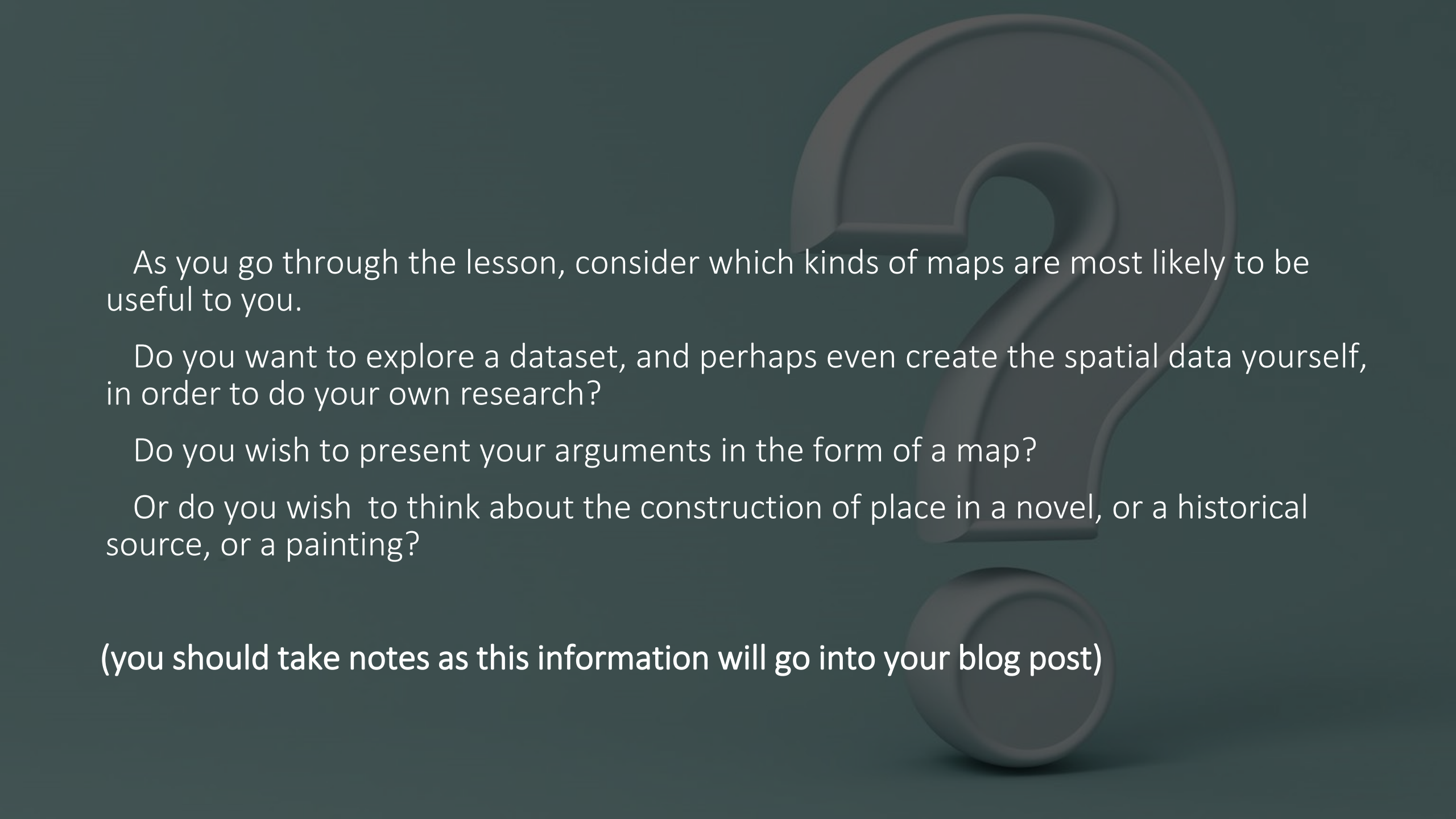
Publishing Spatial Data & Working With Historical Maps

Mapping, digital humanities, and the disciplines



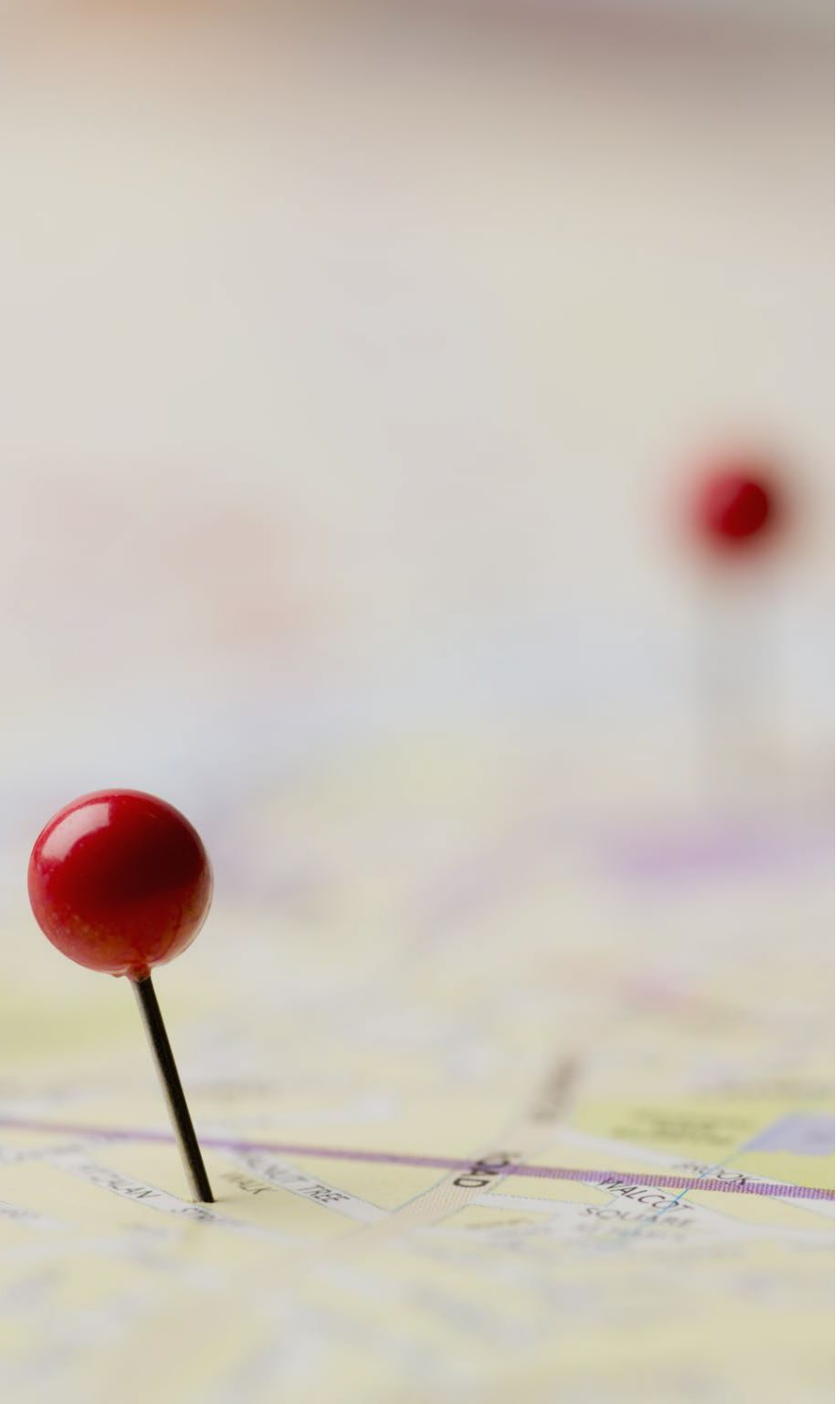
As you go through the lesson, consider which kinds of maps are most likely to be useful to you.

Do you want to explore a dataset, and perhaps even create the spatial data yourself, in order to do your own research?

Do you wish to present your arguments in the form of a map?

Or do you wish to think about the construction of place in a novel, or a historical source, or a painting?

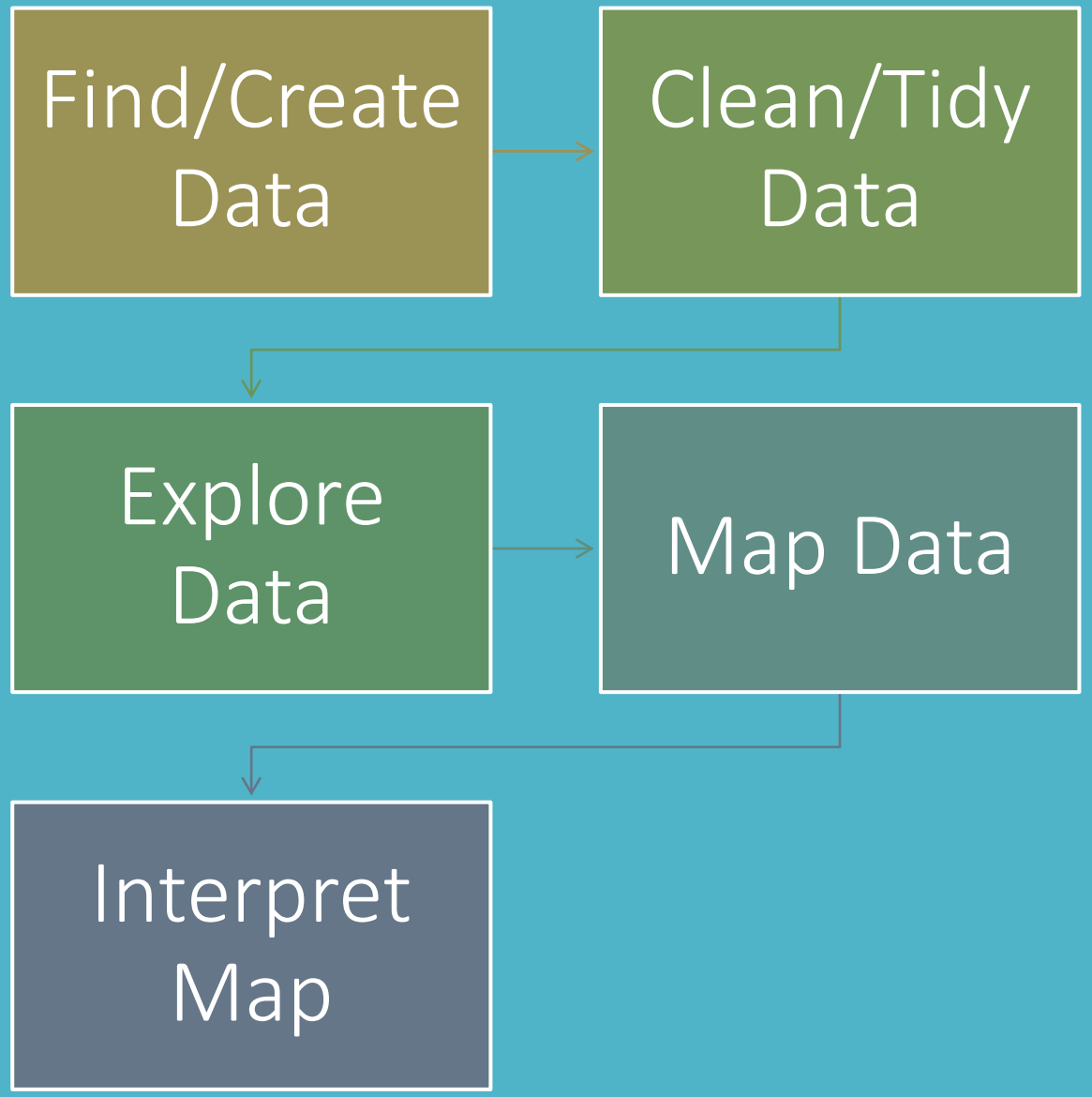
(you should take notes as this information will go into your blog post)

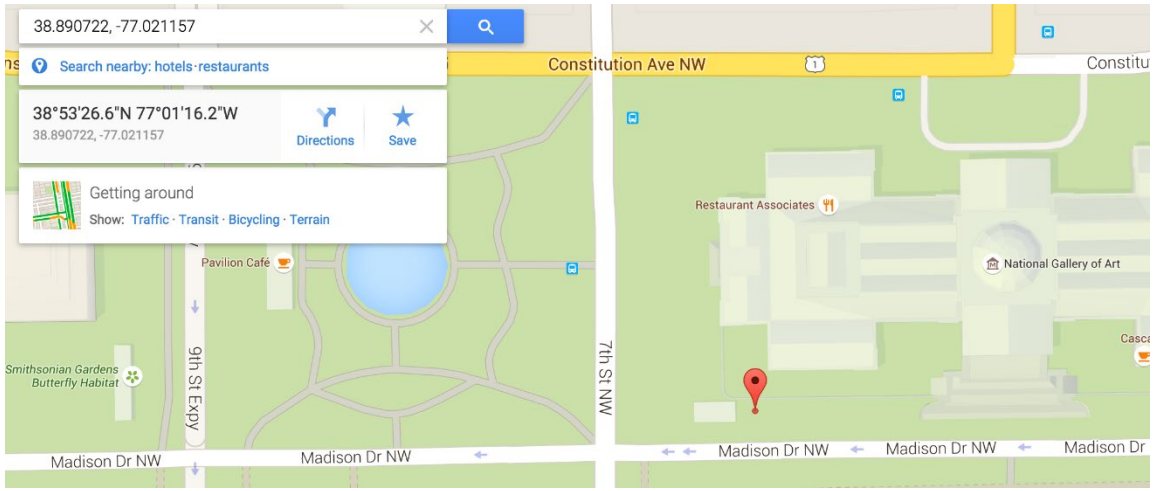


Map/Spatial Literacy

- How does one read a map?
- Maps and the Humanities
- Digital Maps

The Process of Mapping





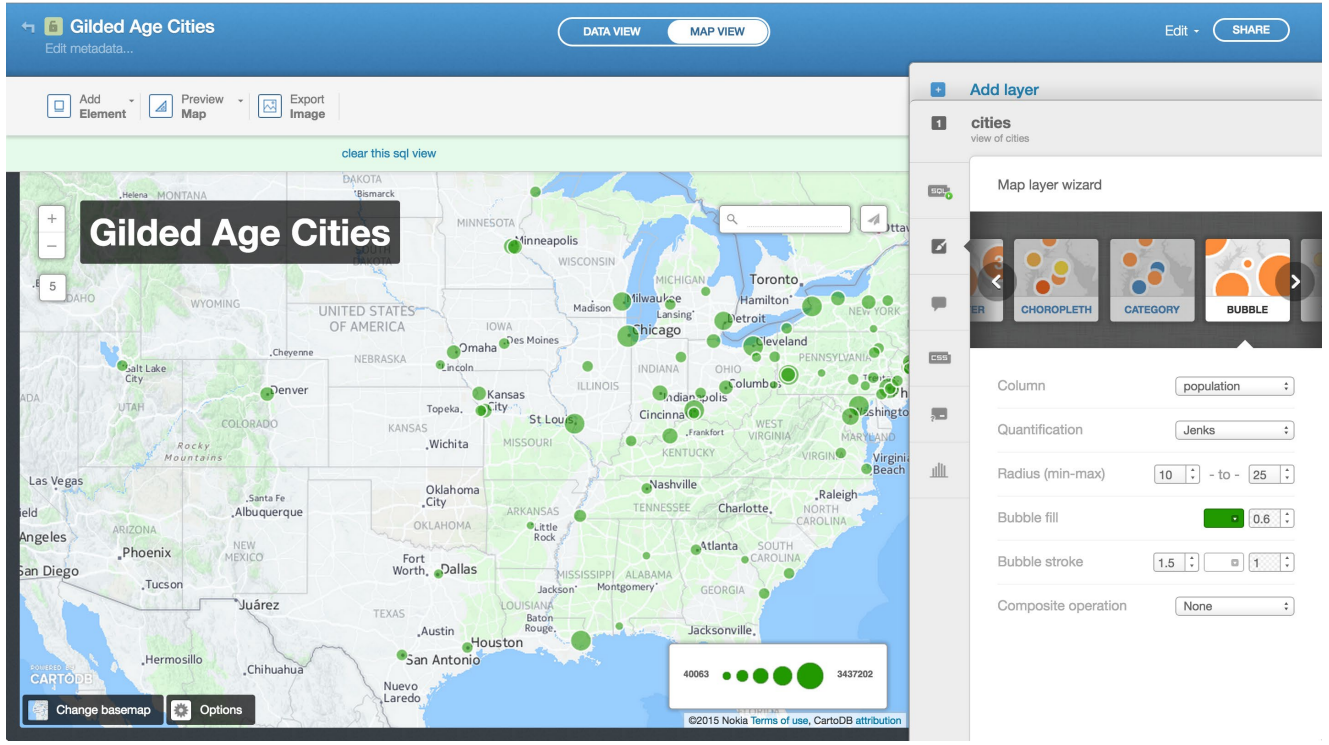
What is GIS?

~ As Stephen Robertson explains about his map of Harlem: "GIS organizes and integrates sources on the basis of their shared geographic location … . Geospatial tools involve not only maps but also databases. The power of such tools is that they use geographic location to integrate material from a wide range of disparate sources. "What is important about assigning a geographic reference to data," Karen Kemp points out, "is that it then becomes possible to compare that characteristic, event, phenomenon, etc. with others that exist or have existed in the same geographic space. What were previously unrelated facts become integrated and correlated."

Let's look at Google Maps now.

Aligning a point to the spatial reference system. Seen here are the coordinates 38.890722, -77.021157 in the EPSG:4326 / WGS 84 coordinate reference system.

Web Mapping Tools



What do Maps Do?

A Google Map of the National Mall

We can compare this Google map to the Open Street Map version of the same place.

Types of Maps

GENERAL PURPOSE

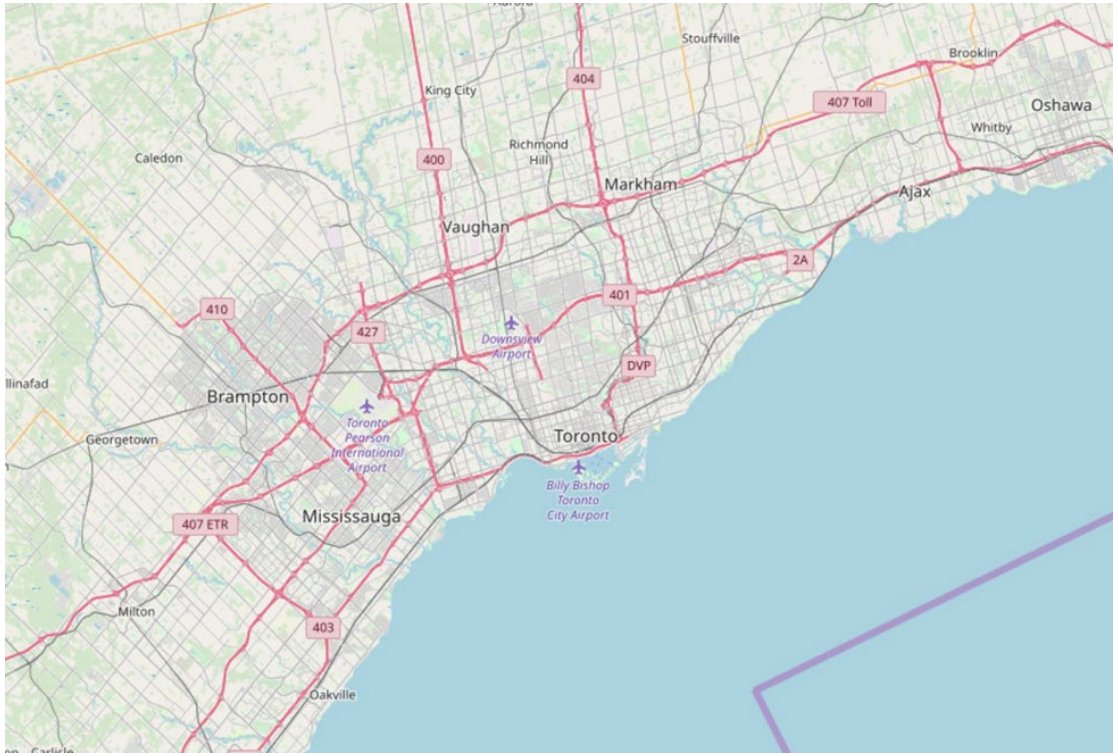


Figure 1.2.1 OpenStreetMap Basemap.

Credit: OpenStreetMap © OpenStreetMap contributors.
The data is available under the Open Database License (CC BY-SA(link is external)).

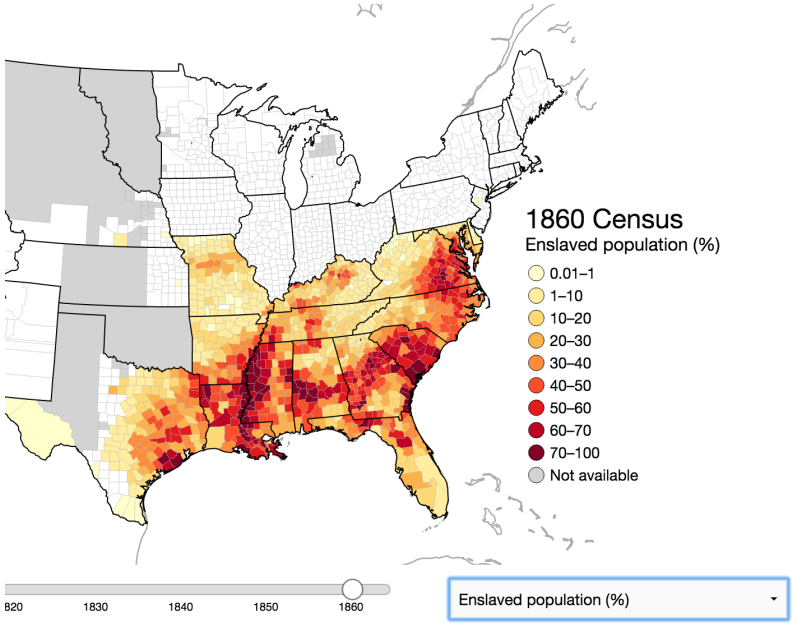
NARRATIVE MAPS

Figure 2.1 StoryMap JS

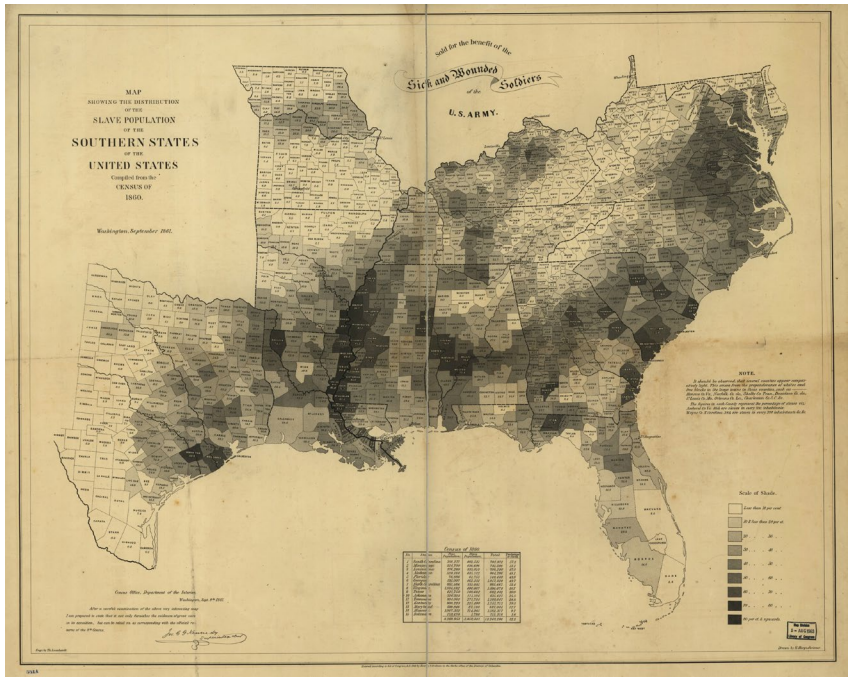
Jame Joyce's short story "An Encounter" from *Dubliners* (1914) and mapped the narrative of two boys' journey around Dublin.

Types of Maps

DATA MAPS – THEMATIC MAPS



The Spread of U.S. Slavery, 1790–1860



U.S. Coast Survey, Map showing the distribution of the slave population of the southern states of the United States *(Washington, DC: Henry S. Graham, 1861). Image from the Library of Congress.*

Types of Maps - Cartometric

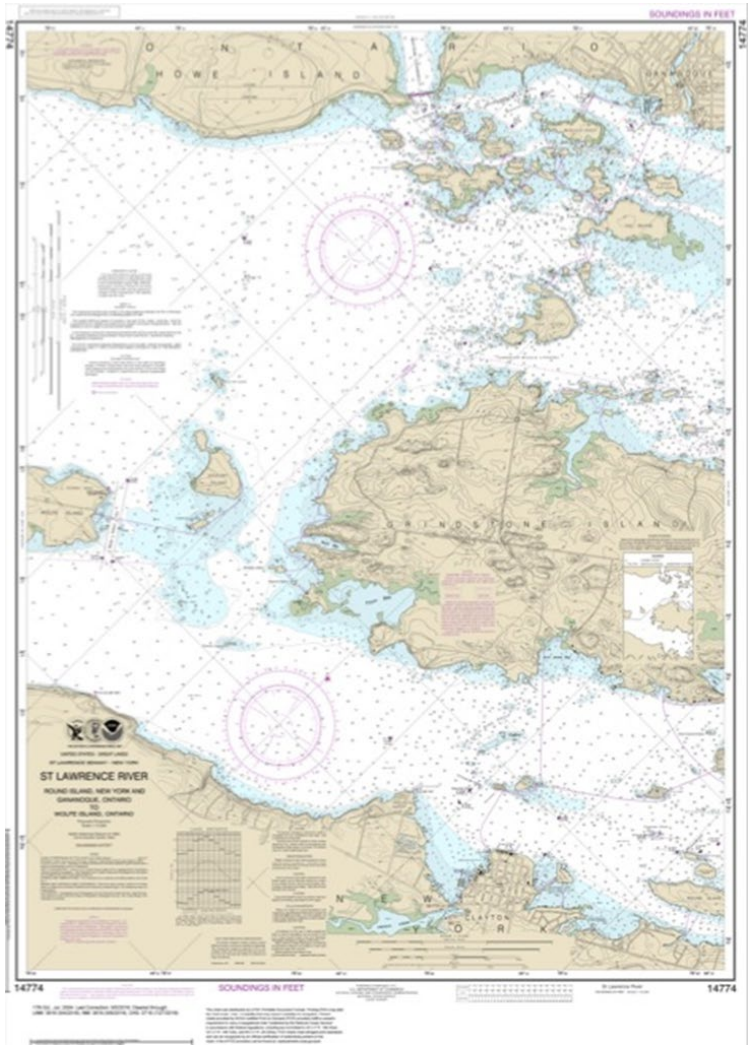


Figure 1.2.3 A Nautical Chart from NOAA

Credit: NOAA (link is external) (click the link for a larger image!)

Figure 1.2.4 A hybrid map of fire hazard severity zones from Orange County, CA

Credit: Cal Fire from CA.gov(link is external)

Types of Maps – Cartometric, continued

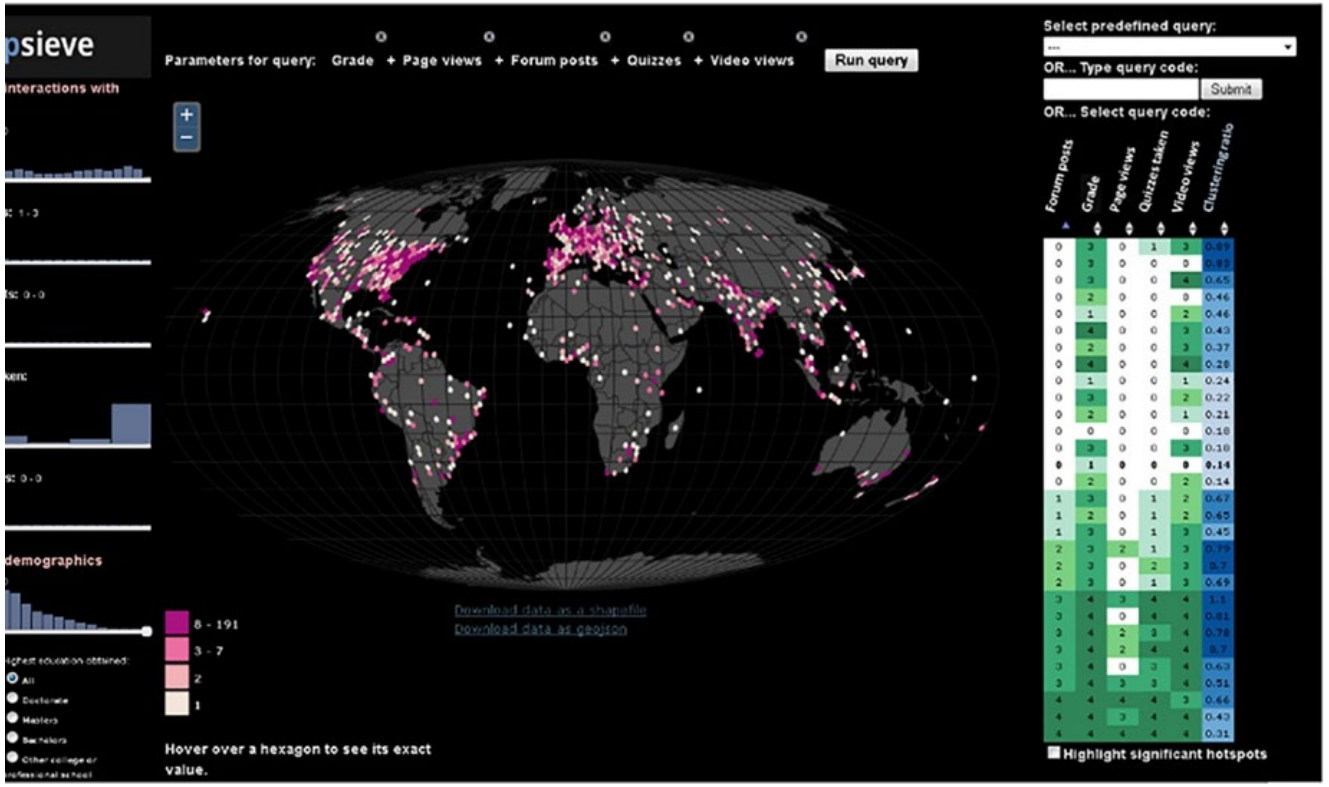


Figure 1.2.5 A Screenshot of the Geovisual Analytic tool *MapSieve*.

Credit: Robinson, Anthony C., and Sterling D. Quinn. 2018. "A Brute Force Method for Spatially-Enhanced Multivariate Facet Analysis." Computers, Environment and Urban Systems 69 (June 2017). Elsevier: 28-38.
Reproduced with permission from Dr. Anthony Robinson, Penn State University.

Types of Maps – Cartometric, continued

Figure 1.2.6 Places to see both bigfoot and the solar eclipse

Credit: Sightings map by Joshua Stevens

(JoshuaStevens.net (link is external))

Types of Maps – Cartometric, continued

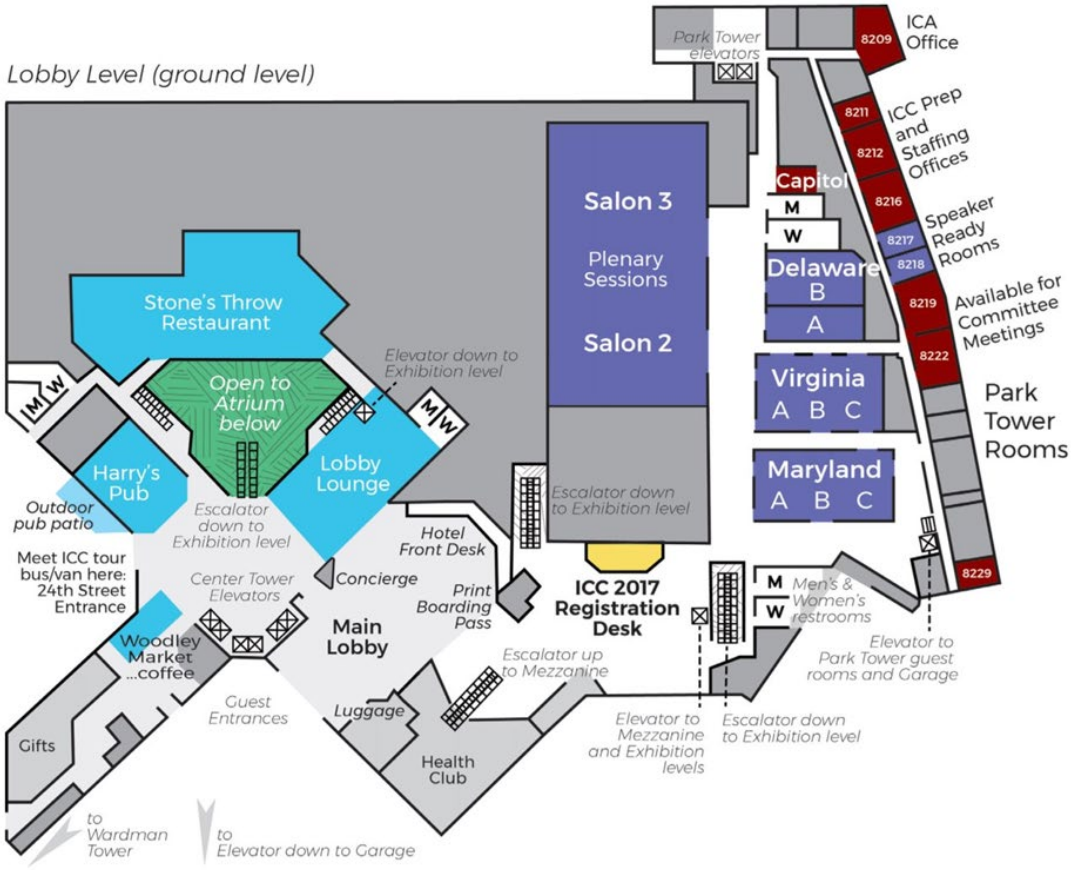
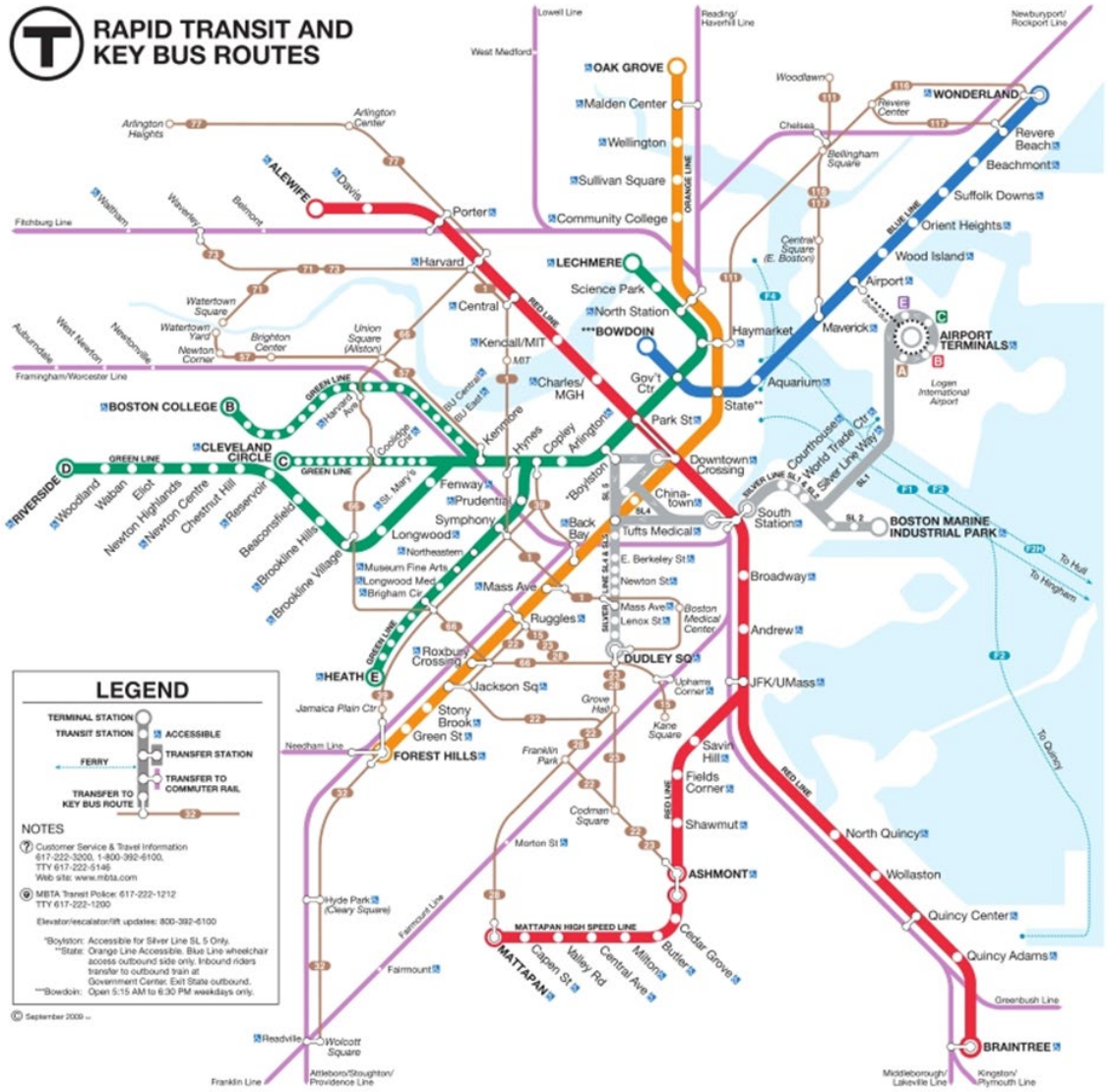


Figure 1.2.7 Indoor map of the Washington DC Marriott from the 2017 International Cartographic Conference

Credit: Cary Anderson and Cindy Brewer. In-hotel walk throughs and detailed floor plans at www.marriott.com(link is external).



Types of Maps – Cartometric, continued

Figure 1.2.8 A Public Transportation Map from Boston, M.A.

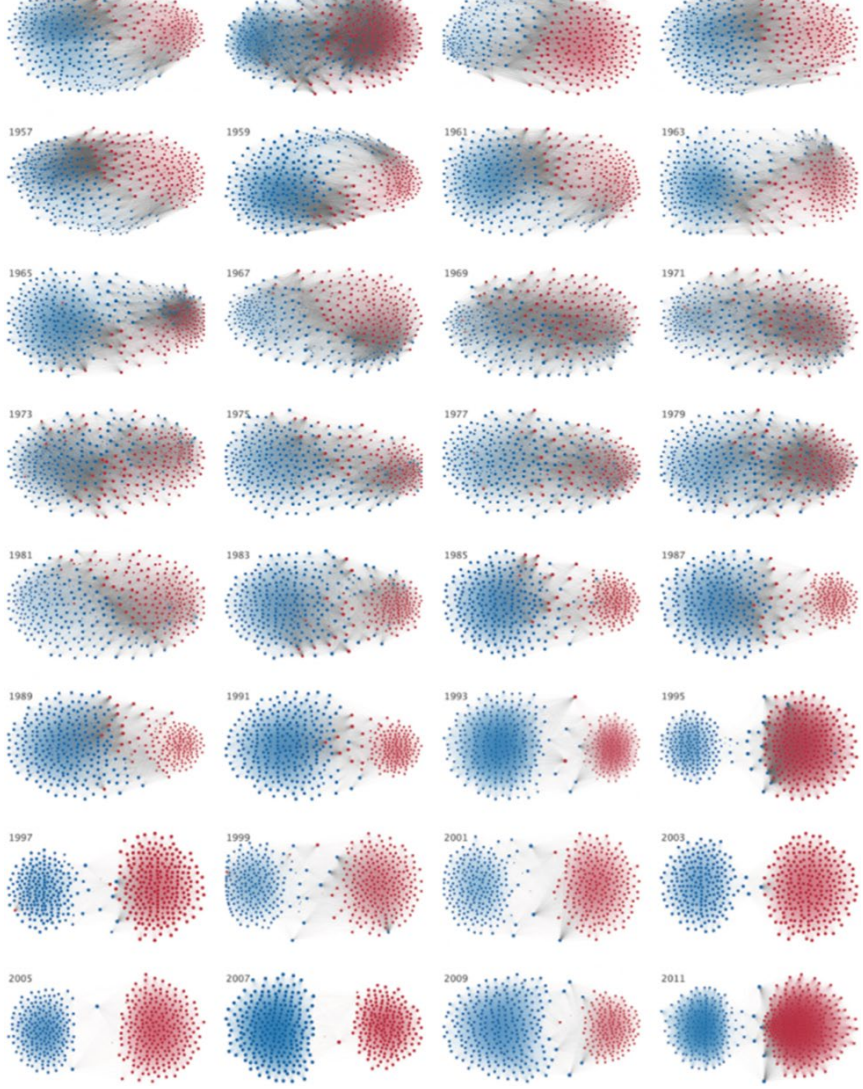
Credit: Boston MBTA(link is external)

Types of Maps – Cartometric, continued

Figure 1.2.9 A spatialization

by Andris et al., (2015) that demonstrates the increasing polarization between members of the US House of Representatives. Each dot represents a member of a congress (blue for democrat, red for republican); connections represent vote-based agreement above a threshold determined by the authors. For more details, see (Andris et al. 2015).

Credit: Andris, Clio, David Lee, Marcus J. Hamilton, Mauro Martino, Christian E. Gunning, and John Armistead Selden. 2015. "The Rise of Partisanship and Super-Cooperators in the U.S. House of Representatives." PLoS ONE 10 (4). doi:10.1371/journal.pone.0123507. Available under the Open Database License (CC BY-SA(link is external)).



Creating your own Google Map

Google Maps allows users to place markers, upload pictures of specific locales, draw lines and shapes, and provide descriptions—helpful for constructing historical maps.

Download this sample data and located it on your computer: UK Global Fat Supply 1894-1896 - Sheet1. If you open the file in Excel or another spreadsheet program, you'll find a simple two column dataset with a list of different kinds of fats and the associated list of places. This data was created using British import tables from 1896.

Create your Own Google Map

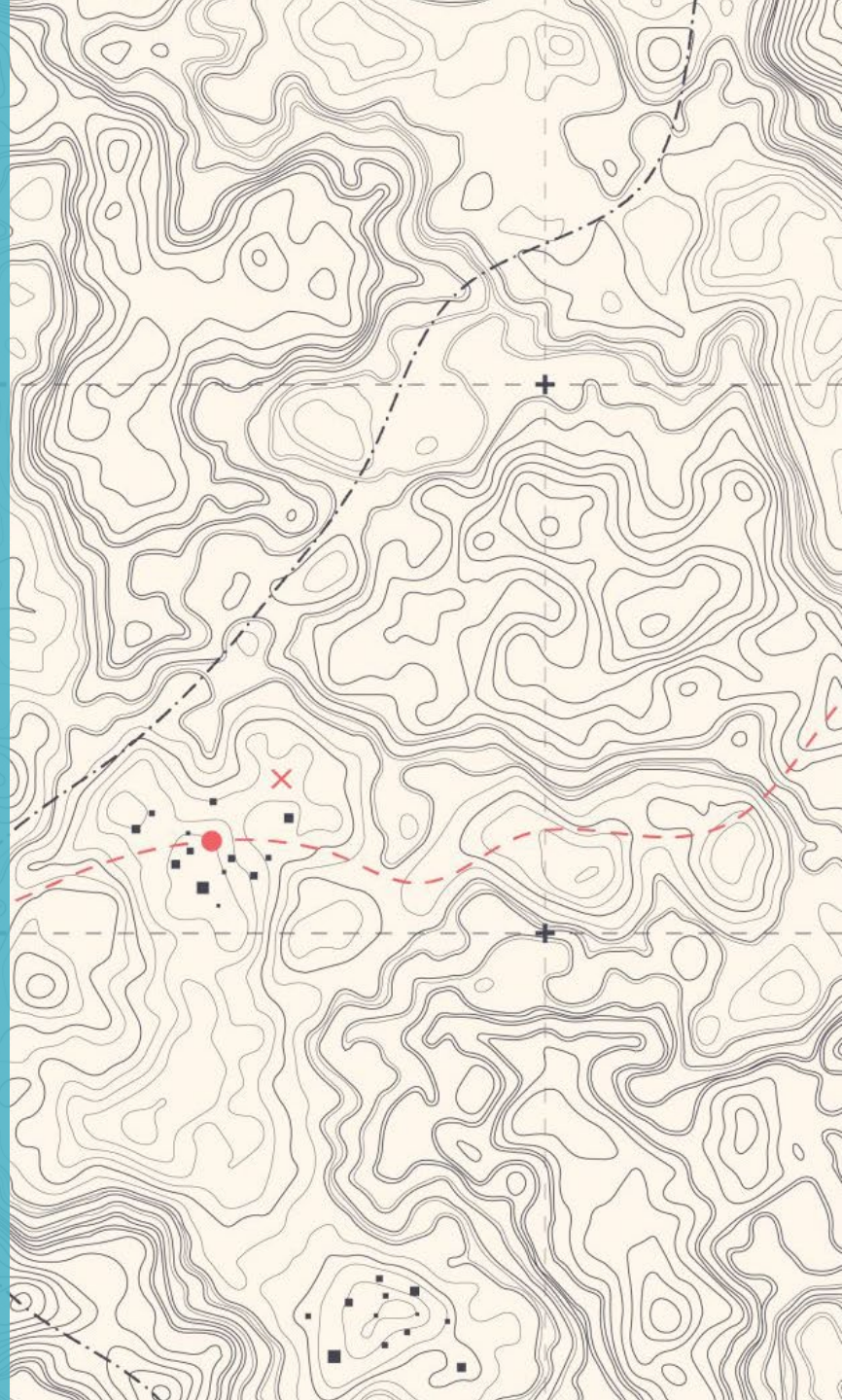
Create 5 entries on your Google Map:

1. Entries are about 150–200 words in length. They can be a person, a place, an event, a commodity/thing, or an idea. If the entry doesn't fit into one of those broad categories, Write in full sentences.
2. Entry Name/Title – make it easy to understand
3. Date(s) – Does not need to be exact year; Some entries may be centuries
4. Location – Necessary for the map pinpoint!
5. Historical Significance – The "why" does this matter. What is important about this entry? Did it effect history? Is it a representation of a particular theme? What's the broader story here? Try to limit this to a few sentences.
6. Important Notes – Anything that you deem to be particularly noteworthy about your entry. Sometimes this section will be left blank but if you find you're left with extraneous material from the Historical Significance category then fill it in.
7. Connected to – Are there other people, places, events, ideas, etc that this entry could be connected to? If so, mention it and then be sure to draw a line to that on the map.

Creating a Narrative Map

A narrative map tells a story plotted through space. The point of a narrative map is not to display data. Rather it is to provide an explicit visual counterpart to the implicit spatial underpinnings of a narrative or argument. Narrative maps are broadly useful across the disciplines, since many texts have a spatial component.

For example, a class on literature might ask the students to trace the movements of characters within James Joyce's Dubliners, or some other work of literature. Another class might look for the movements of Augustine of Hippo around the Mediterranean. Students in a class on American religion might each take a different itinerant minister's autobiography and trace their movements. An art or music class might track the development of certain kinds of painting or musical styles across space.



Create your own JS StoryMap

Using StoryMapJS, build a narrative map that consists of at least five elements. Use the narrative map to relay some significant aspect of your topic. Example: Denmark Vesey's Life Up to the Revolt

- If you did not bring your own elements, create a narrative map of the life of a formerly enslaved person as relayed in their autobiography. Make use of the available open access primary sources that we have reviewed in previous weeks to populate your map.
    - Narratives:
        - Charles Ball
        - Henry Brown
        - Frederick Douglass
        - Harriet Jacobs
        - Solomon Northrup
        - Sojourner Truth
        - Nat Turner

Follow these steps to create a map with StoryMap:

1. Go to the StoryMap website and click "Make a story map now." You will need a Google account with Google Drive in order to save your map.
2. Create a title slide. The map on the title slide will be derived from the places associated with later slides, so don't expect it to display much at first.
3. Create at least five additional slides. Each of these slides will be associated with a point in space. You can find the places by zooming the map and dragging the pointer, or by using the search box. Try uploading an image and adding text.
4. Explore the per-slide options and the general options. For instance, which base map works best for your purposes?