

Maps & Other Lesser-Known Graphs

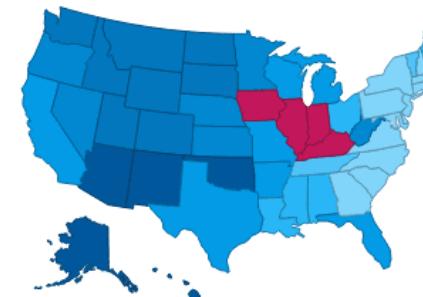
CM4125 – Topic 9

Maps

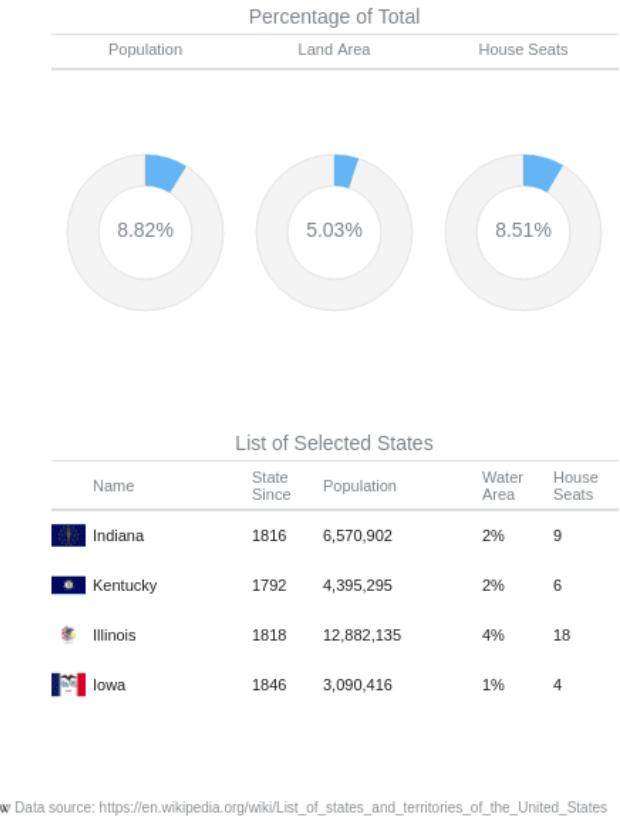
Maps

- Maybe the most widely used visualisation nowadays
- The most logical way to understand population trends

US States
by the Year of Joining the Union
Pick your state or a time period to see when chosen states joined

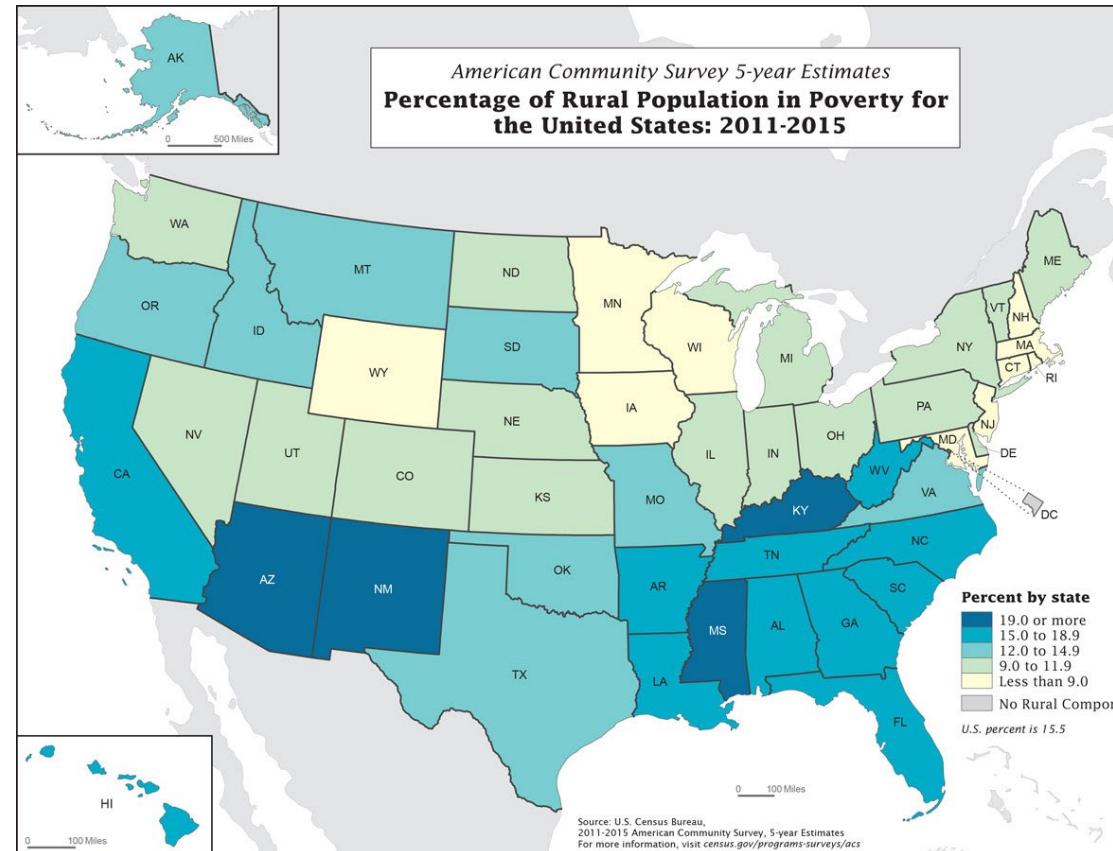


Before 1790 1820 - 1850 After 1900



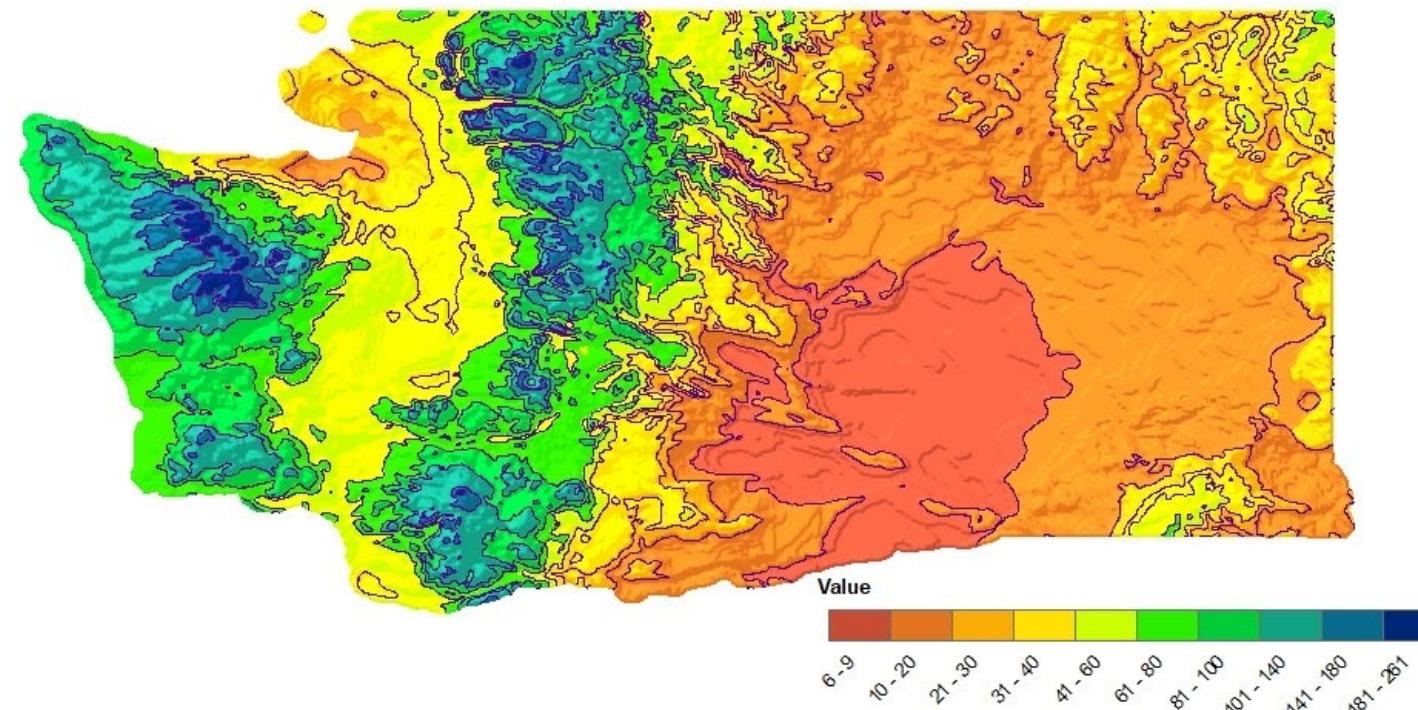
Types of Maps

Choropleth Map

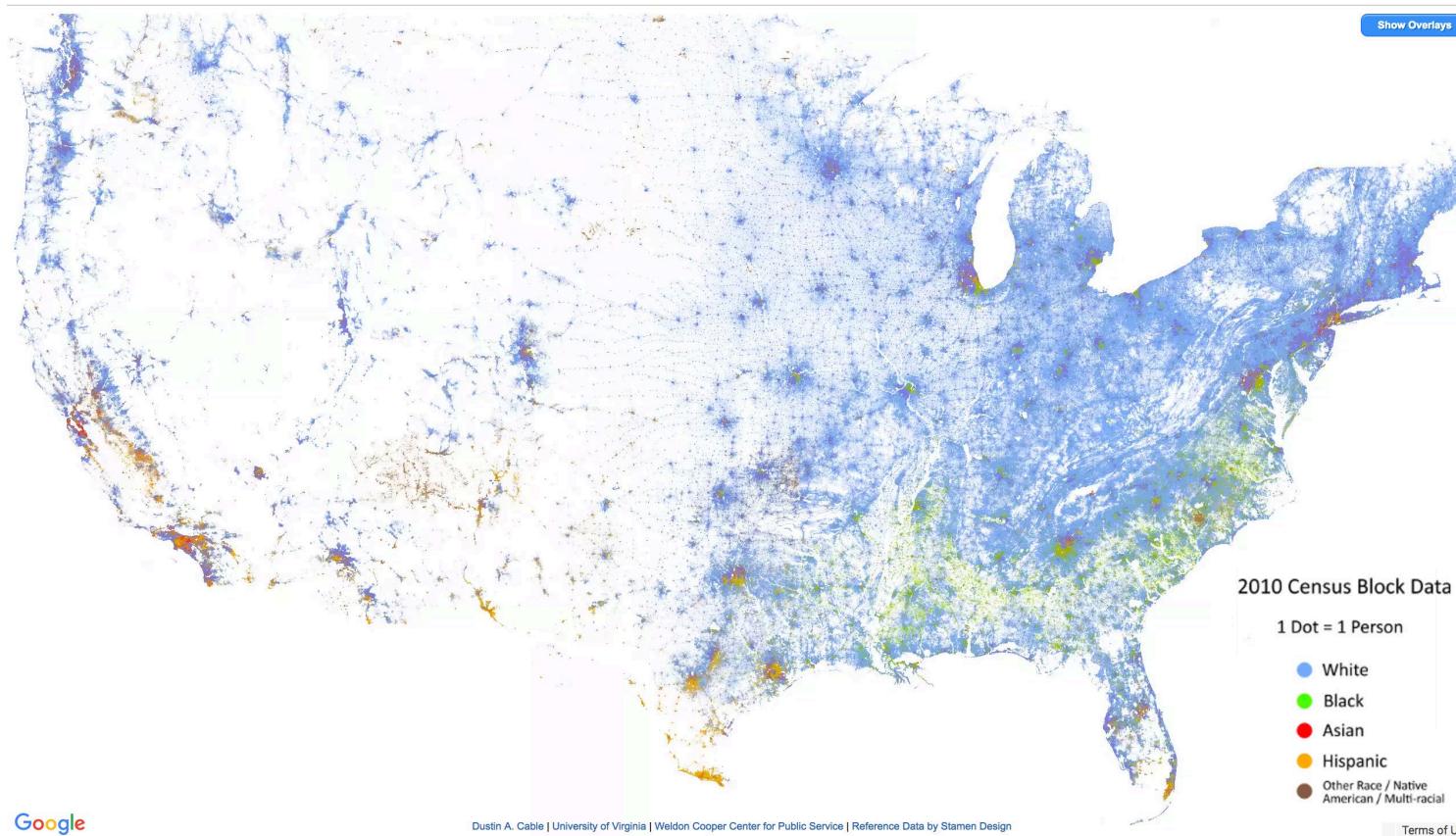


Isarithmic Map

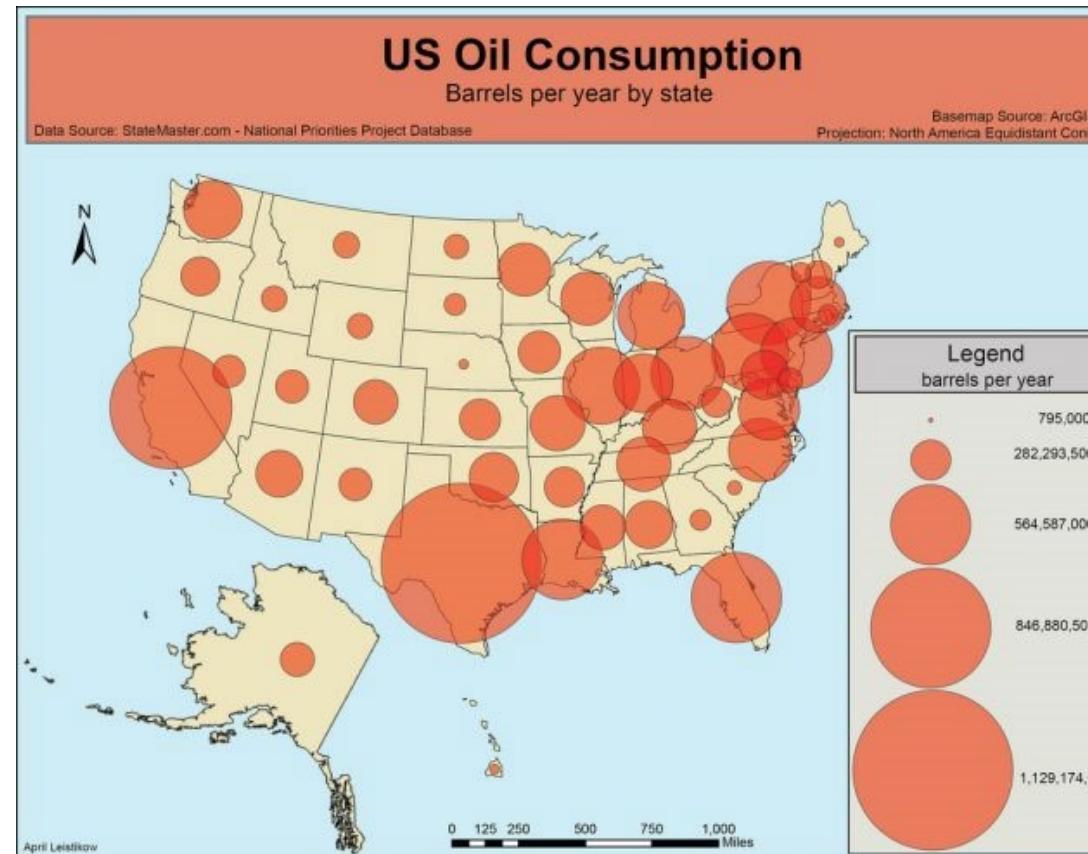
Washington State Annual Precipitation



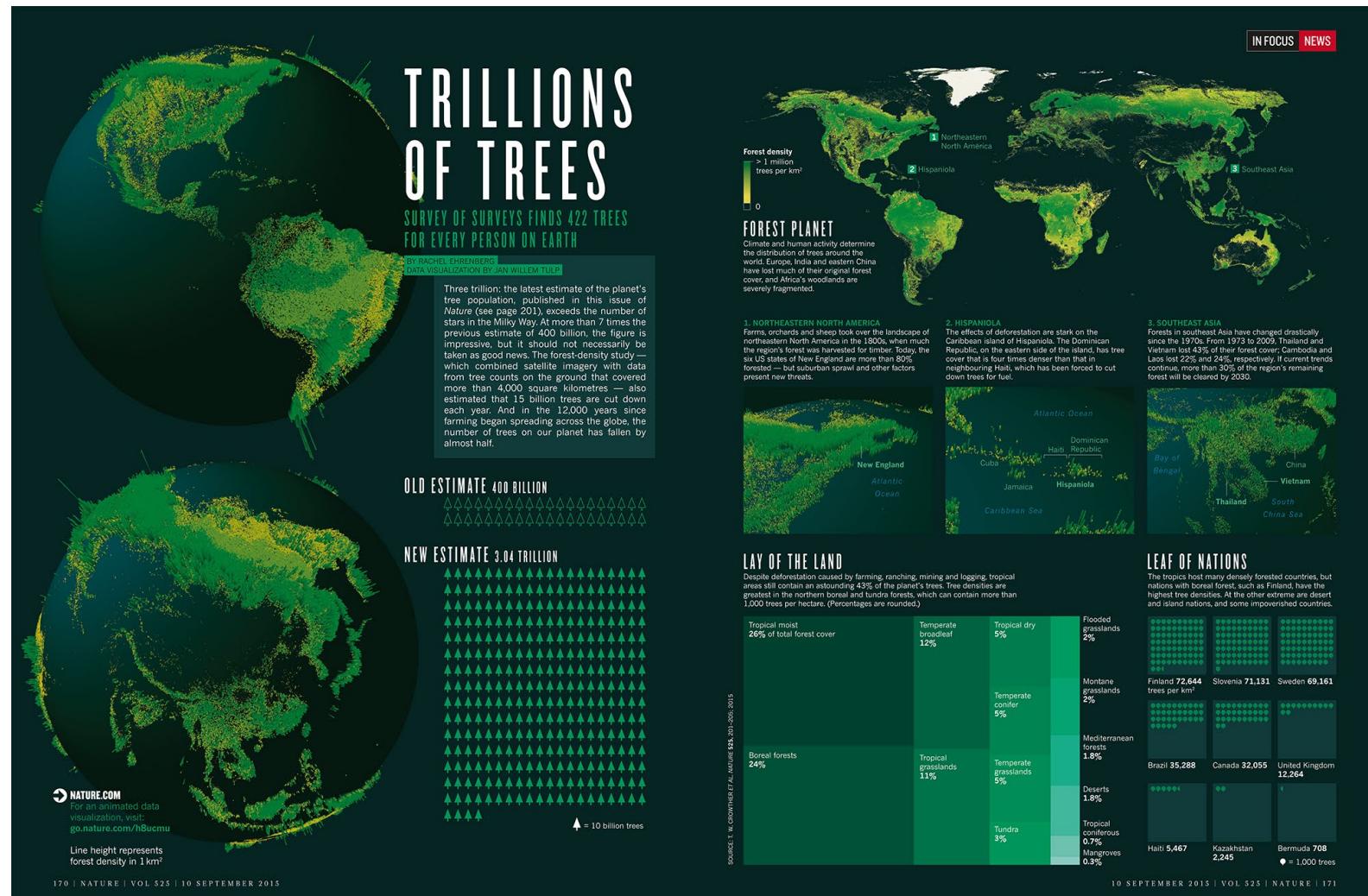
Dot Map



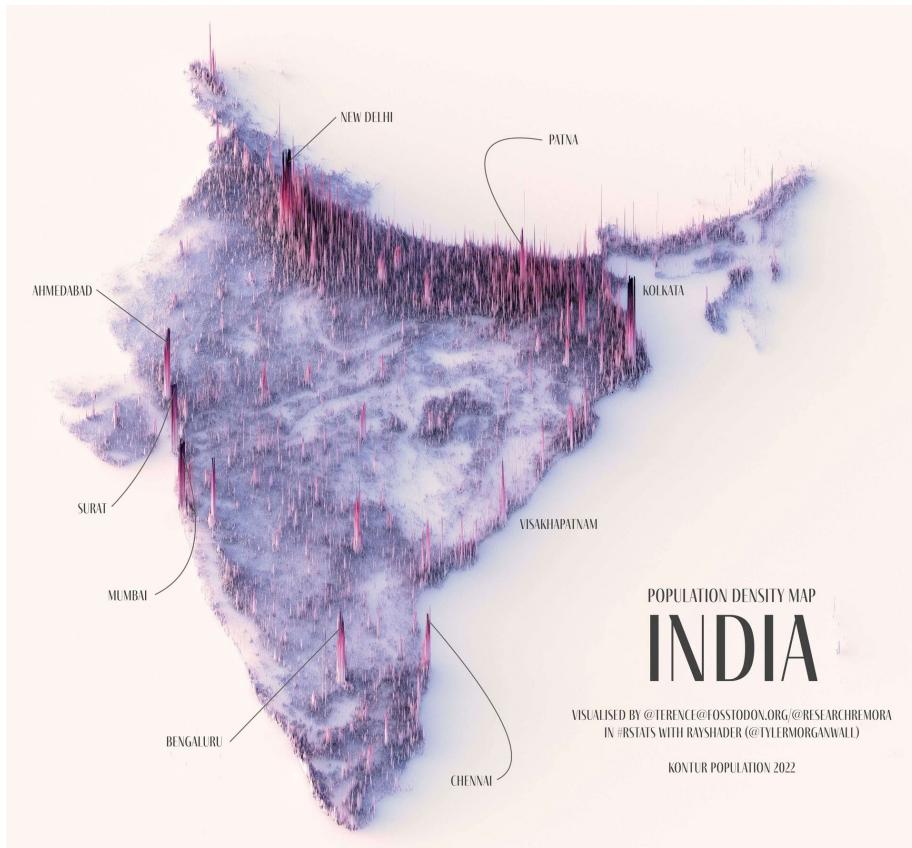
Proportional Symbol Map



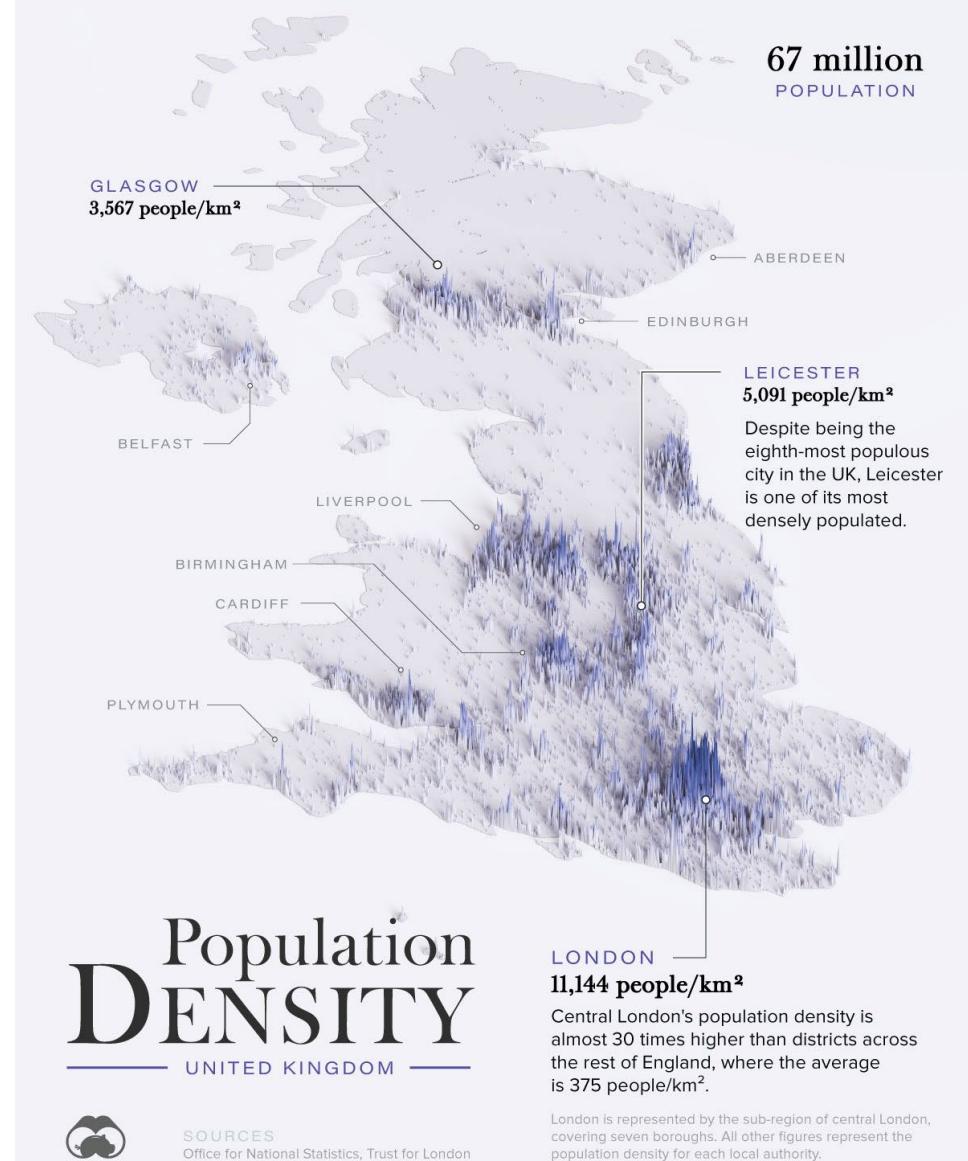
Prism Map



Density Spike Maps



<https://www.informationisbeautifulawards.com/showcase/5676-global-population-density-spike-map>

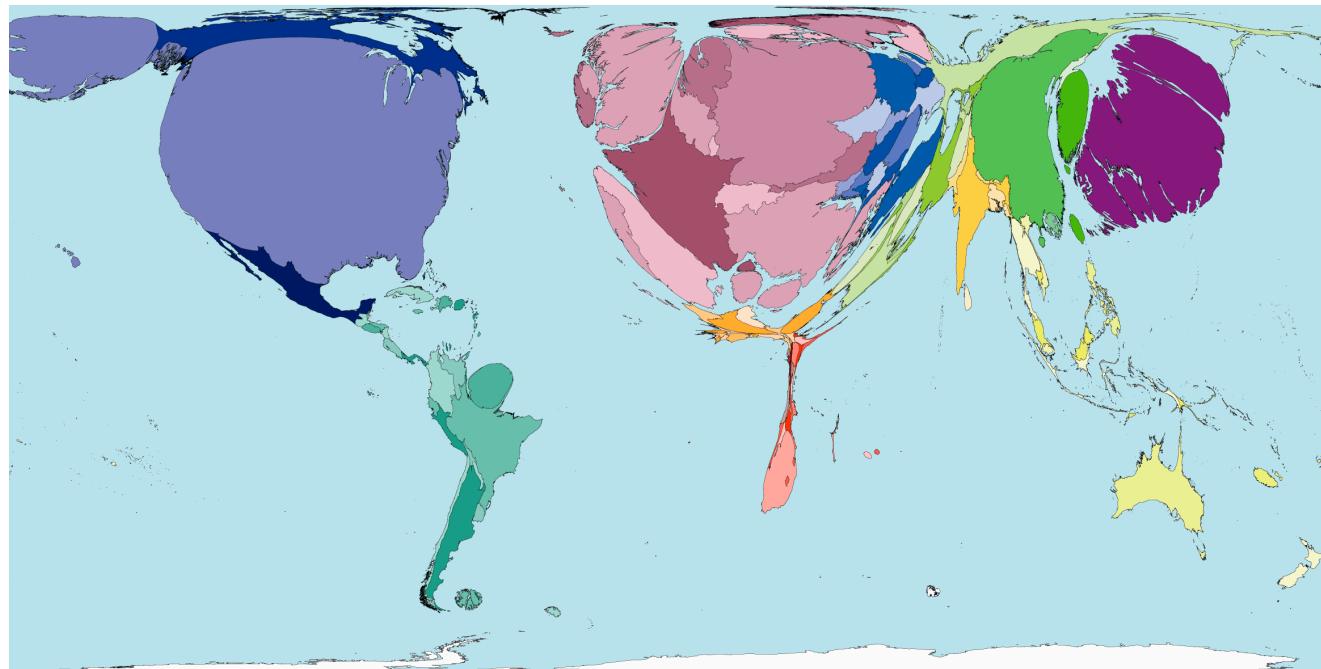


Flow Map



<https://multimedia.scmp.com/culture/article/SCMP-printed-graphics-memory/lonelyGraphics/201210A113.html>

Area Cartogram (a map of inequalities)



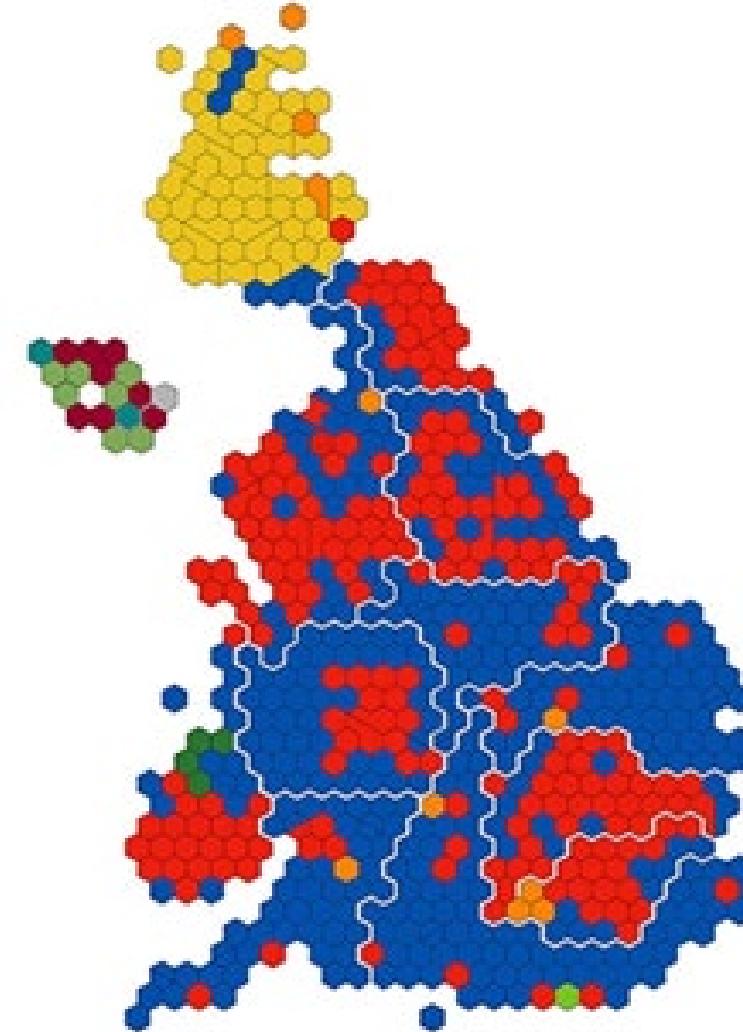
<https://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.0040001>

Dorling Cartogram



<https://blog.datawrapper.de/cartograms/>

Grid Map



Map Word Cloud



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GREAT BRITISH BANDS

 Art inspired by music | www.guitarart.com
Copyright © Photo 2013

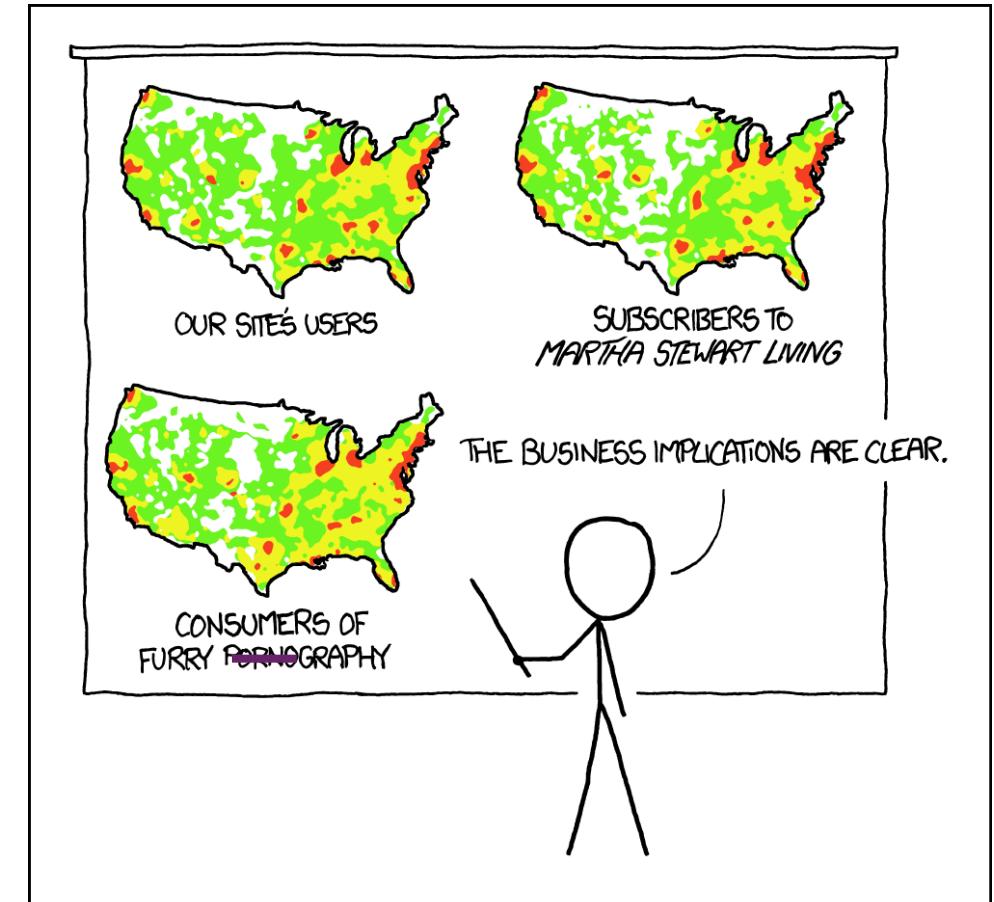


Problems with Maps



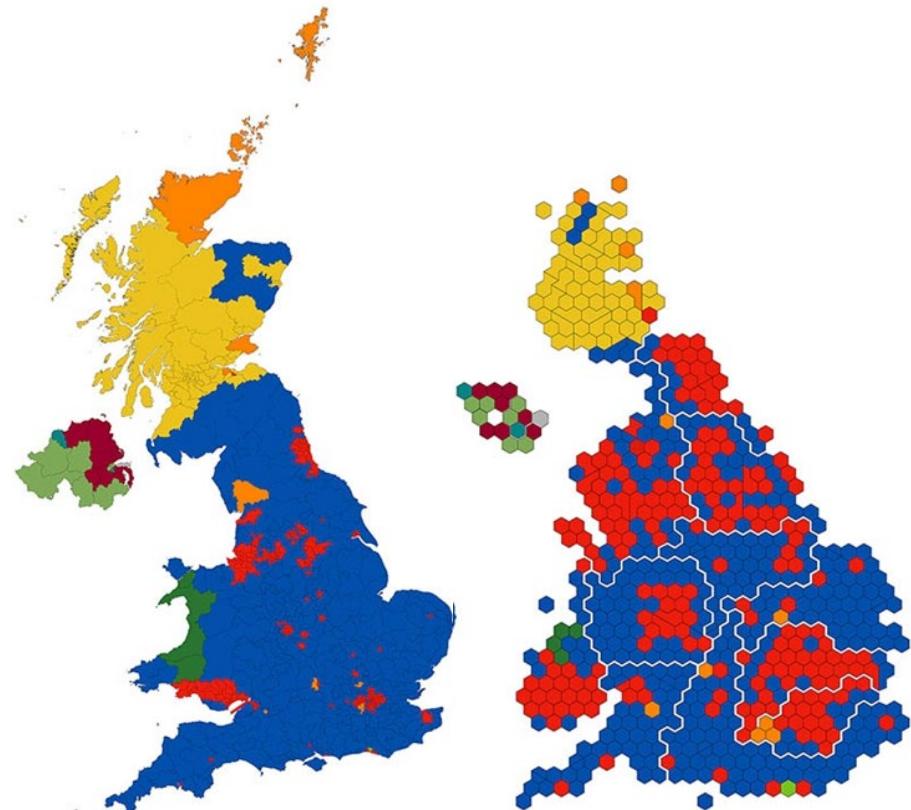
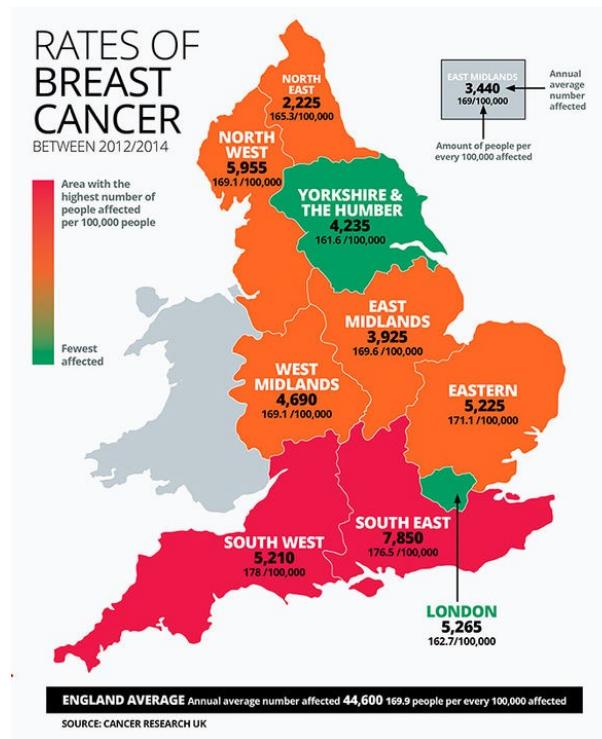
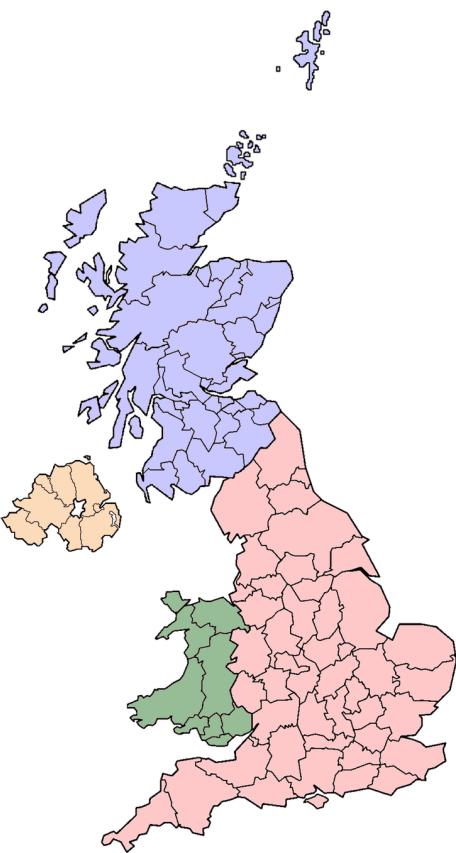
<https://thetruesize.com/>

Problems with Maps



PET PEEVE #208:
GEOGRAPHIC PROFILE MAPS WHICH ARE
BASICALLY JUST POPULATION MAPS

Problems with Maps



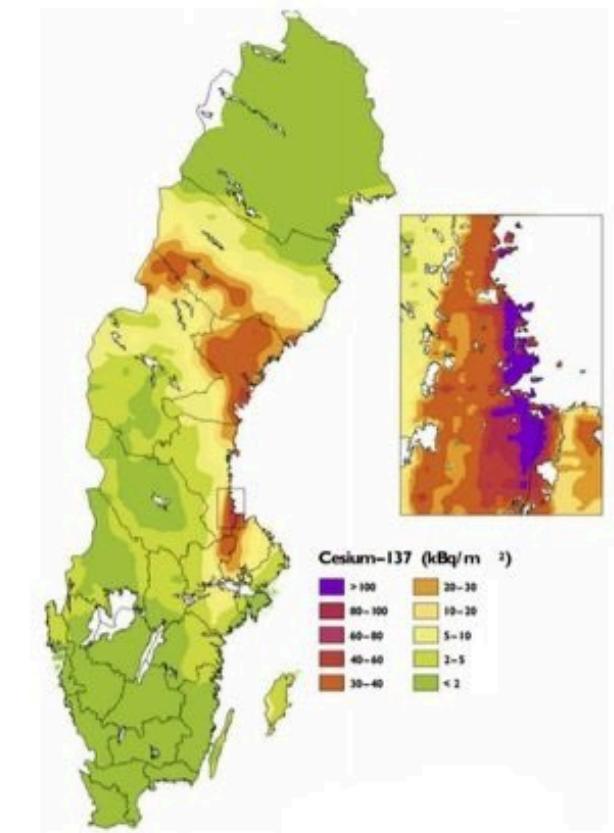
Again correlation ≠ causation

This is Sweden! -->

Most popular ~~porn~~ categories per region

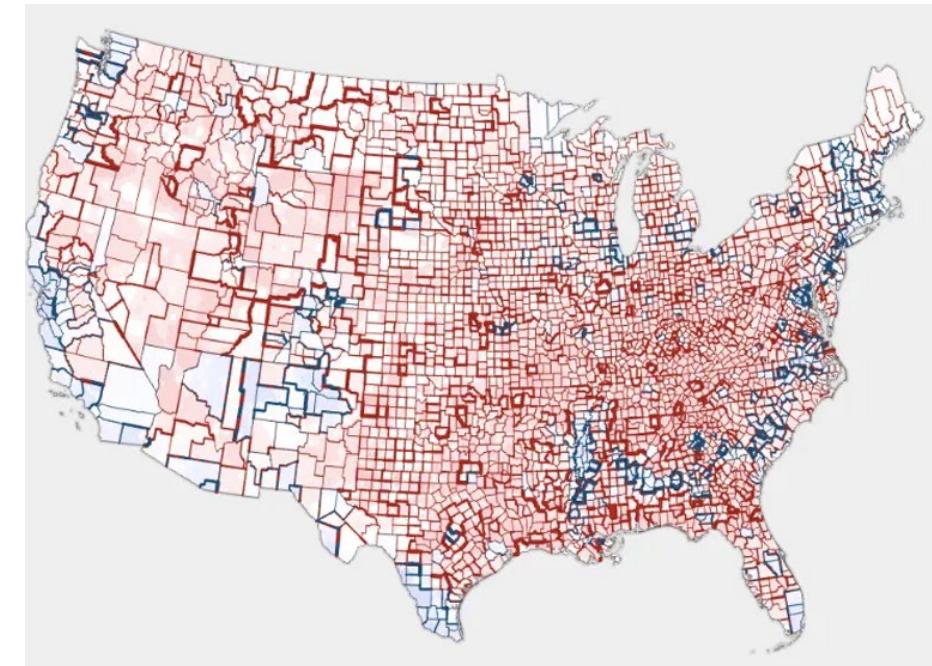
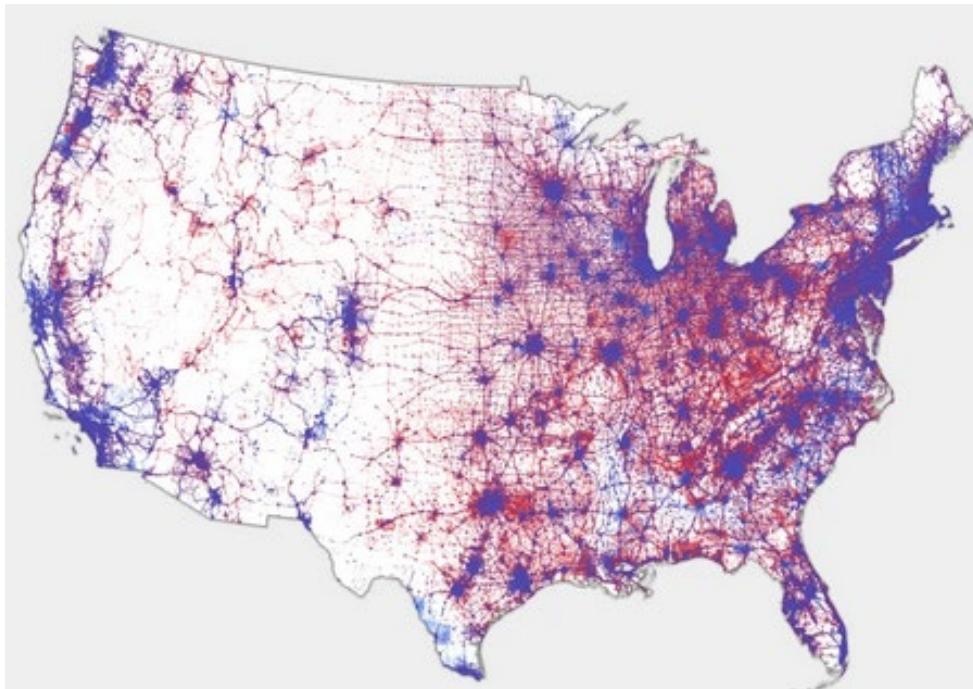


Density of radioactive fallout from Chernobyl



<https://www.facebook.com/photo.php?fbid=3496496333928064&id=1702341603343555&set=a.3010414095869626>

Other examples



<https://www.wired.com/story/is-us-lean-ing-red-or-blue-election-maps>

Other examples



<https://www.anychart.com/blog/2024/11/08/us-election-maps/>

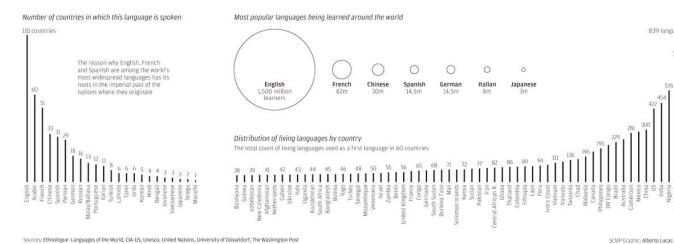
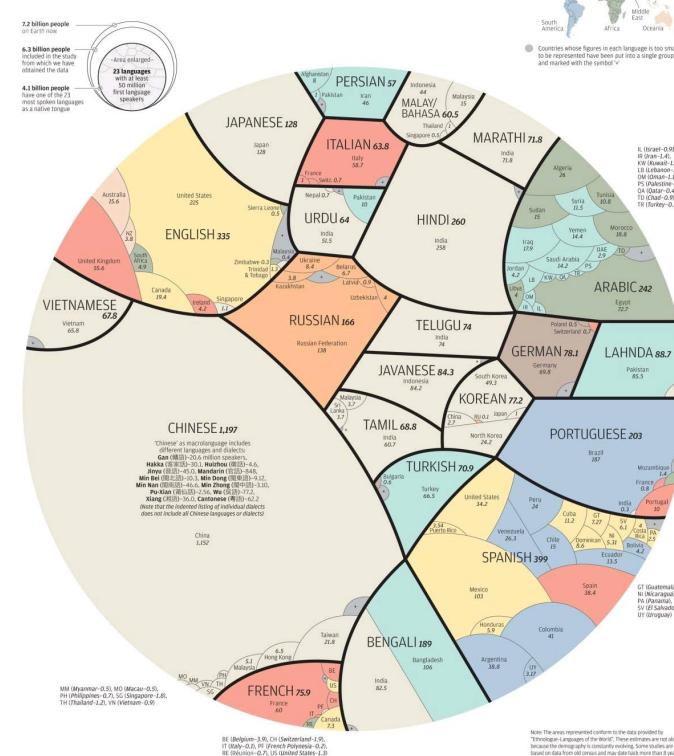
Other interesting ideas for maps

- Create your own maps!
 - <https://artsexperiments.withgoogle.com/ocean-of-books>



A world of languages

There are over 7,000 known languages alive in the world today. Twenty-three of these languages are a mother tongue for more than 50 million people. The 23 languages make up the native tongue of 4.1 billion people. We represent each language within black borders and then provide the numbers of native speakers (in millions) by country. The colour of these countries shows how languages have taken root in many different regions.



<https://www.visualcapitalist.com/a-world-of-languages/>

How to easily create maps...

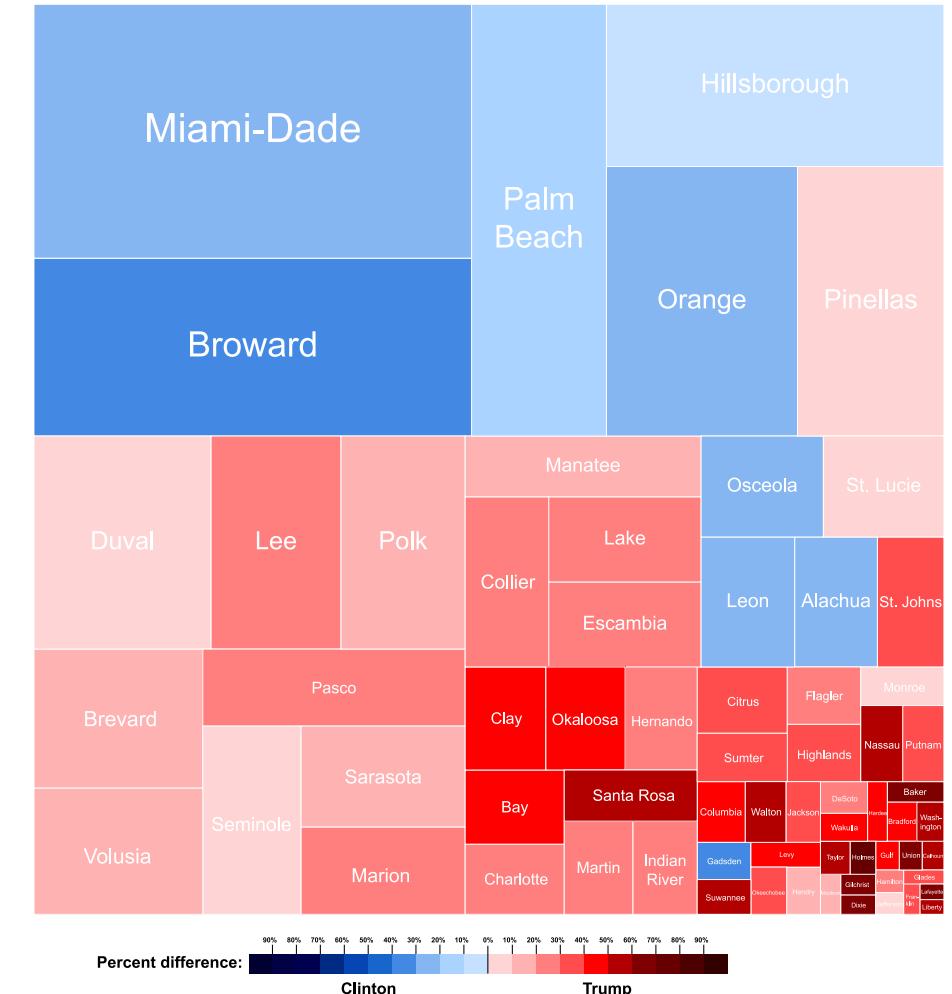
Or use tools like
<https://mapchart.net/>

Other Vis

Tree map

- Like a Word cloud, but with areas instead of words
- More accurate
- Can be more impactful/exhibitory
 - <https://www.informationisbeautiful.net/visualizations/the-billion-dollar-gram/>

Florida Counties
United States presidential election, 2016

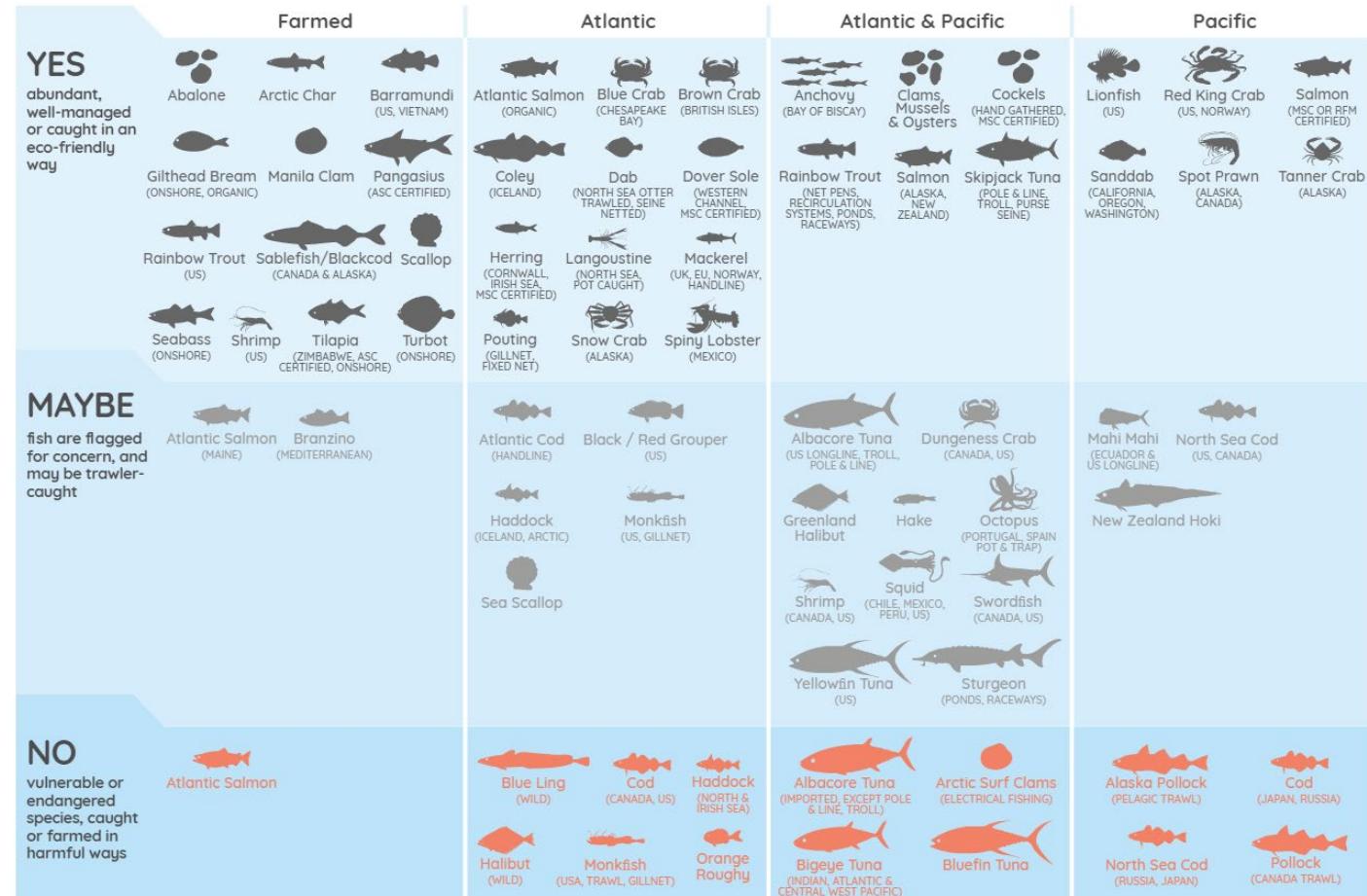


<https://en.wikipedia.org/wiki/Treemapping>

Matrix Charts

- Instead of simply doing a matrix or a heatmap, you can be more visual!
- Moral matrix

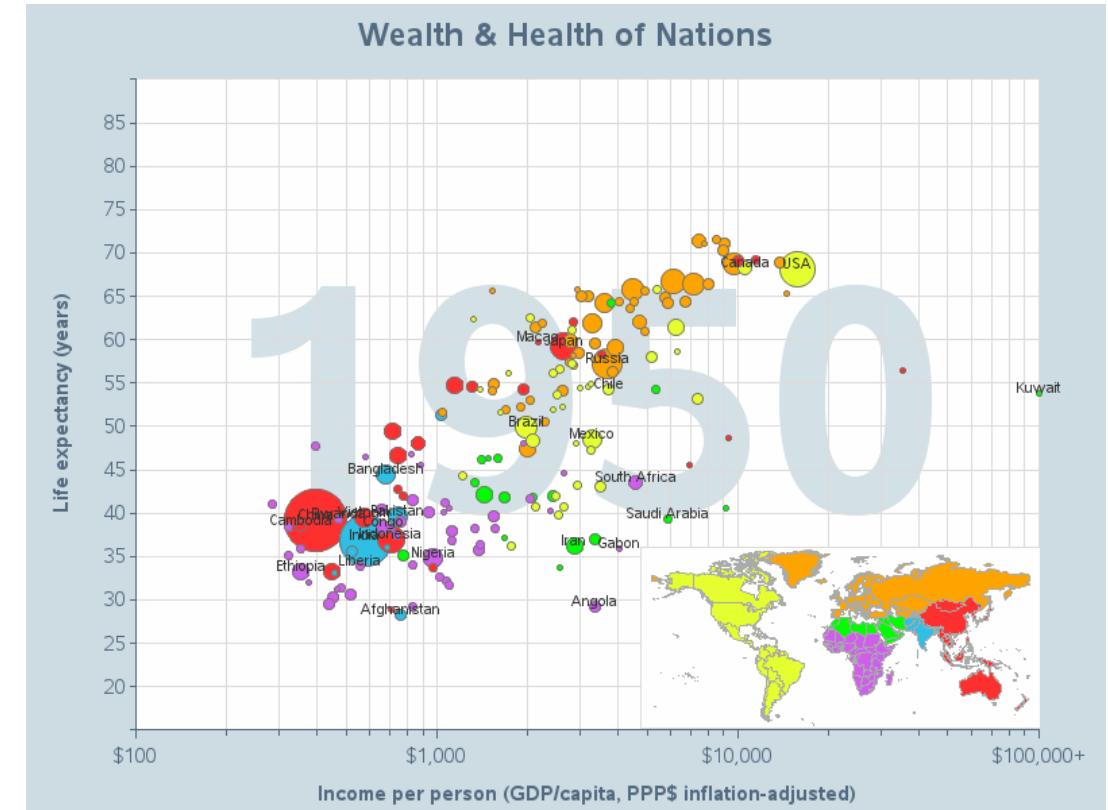
- <https://lucyxwalker.wordpress.com/2014/02/04/moral-matrix/>



<https://www.informationisbeautifulawards.com/showcase/2620-which-fish-are-okay-to-eat>

Bubble Charts

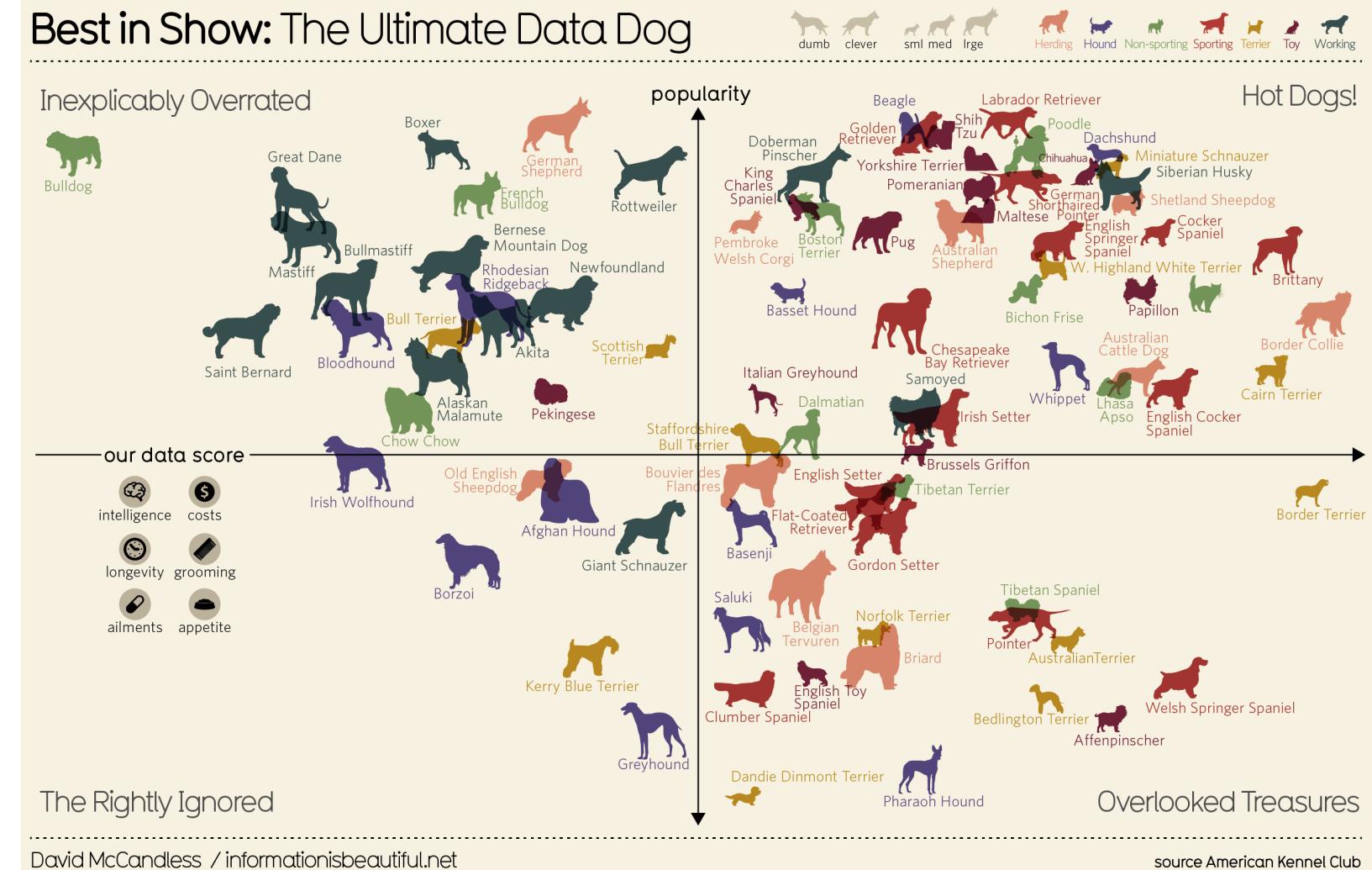
- As said before, these make more sense when moving (i.e. GapMinder)



<https://www.gapminder.org/for-teachers/>

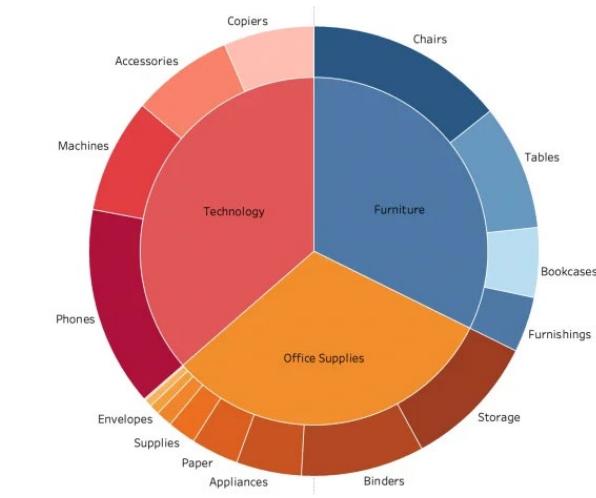
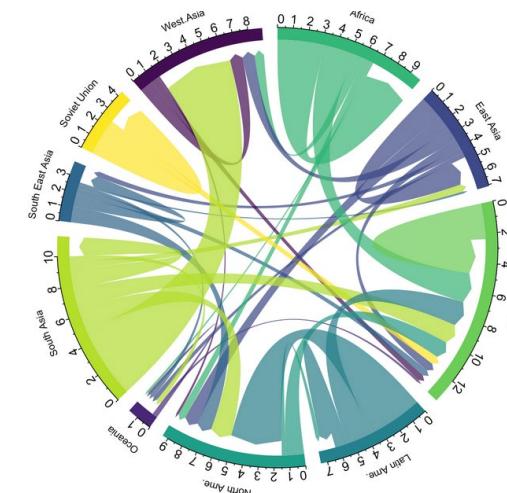
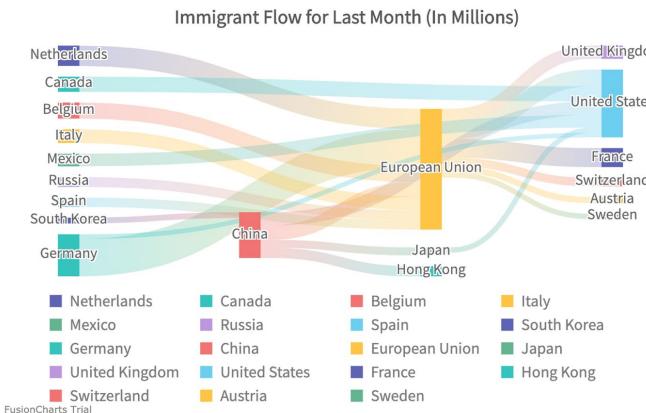
Bubble Charts

- They don't have to move necessarily!



<https://www.informationisbeautiful.net/visualizations/best-in-show-whats-the-top-data-dog/>

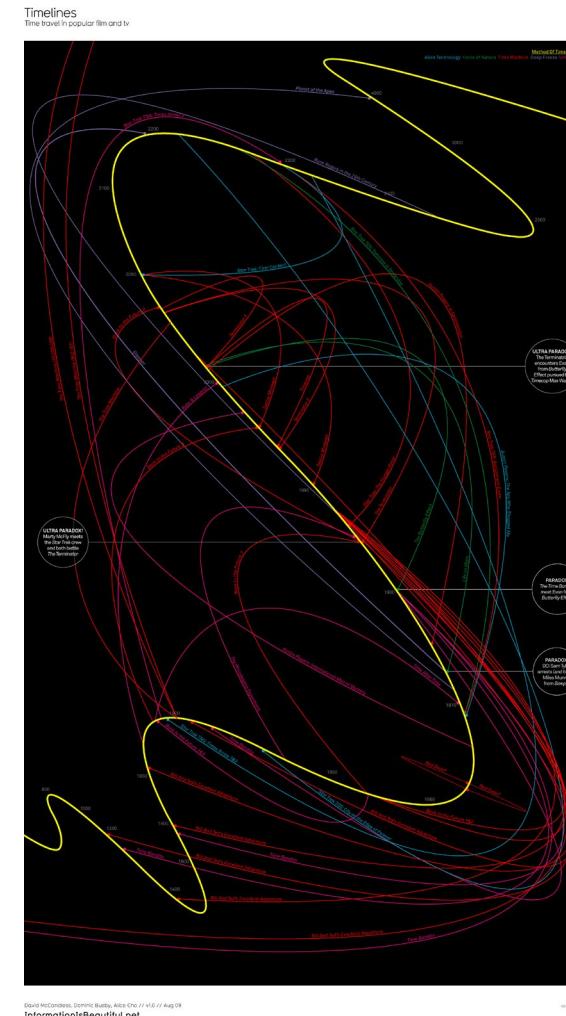
Sankey/Chord/Sunburst Diagrams



- Harder to interpret for the “general public”, but very appealing!

We will look at these in detail next week!

- A timeline based on Sankey/Chord, which again, is very appealing but very hard to read!



<https://www.informationisbeautiful.net/visualizations/timelines-time-travel-in-popular-film-and-tv/>

Lab: “Running Maps” in Python
