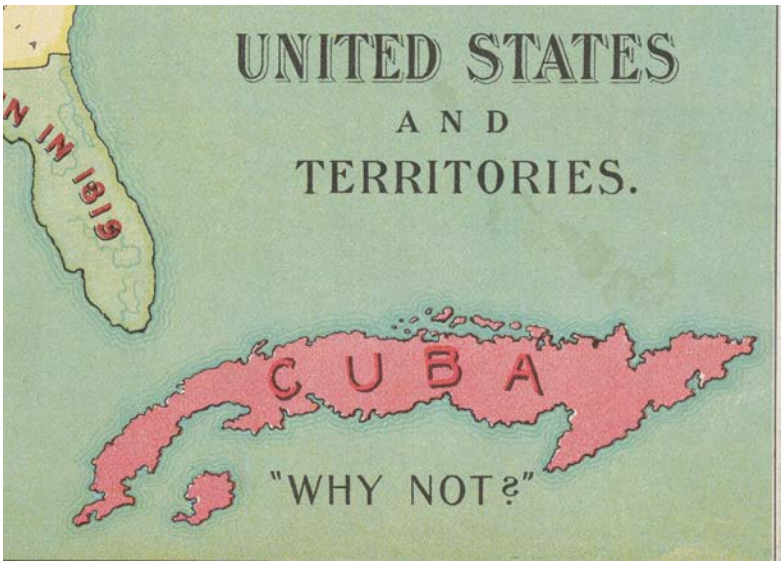
HOW WE GROW.

A Duplicate of an Interesting Official Map Recently Issued by the U.S. Government

At first, I read the lower caption as "How We Grew," past tense. Okay; quite conventional. And then I realized that it is actually in the present tense. "How We **GROW**."

The present tense makes explicit a sense that was normally only implicit in the wider genre. Generically, such maps—a complication of the logo map—show the expansion of the US as a matter of historical record: this is how the US expanded from the original thirteen colonies through the nineteenth century. Such maps are a record of Manifest Destiny, of the US's inevitable acquisition of the continent through the dispossession of native peoples and the dissolution of their land claims, and also of the conquest of half of the original republic of Mexico.

But this particular map—produced at the time of the Spanish-American War when the US, ginned up by yellow journalism, sought to enter the ranks of great world empires by taking over the remaining imperial territories of Spain—takes that extra step. The manifest destiny of the USA is ongoing. It is going on **right now**! In particular, Cuba is colored like a US territory and labeled "Why Not?"



The map obviously calls for the annexation of that island in addition to whatever other Spanish territories the USA might consume (notably the Philippines and Puerto Rico). The map is a small part of the outpouring of public imagery that proselytized for the US to become a world-spanning empire (Craib and Burnett 1998).

An Example of the Determination of Meaning

What *really* struck me about this map image and its caption from an academic standpoint is the work done by the captions. One of the great essays into how imagery can be actively manipulated to determine their meanings in the eyes of readers was by the late Stuart Hall (1972). In a working paper on "The Determination of News Photographs," Hall explored several strategies that could be followed to give a particular meaning to a photograph, to give the photograph "news value." (To be clear, there is a great deal in Hall's essay that addresses other elements of denotation and connotation that are more amenable to less conscious manipulation.) These strategies include the initial selection of the photograph of a subject to be reproduced in a newspaper (politician awake and engaged, or momentarily resting their eyes), where it is reproduced (above the fold, on an inside page), cropping and other manipulations, and the caption. The caption is key: it tells the reader how the photograph should be interpreted.

These strategies can be recast slightly when reading maps. The caption, or title, is equally important on a map. The main title tells the reader what the map is *of*—the USA and its territories. This function is more than just the denotation of a region but combines with the framing of a map (how the territory is cropped, not the use of a neatline) to connote particular spatial identities.

But here, the extra captions at top and bottom, guide the reader into an explicit reading of the map. First the map is overtly defined as a statement of truth apparently based on a recent official publication … except that this image does not "duplicate" any official publication. That is apparent from the label applied to Cuba, within the body of the map. The content of the map has been altered, but the claim is that it has not.

The use of the present tense in the lower caption calls the reader to think of the USA as a living thing. The organic metaphor for states and nations was well established by the end of the nineteenth century: nations/states were living organisms that, like any organism, had to grow at the expense of weaker ones. There is some conflation here: nations are groups of living things ("how **we** grow") and the states made up of nations (the mapped-out USA) are themselves living things that need room to grow (in Friedrich Ratzel's particular formulation of *Lebensraum*). Why not annex Cuba? If we don't, we'll cease to grow and inevitably decline, to become food for the next expanding state(s).

The problems with this perspective are legion, not least the fact that the organic analogy (states act like organisms, therefore states possess the same functions as organisms) is fundamentally flawed. The analogy developed because, early in the nineteenth century when the emergent field of sociology

grappled with the complexity of social organization, the sociologists turned to biology as the field of science that had been successful in understanding and studying complex systems. (This is also a function of the turning away from the static, mechanistic cosmos of the early modern era to the modern understanding of nature as dynamic and driven by hidden forces [gravity, electricity].) There's a large literature on this stuff; for more about how the ideology gave shape to map history as a field of study, see chapters 3 and 7 of *Mapping, History, Theory*, whenever I can finish it.

References

Craib, Raymond B., and D. Graham Burnett. 1998. "Insular Visions: Cartographic Imagery and the Spanish-American War." *Historian* 61: 100–18.

Hall, Stuart. 1972. "The Determinations of News Photographs." *Working Papers in Cultural Studies* 3: 53–88. Extracted in *The Manufacture of News: Social Problems, Deviance and the Mass Media*, edited by Stanley Cohen and Jock Young (London: Constable, 1973), 176–90 (published in New York as *The Manufacture of News: A Reader*).

Wright, Artis Q. 2018. "Mapping the Nation with pre-1900 U.S. Maps: Uniting the United States." NYPL Lionel Pincus and Princess Firyal Map Division (15 May 2018). https://www.nypl.org/blog/2018/05/15/united-states-pre-1900-map-collection