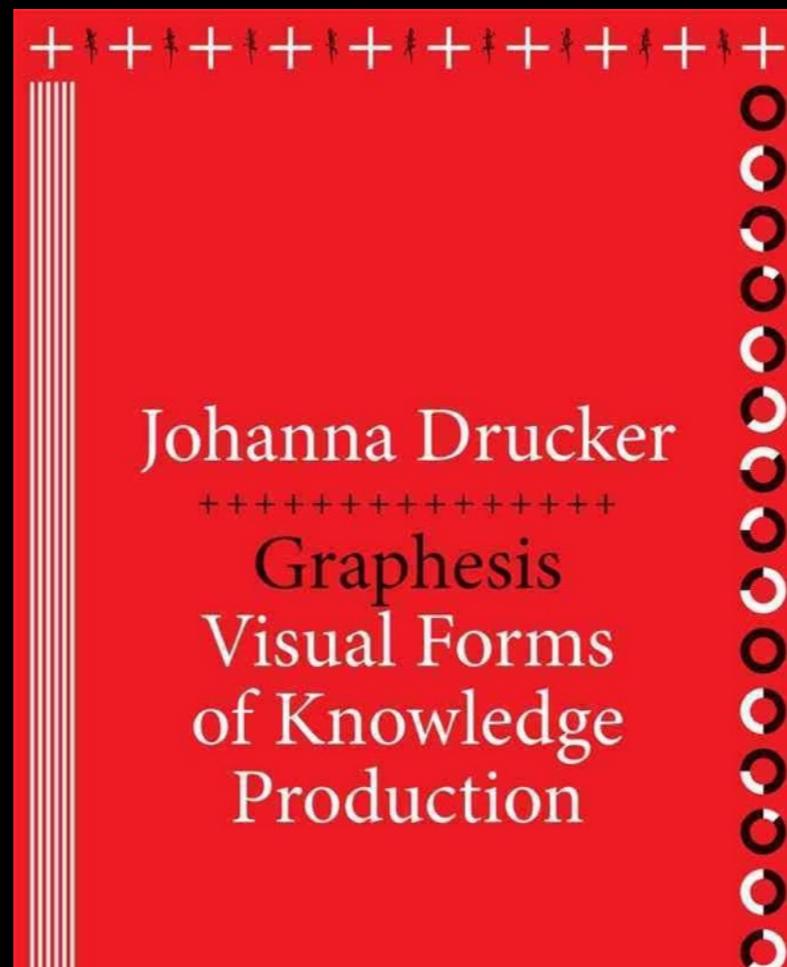


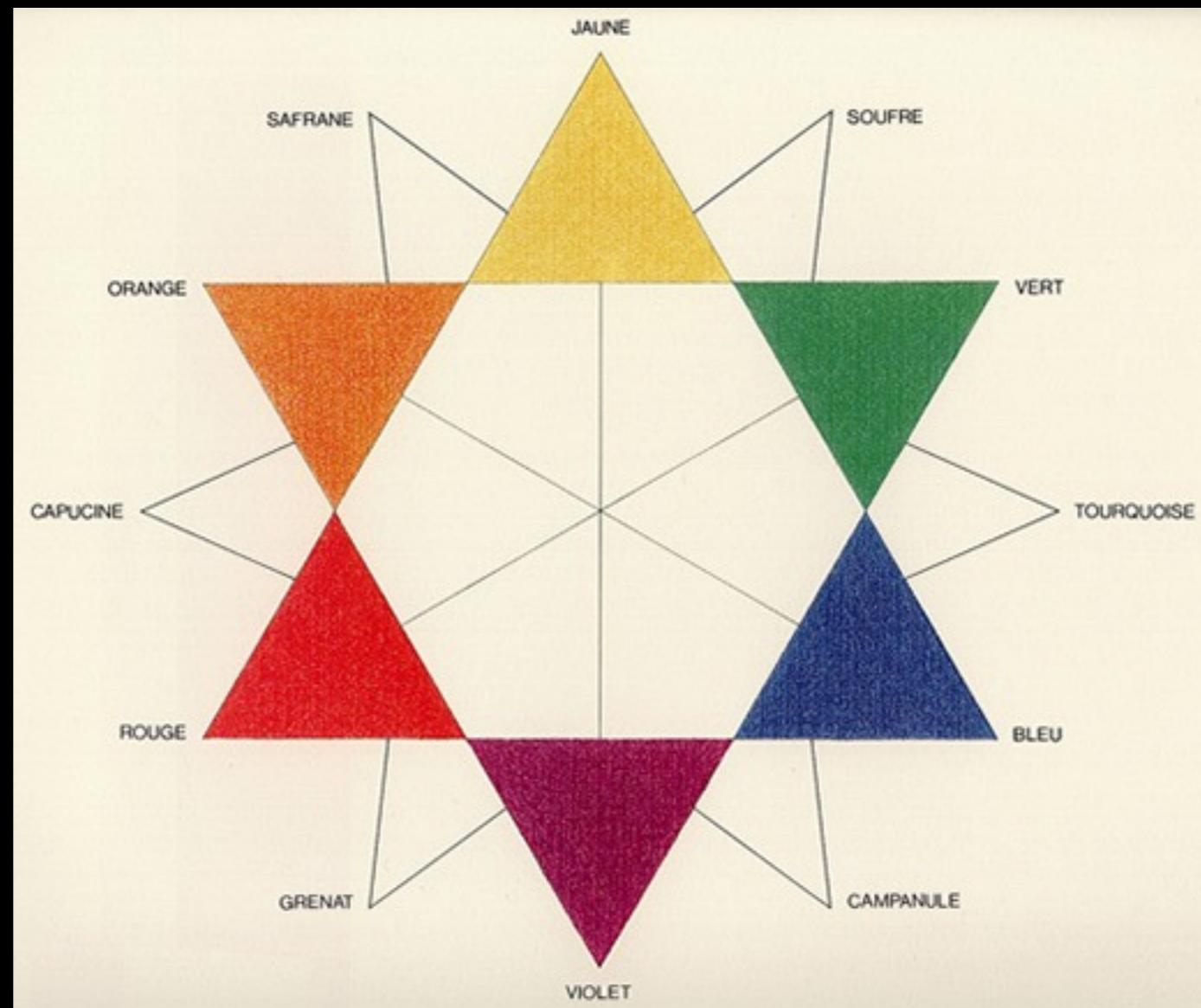
Graphesis

Visual Forms of Knowledge Production



Visual Epistemology

(knowing through vision)



Charles Blanc, Grammaire des arts décoratifs 1867

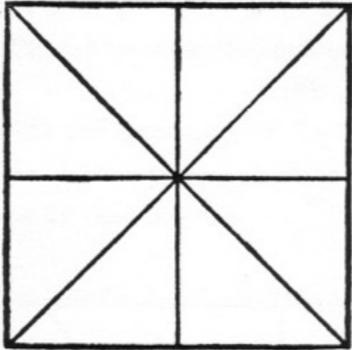


Fig. 95
Silent lyric
of the four elementary lines—
expression of rigidity.

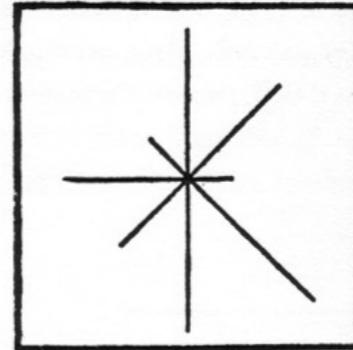


Fig. 96
Dramatization
of the same elements—
complex pulsating expression.

Use of the eccentric:

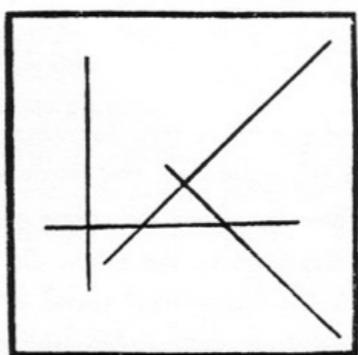


Fig. 97
Diagonals centered.
Horizontal-vertical acentric.
Diagonals in the greatest tension.
Balanced tensions of the
horizontal and vertical.

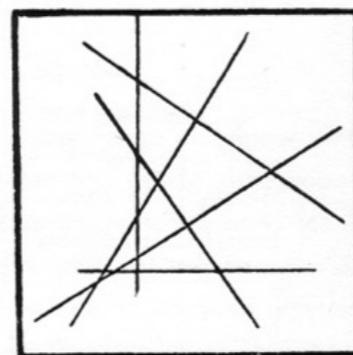
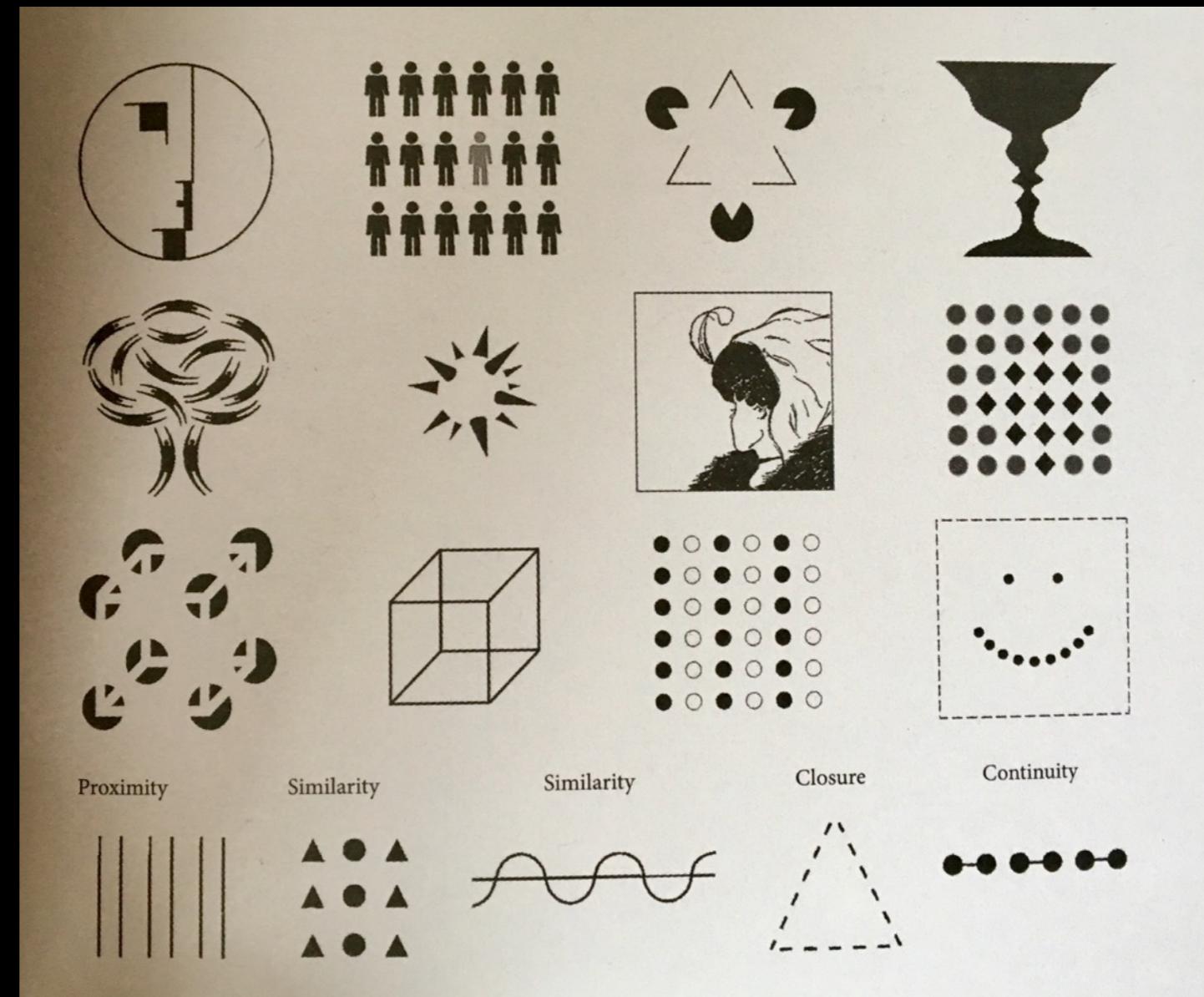


Fig. 98
Everything acentric.
Diagonals strengthened
through their repetition.
Restraint of the dramatic sound
at the point of contact above.

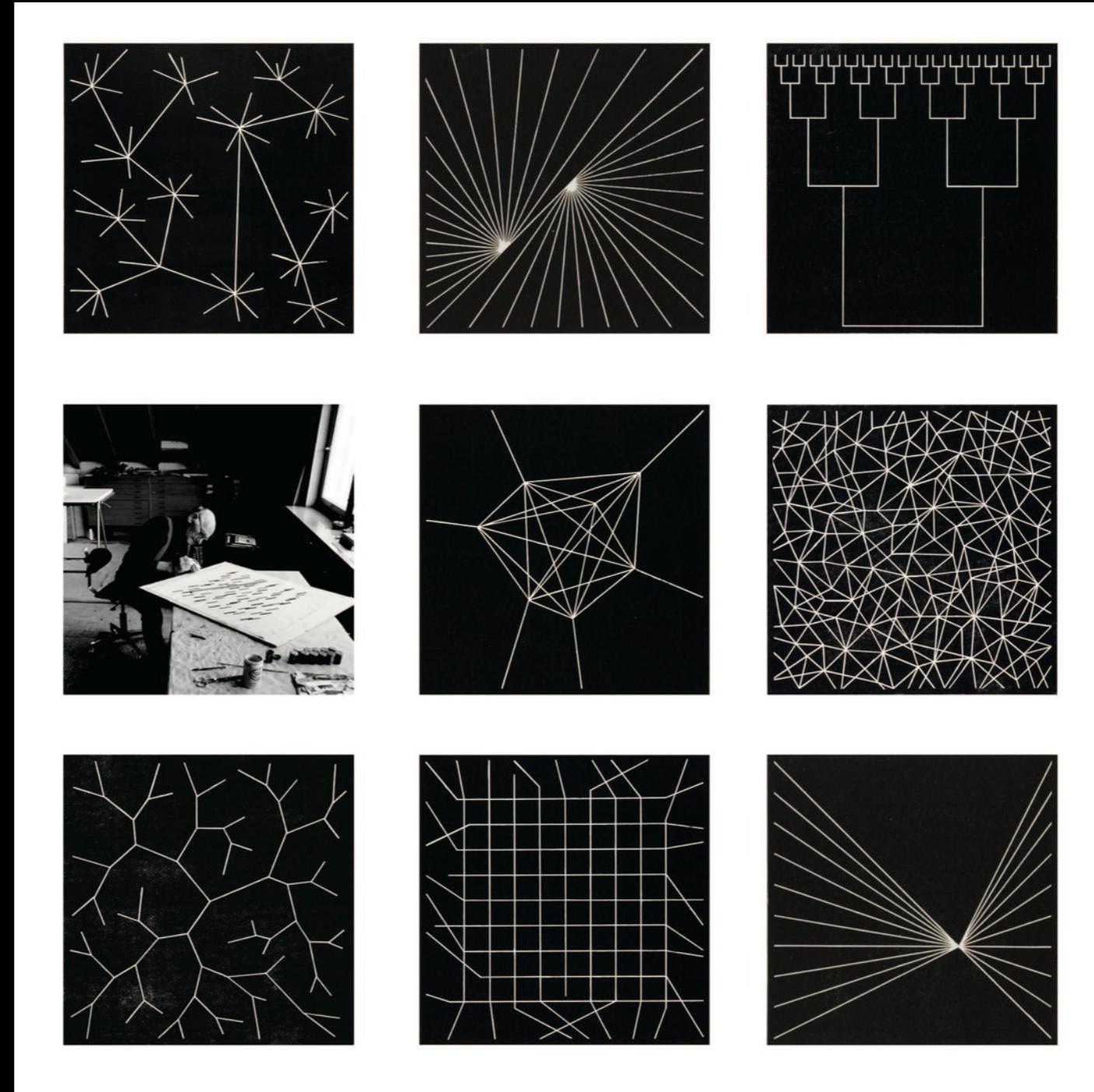
Wassily Kandinsky - Point and Line to Plane, 1926



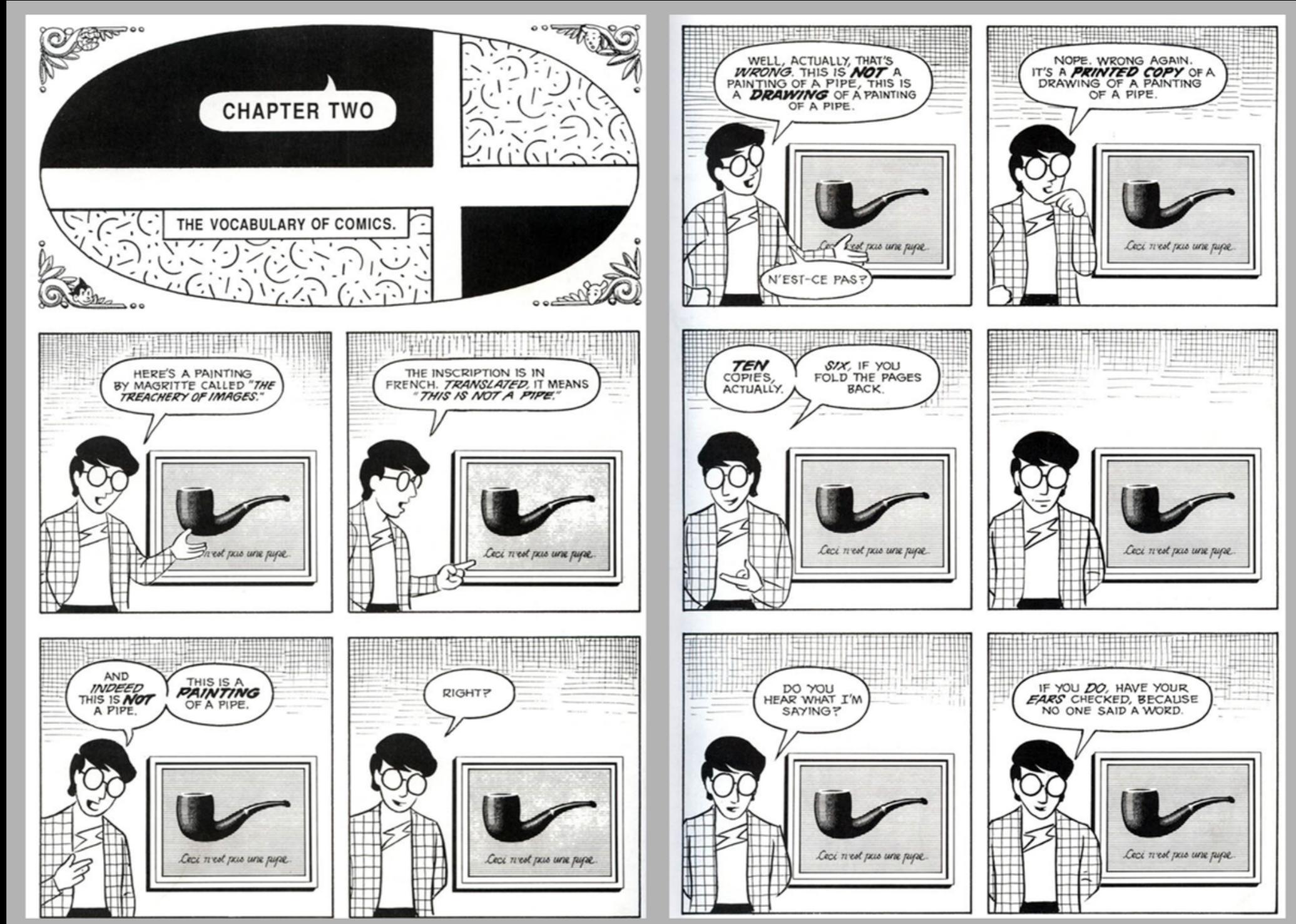
Gestalt Diagrams

	<i>Points</i>	<i>Lines</i>	<i>Areas</i>	<i>Best to show</i>
<i>Shape</i>		<i>possible, but too weird to show</i>	<i>cartogram</i>	<i>qualitative differences</i>
<i>Size</i>			<i>cartogram</i>	<i>quantitative differences</i>
<i>Color Hue</i>				<i>qualitative differences</i>
<i>Color Value</i>				<i>quantitative differences</i>
<i>Color Intensity</i>				<i>qualitative differences</i>
<i>Texture</i>				<i>qualitative & quantitative differences</i>

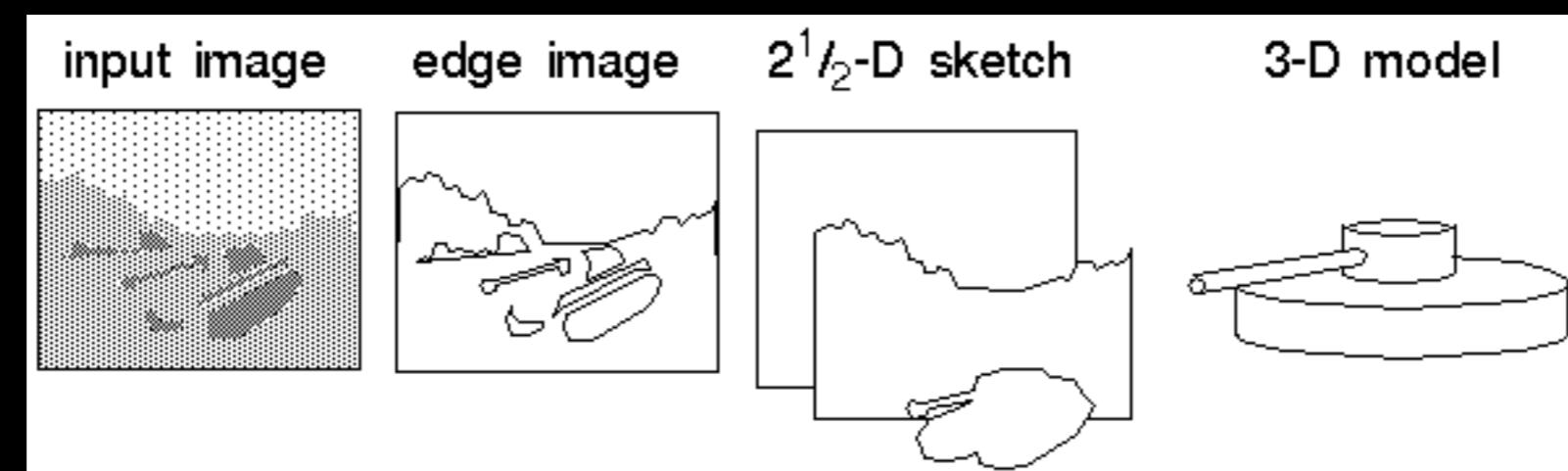
Semiology of Graphics and Graphic Variables for use in Cartography
by Jacques Bertin, 1967



Anton Stankowski, Visual Presentation of Invisible Process, 1967



Scott McCloud, Understanding Comics
(Visual narrative/ like film/ linear)



Forms of Visual Knowledge



Timekeeping

Relation

 $Before(i, j)$ $Meets(i, j)$ $Overlaps(i, j)$ $Starts(i, j)$ $During(i, j)$ $Finishes(i, j)$

Inverse

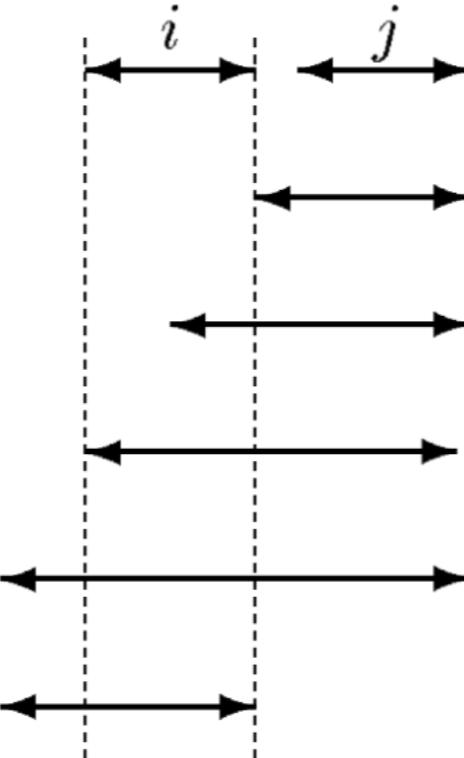
 $After(j, i)$ $MetBy(j, i)$ $OverlappedBy(j, i)$ $StartedBy(j, i)$ $Contains(j, i)$ $FinishedBy(j, i)$ 

Figure 4: The possible relations between time periods (equality not shown)

Actions and Events in Interval Temporal Logic
JAMES F. ALLEN GEORGE FERGUSON



Space-making

The Diseases and Casualties this Week,



A	Bortive	5
	Aged	43
	Ague	2
	Apoplexic	1
	Bleeding	2
	Burnt in his Bed by a Candle at St. Giles Cripplegate	1
	Canker	1
	Childbed	42
	Chrisomes	18
	Consumption	134
	Convulsion	64
	Cough	2
	Dropie	33
	Feaver	309
	Flox and Small-pox	5
	Frighted	3
	Gowt	1
	Grief	3
	Griping in the Guts	51
	Jaundies	5

Males — 95	Males — 4095
Christned Females — 81	Buried Females — 4202
In all — 176	In all — 8297

Plague — 7165

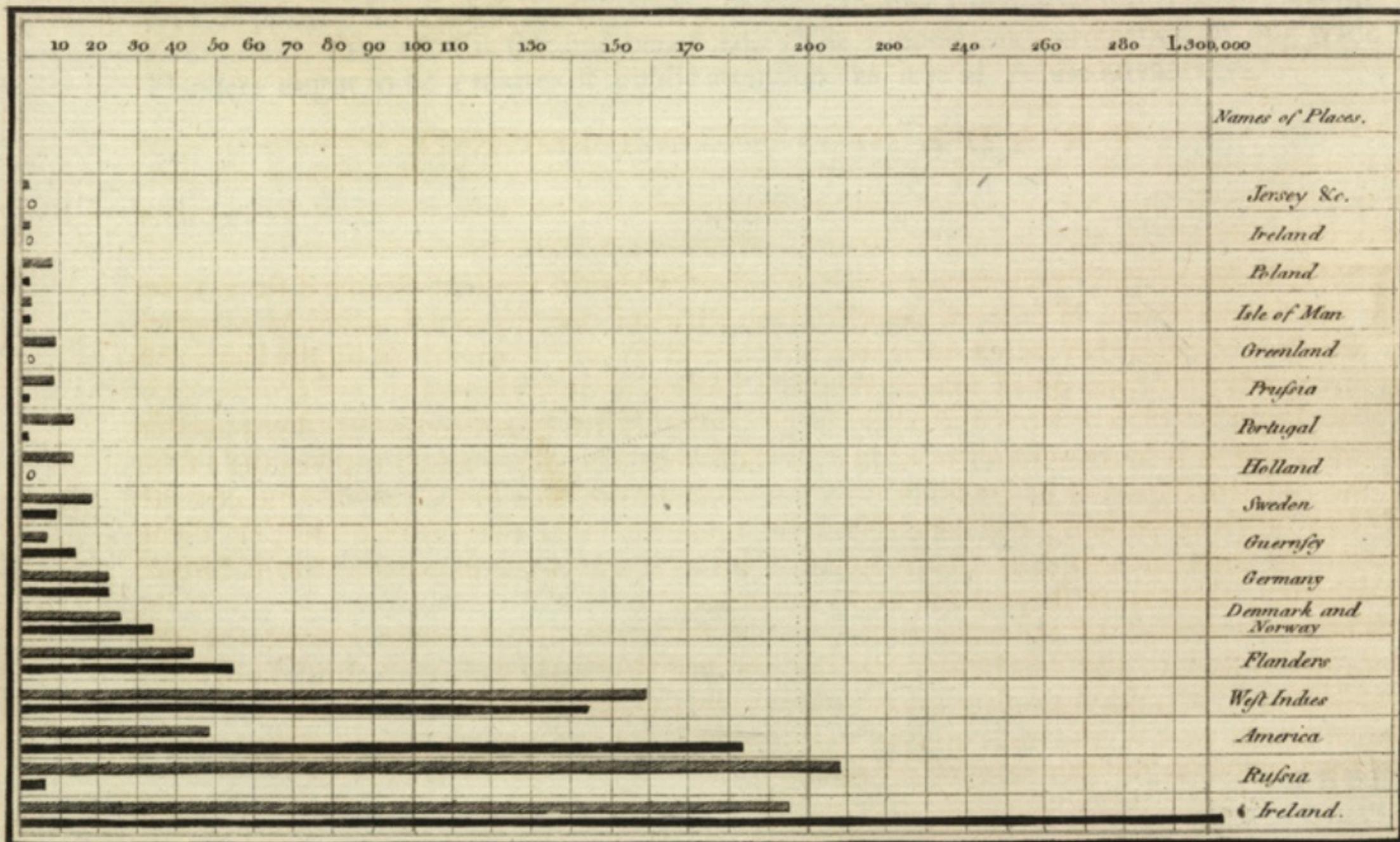
Increased in the Burials this Week — 607

Parishes clear of the Plague — 4 Parishes Infected — 126

The Asize of Bread set forsh by Order of the Lord Maior and Court of Aldermen.
A penny Wheaten Loaf to contain Nine Ounces and a half, and three
half-penny White Loaves the like weight.

Administration and Record-Keeping

Exports and Imports of SCOTLAND to and from different parts for one Year from Christmas 1780 to Christmas 1781.

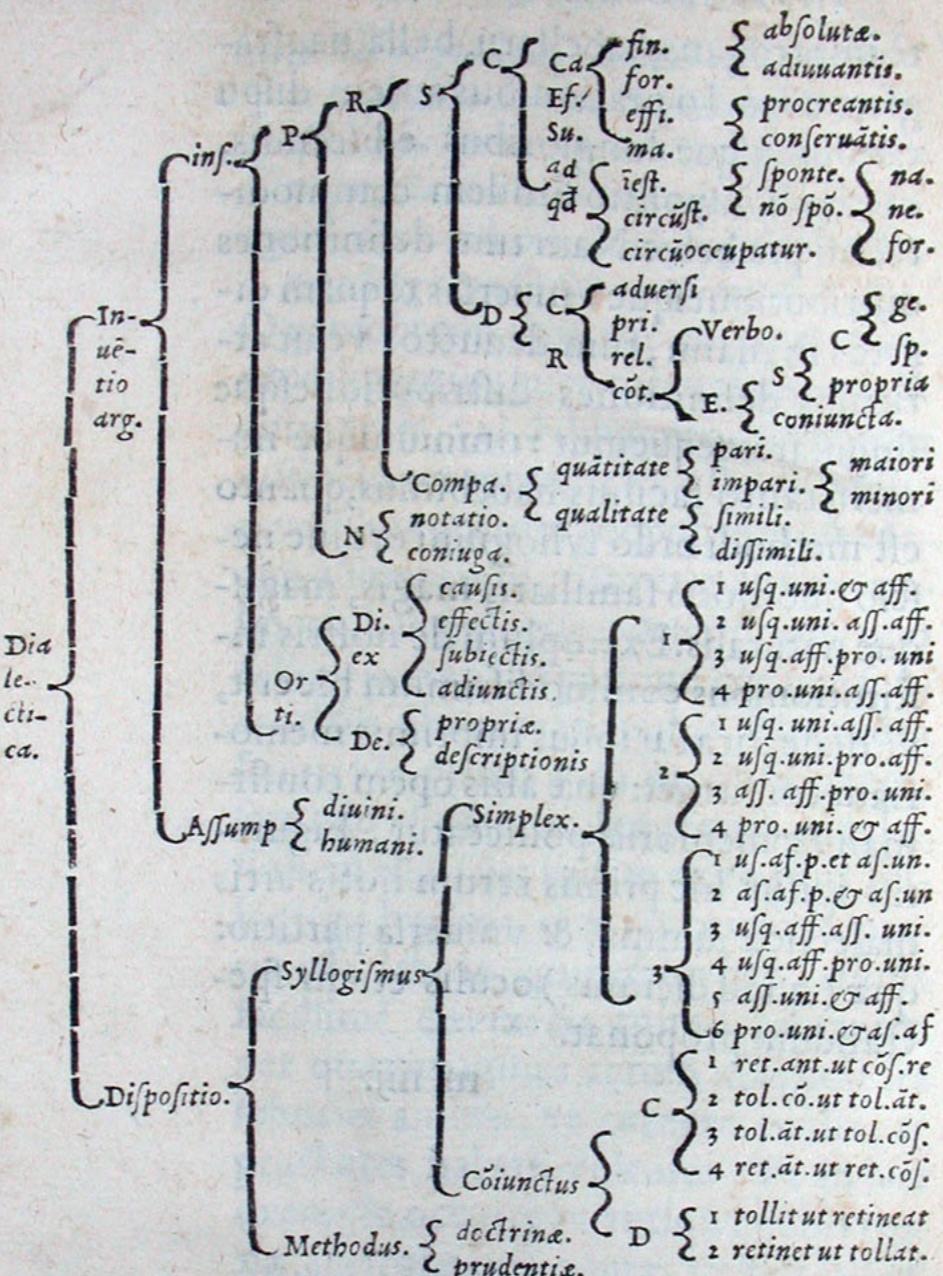


The Upright divisions are Ten Thousand Pounds each. The Black Lines are Exports the Ribbed-lines Imports.

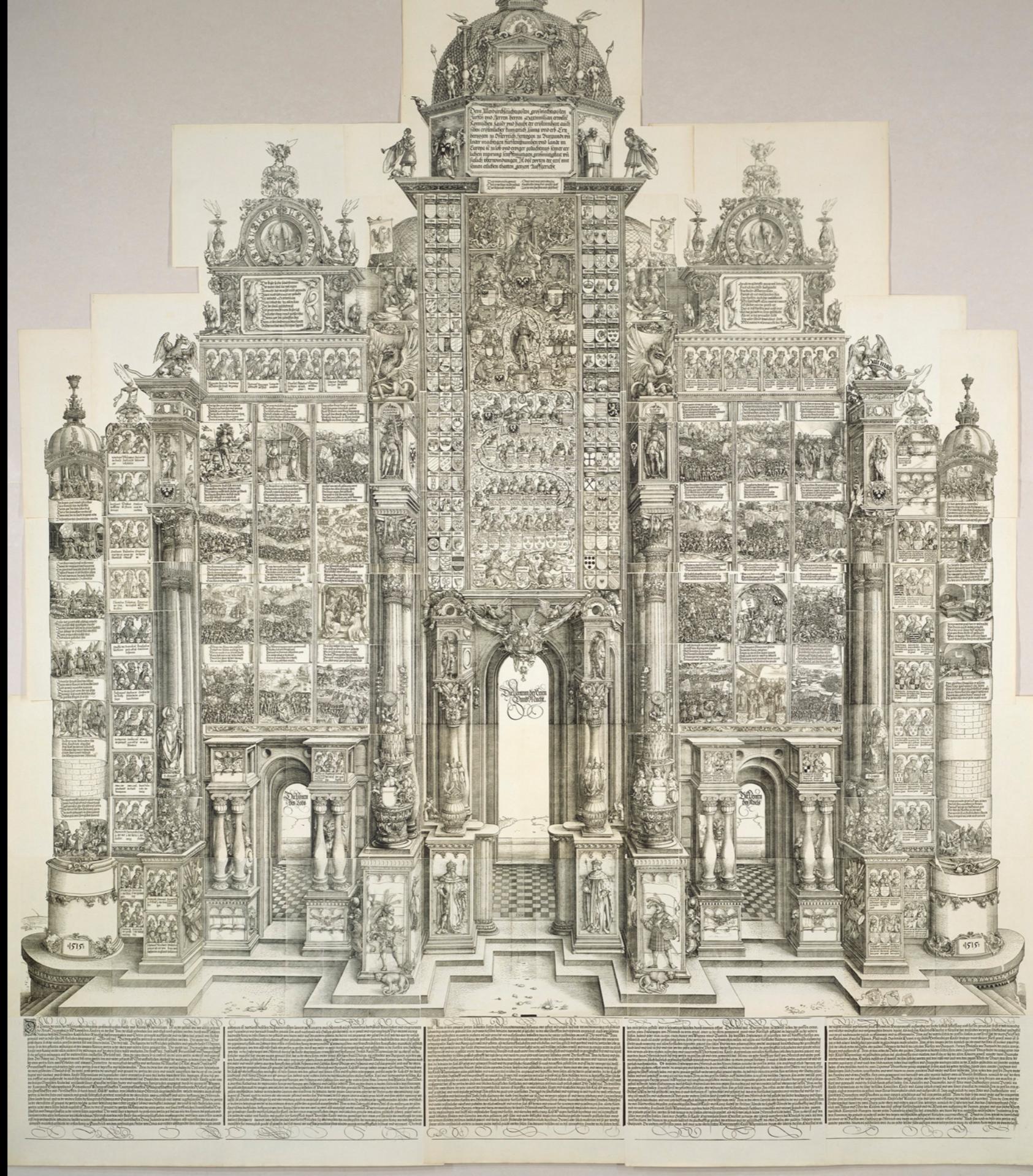
William Playfair, 1780

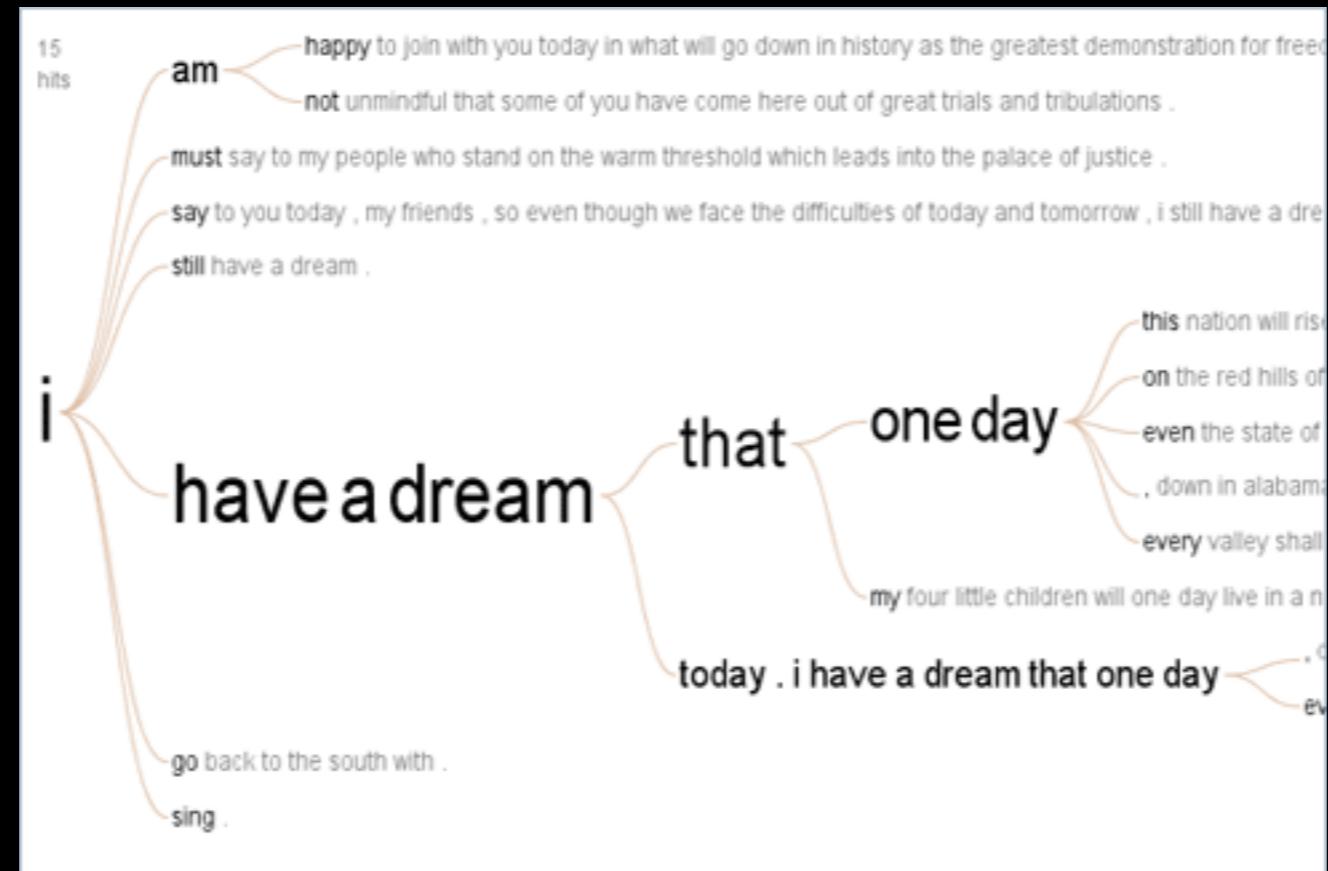


Tree Diagrams

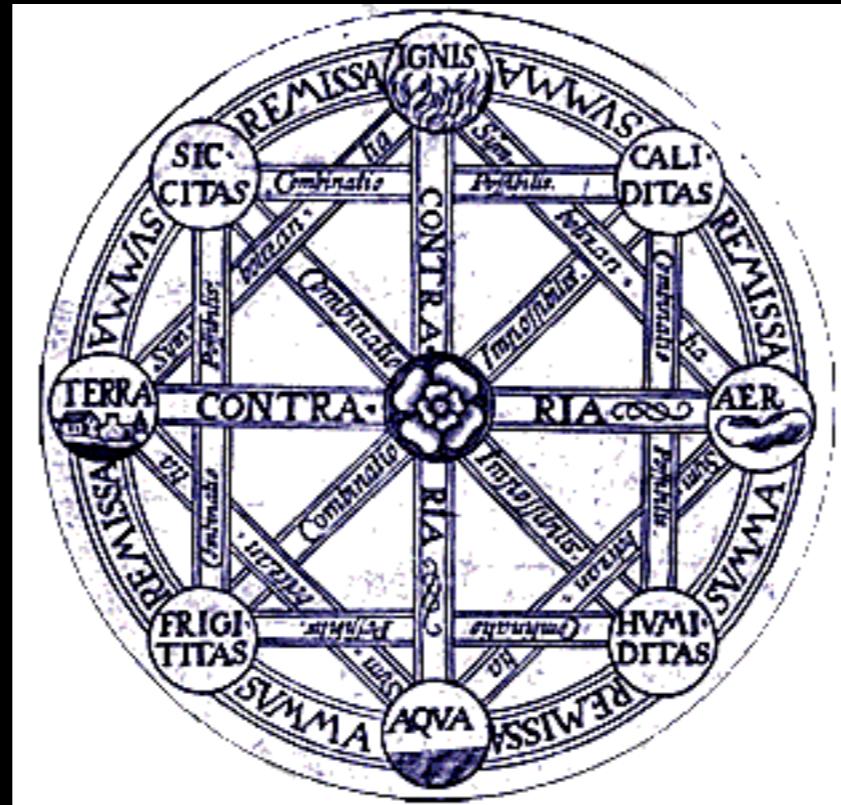


Tree Diagrams





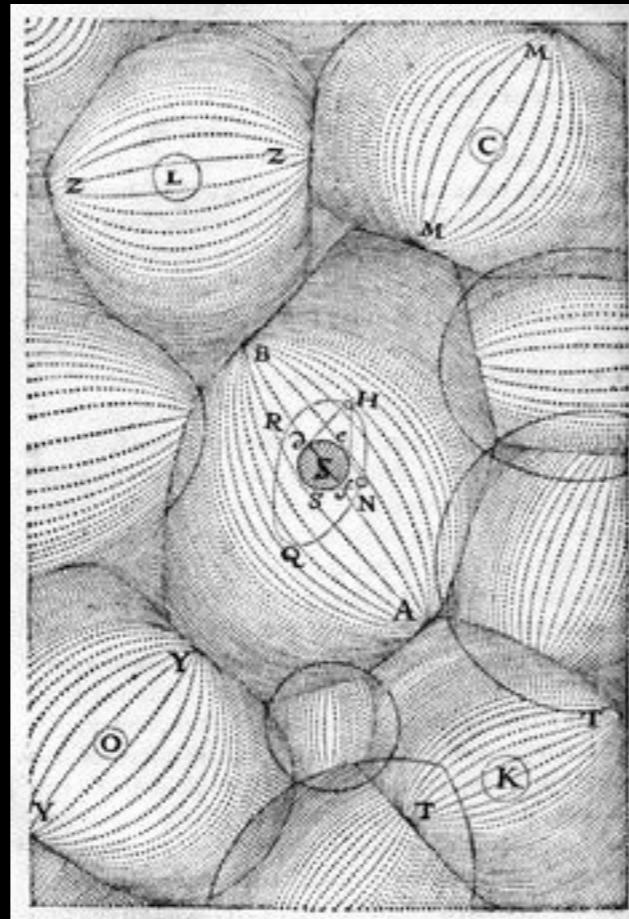
Tree Diagrams



Knowledge Generators
Leibniz, 1666



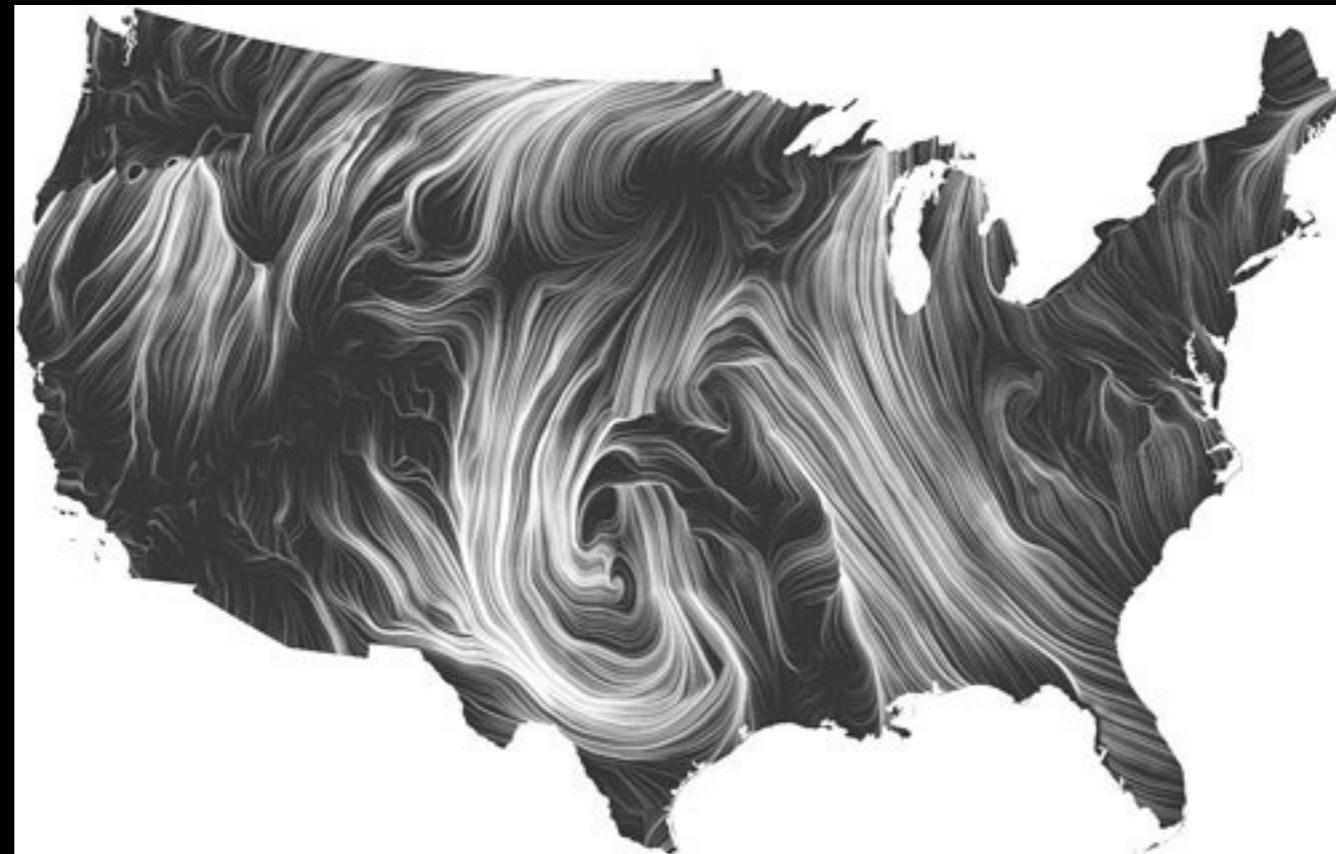
Knowledge Generators



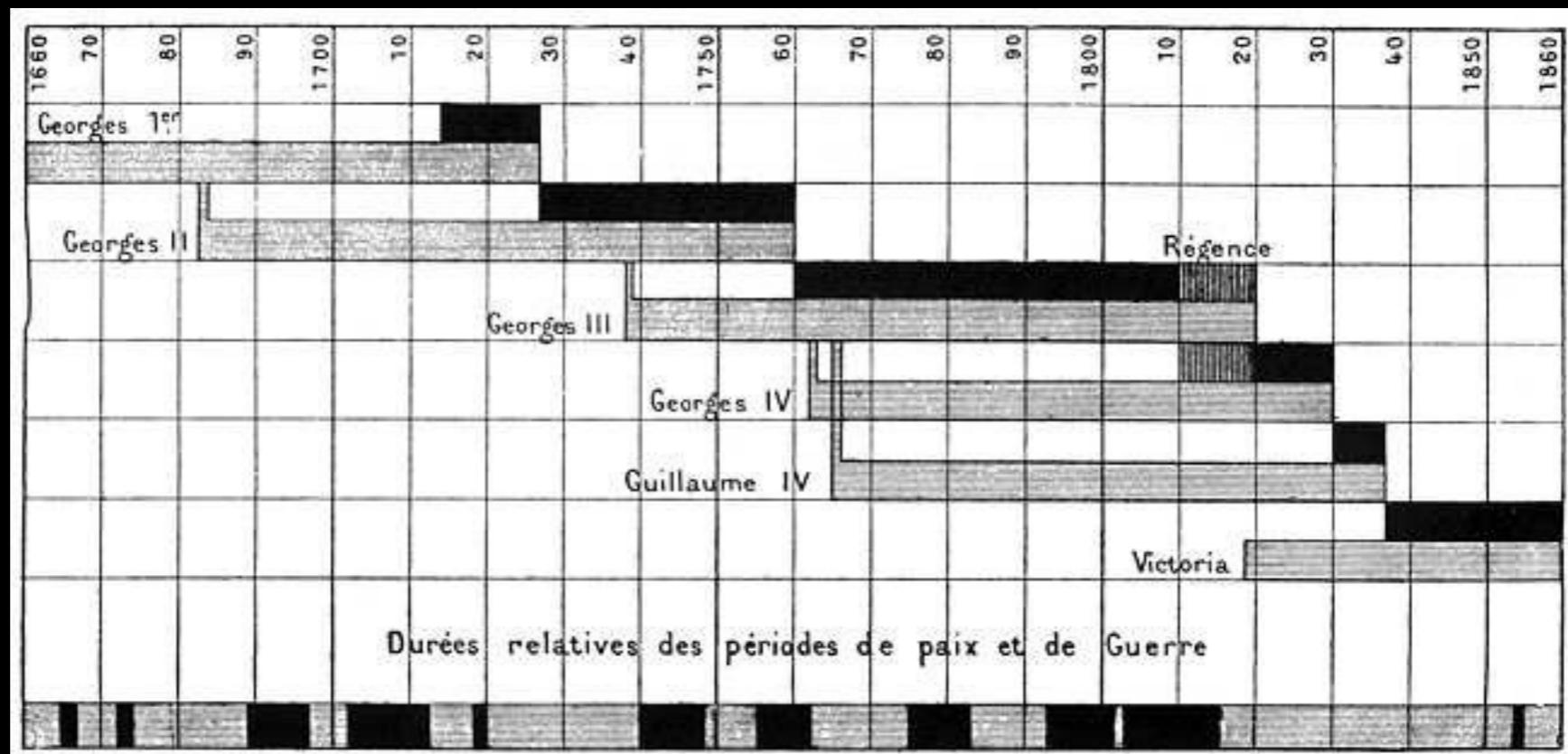
Dynamic Systems Descartes



Edmund Halley, 1686

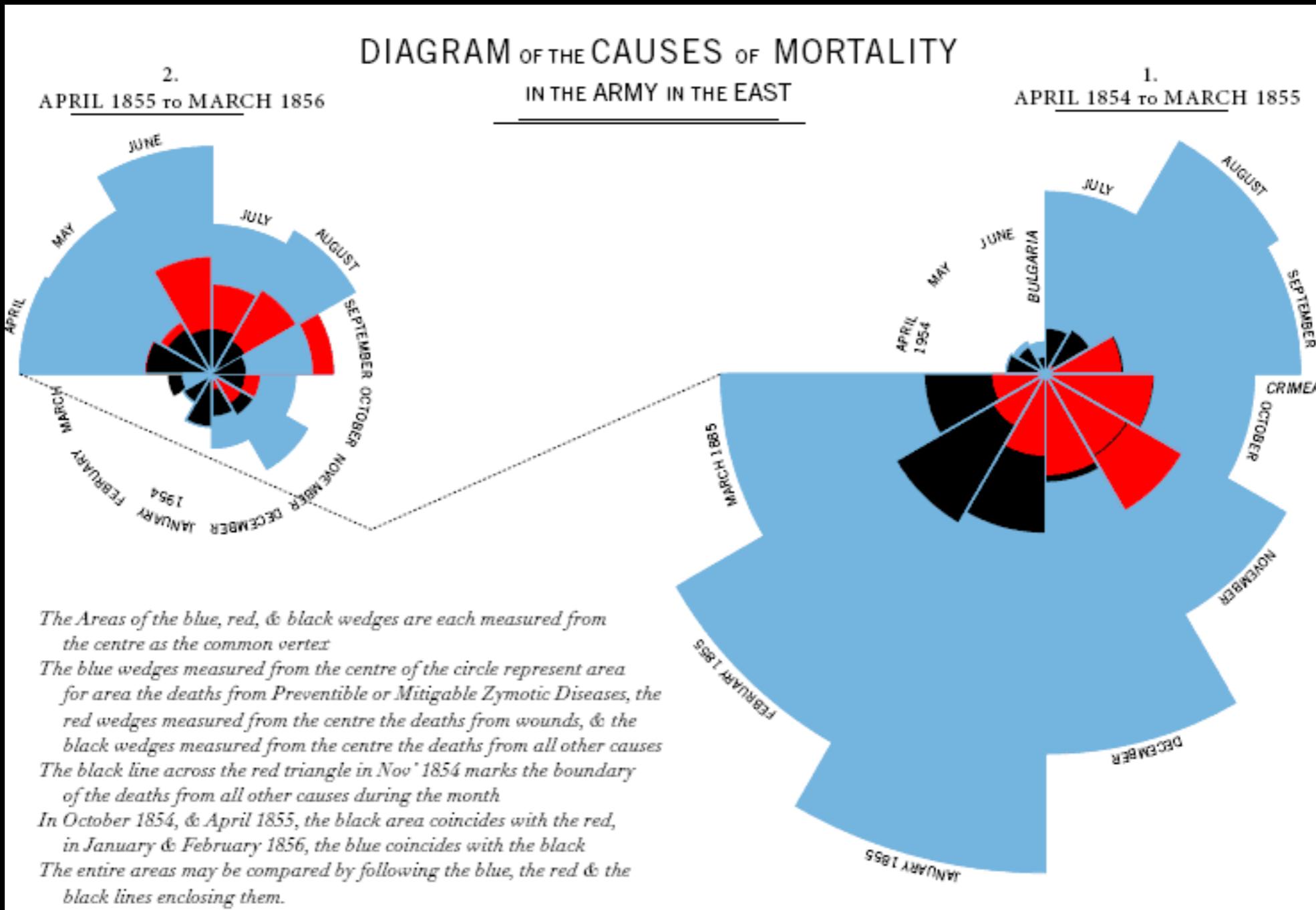


Martin Wattenberg and Fernanda Viégas' JavaScript update of Edmond Halley's wind map. Dynamic version here: <http://hint.fm/wind/>

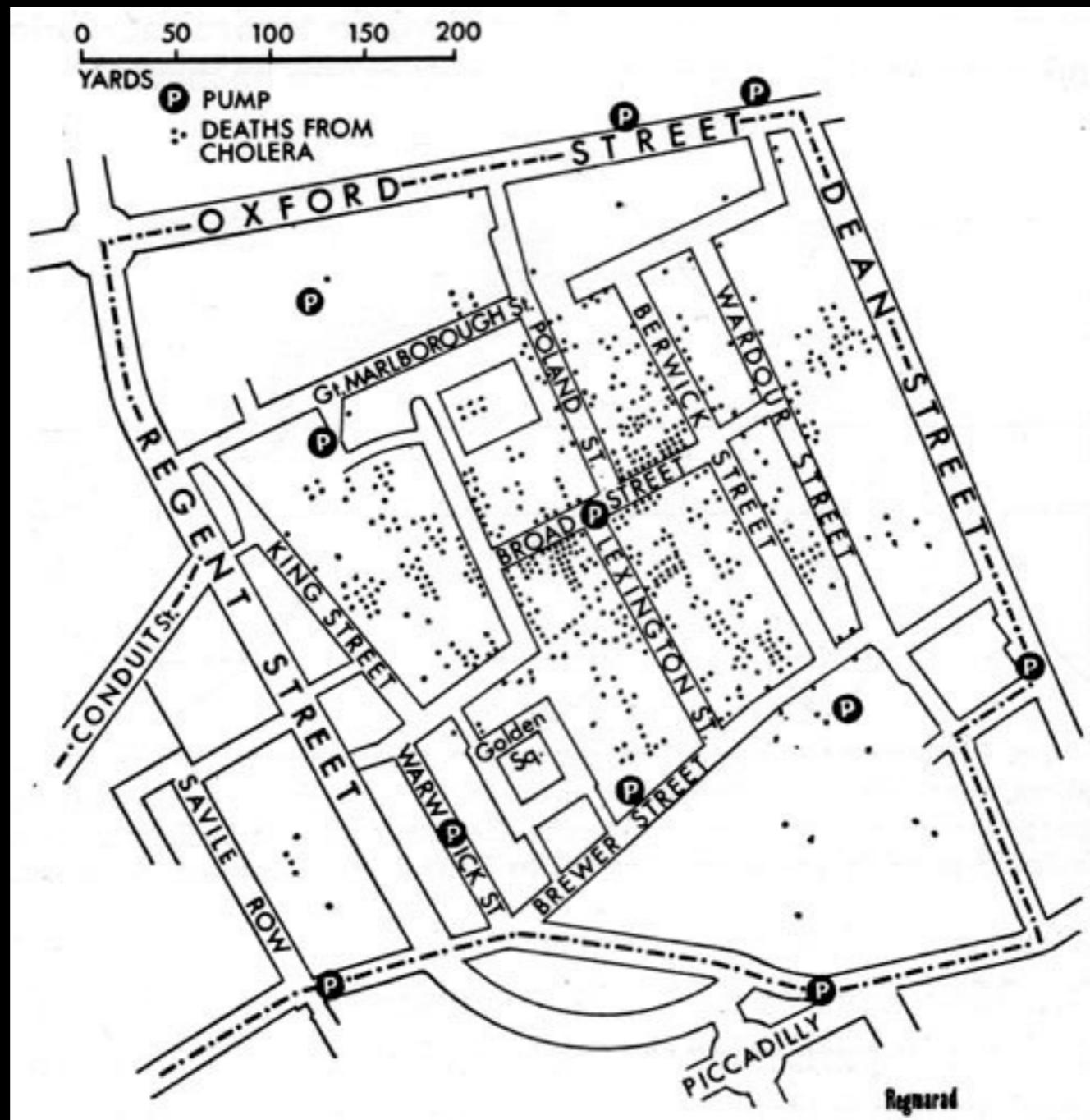


Etienne-Jules Marey, timeline of the reigns of the English monarchs (1885)

Data Humanism



The causes of mortality in the army in the east by Florence Nightingale.



John Snow, 1854 cholera outbreak in London's Broad Street region

Data Vis

some current examples

Fathom (Ben Fry)

<http://povertytracker.robinhood.org/#fall2016>

<http://www.noceilings.org/>

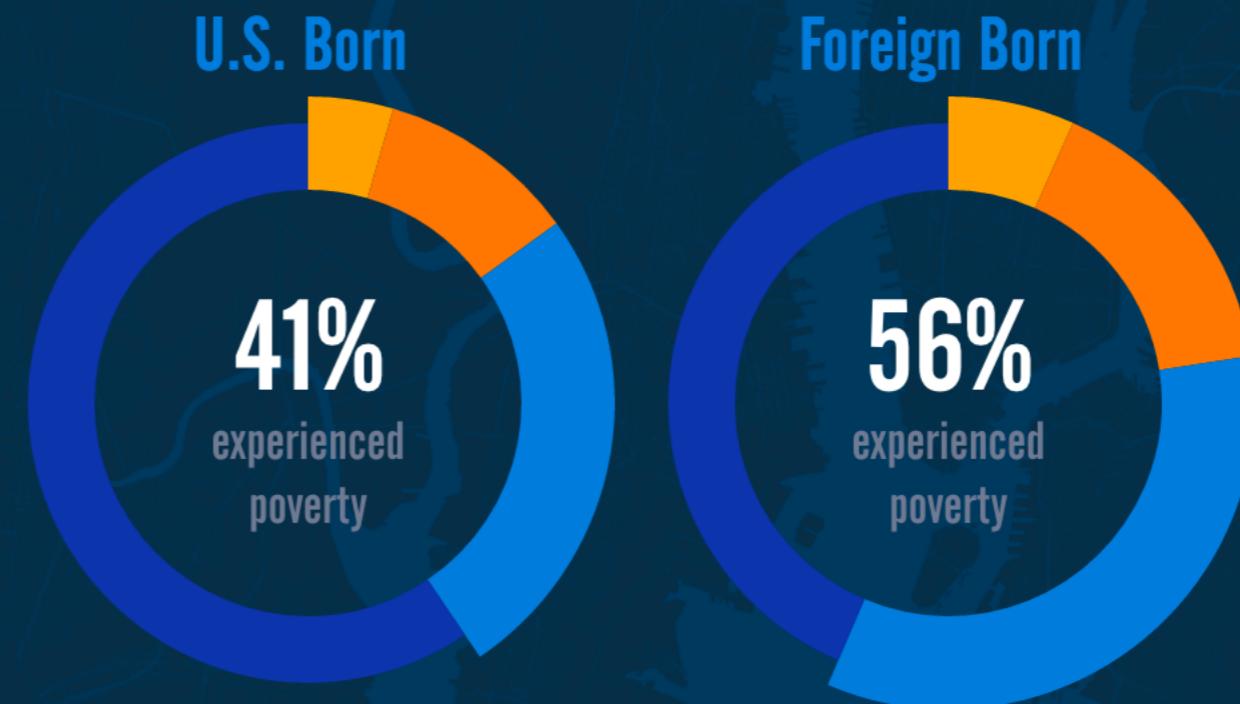
<http://www.nationalgeographic.com/what-the-world-eats/>

Foreign-born New Yorkers were more often in poverty than those born in the U.S.

Persistence of poverty

While annual snapshots suggest that only a minority of New Yorkers experience individual disadvantages, the Poverty Tracker's multi-year study reveals that a much larger number of New Yorkers ever experience poverty or other disadvantages.

Persistence of hardship

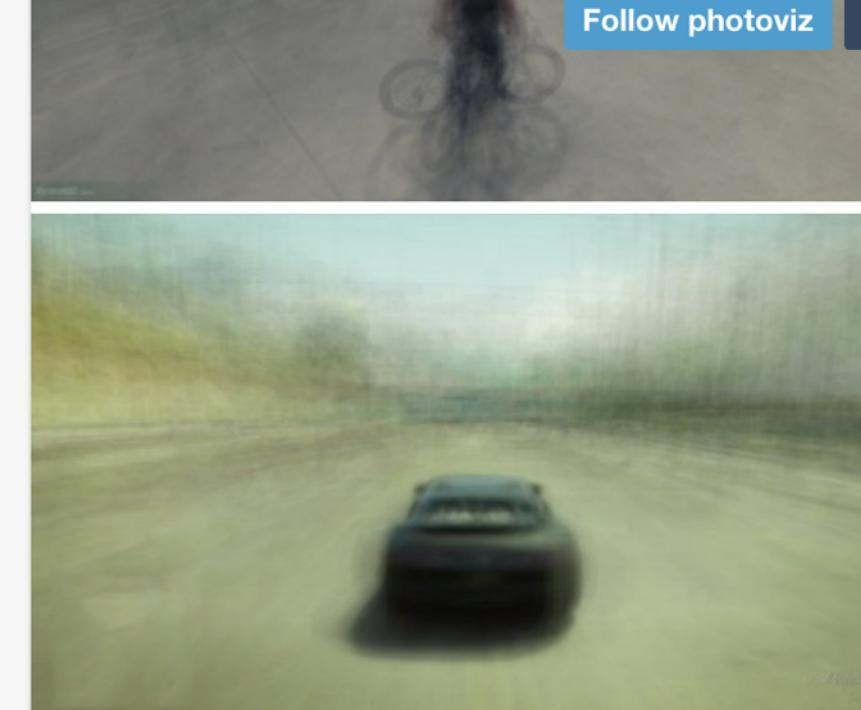
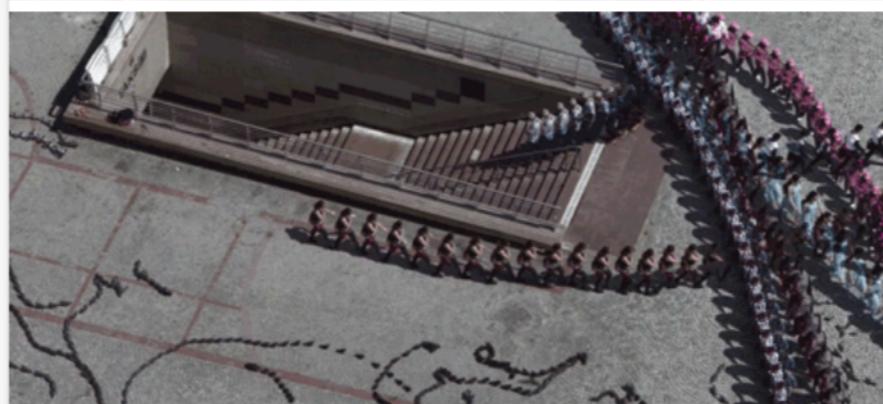


Nicolas Felton

<http://photoviz.tumblr.com/>

<http://feltron.com/>

<http://feltron.com/PhotoViz.html>

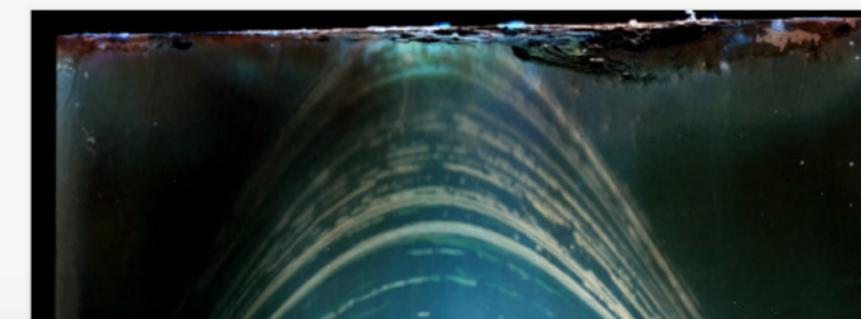


Claire Hentschker - Averages from videos of Grand Theft Auto

#photoviz

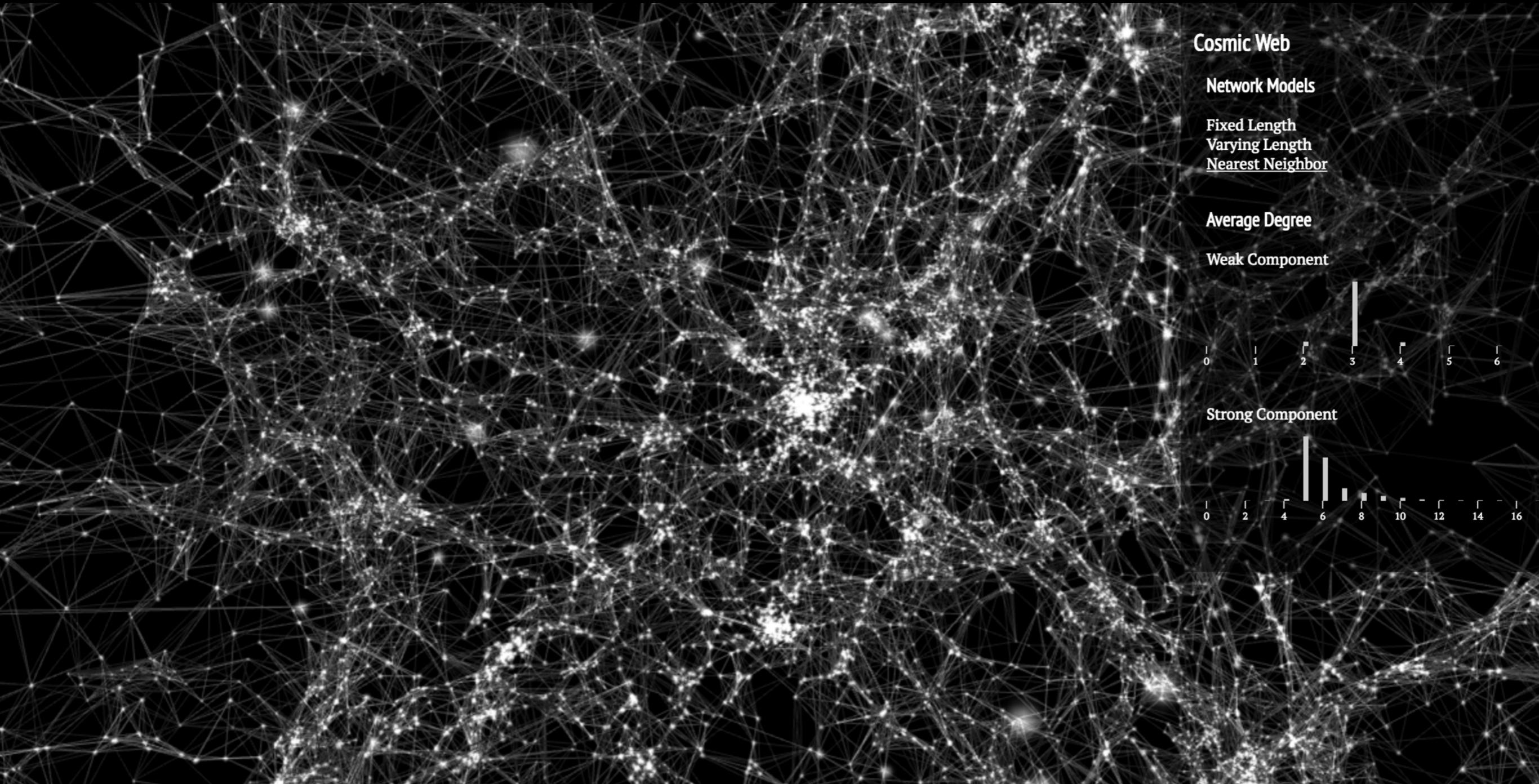


Mar 26, 2011



Kim Albrecht

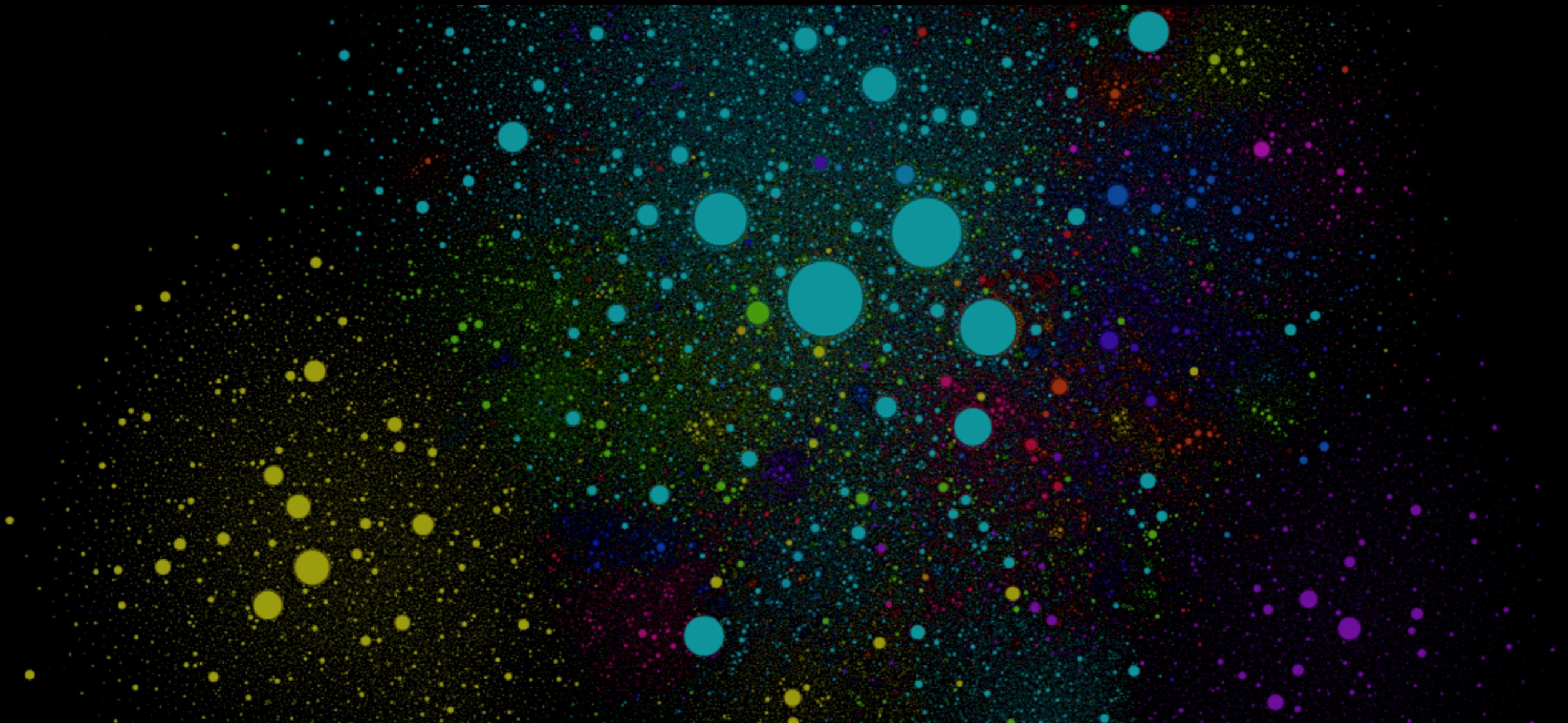
<http://kimalbrecht.com/project/cosmic-web/>



Like Looking At Stars

<http://internet-map.net/>

<http://www.aaronkoblin.com/project/flight-patterns/>

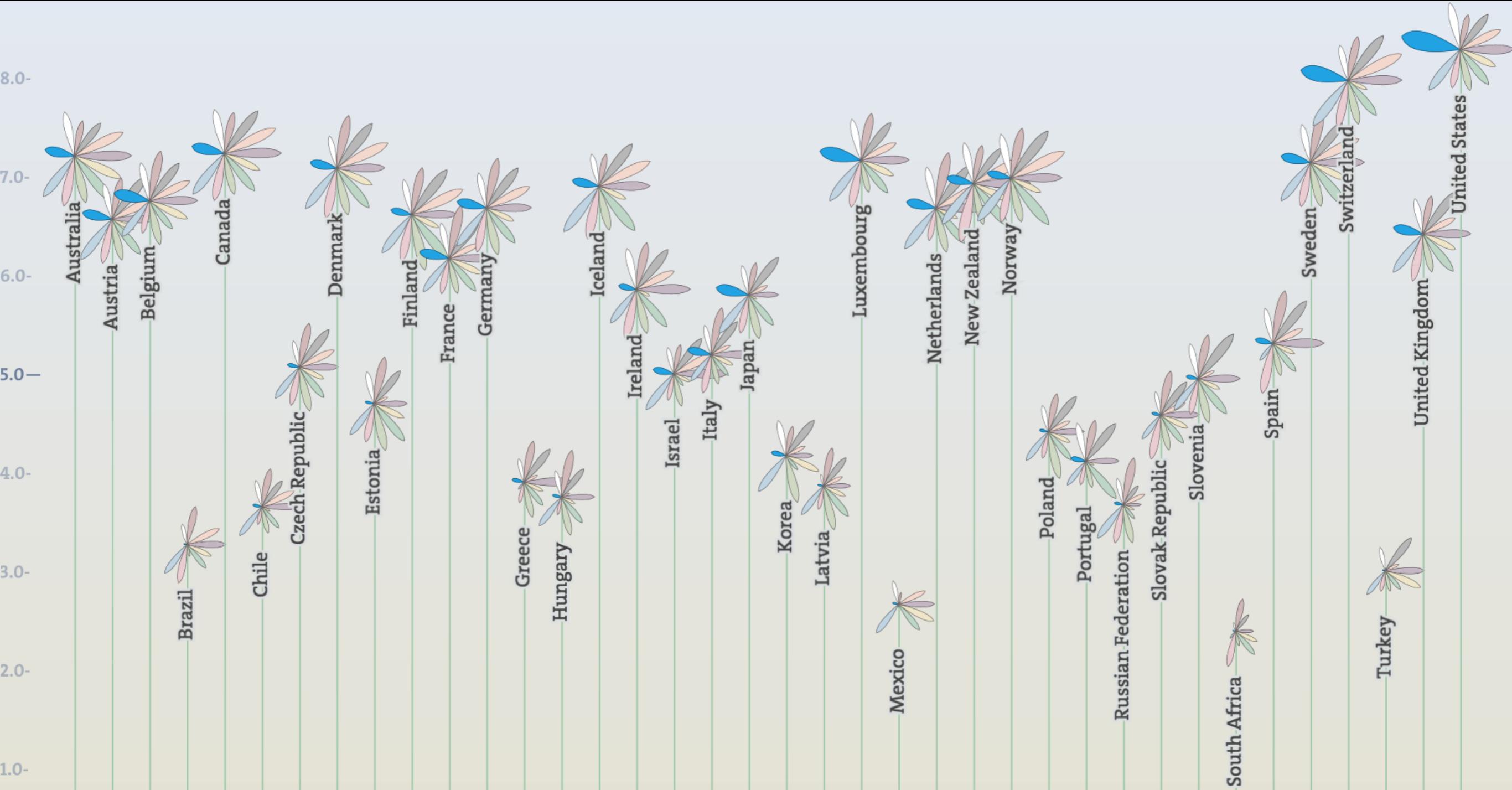


Moritz Stefaner

<http://truth-and-beauty.net/projects/the-rhythm-of-food>

<http://www.oecdbetterlifeindex.org/>

<http://selfiecity.net/>



Wattenberg & Viegas

<http://hint.fm/seer/#left=i%20am&right=are%20you>

<http://hint.fm/>



Music

Alexander Chen (<http://www.chenalexander.com/>)

<https://vimeo.com/31179423>

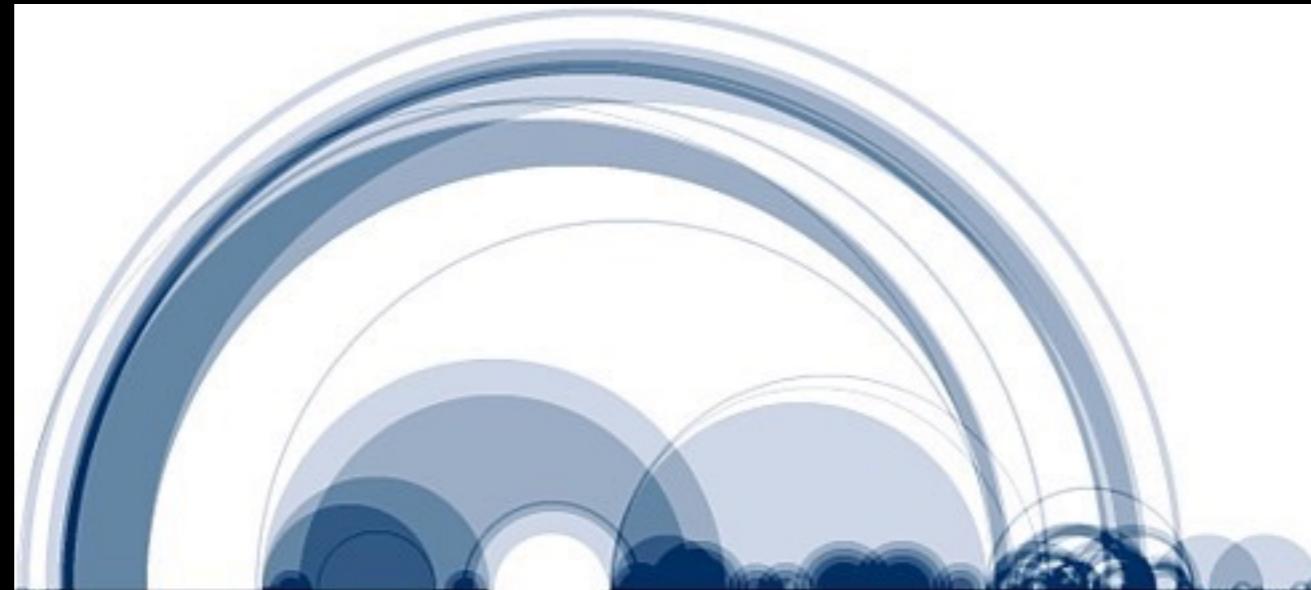
[https://www.youtube.com/watch?
v=9w0K4UM6Epl&feature=youtu.be&list=PLl0i0e9xf0kkvL9CaBaL5-
tZfBRaHTdW](https://www.youtube.com/watch?v=9w0K4UM6Epl&feature=youtu.be&list=PLl0i0e9xf0kkvL9CaBaL5-tZfBRaHTdW)

Others

<http://www.bewitched.com/song.html>

<https://music-timeline.appspot.com/>

<https://www.concerthotels.com/100-years-of-rock/>



Journalism

<https://www.theatlantic.com/video/index/404890/prison-inherited-trait/>

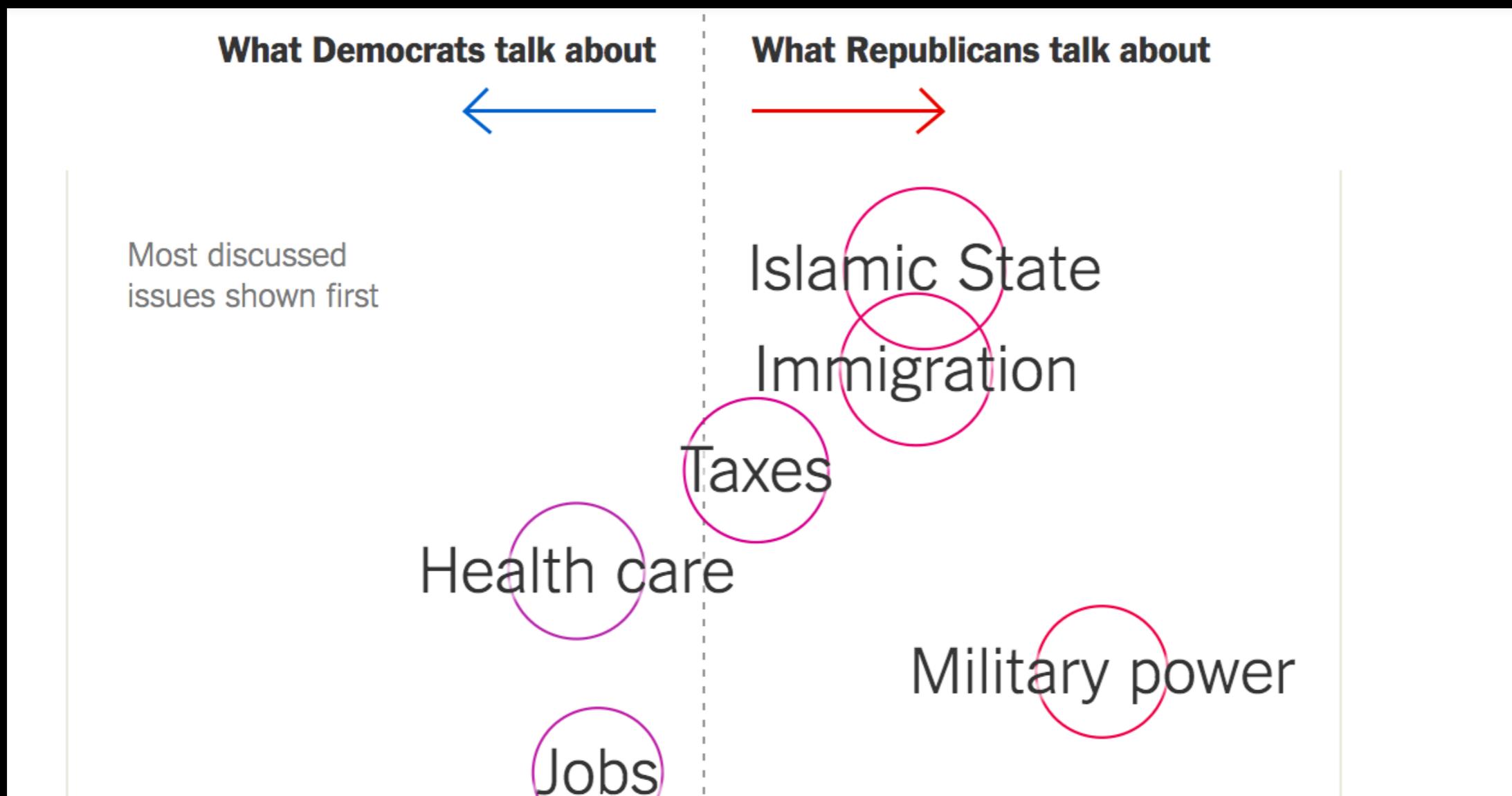
<https://www.nytimes.com/interactive/2016/07/12/us/looking-for-accountability-in-police-involved-deaths-of-blacks.html>

<https://www.washingtonpost.com/graphics/national/how-diverse-is-america/>

<https://www.nytimes.com/interactive/2016/12/28/us/year-in-interactive-graphics.html>

<https://www.nytimes.com/interactive/2016/09/08/us/us-murder-rates.html>

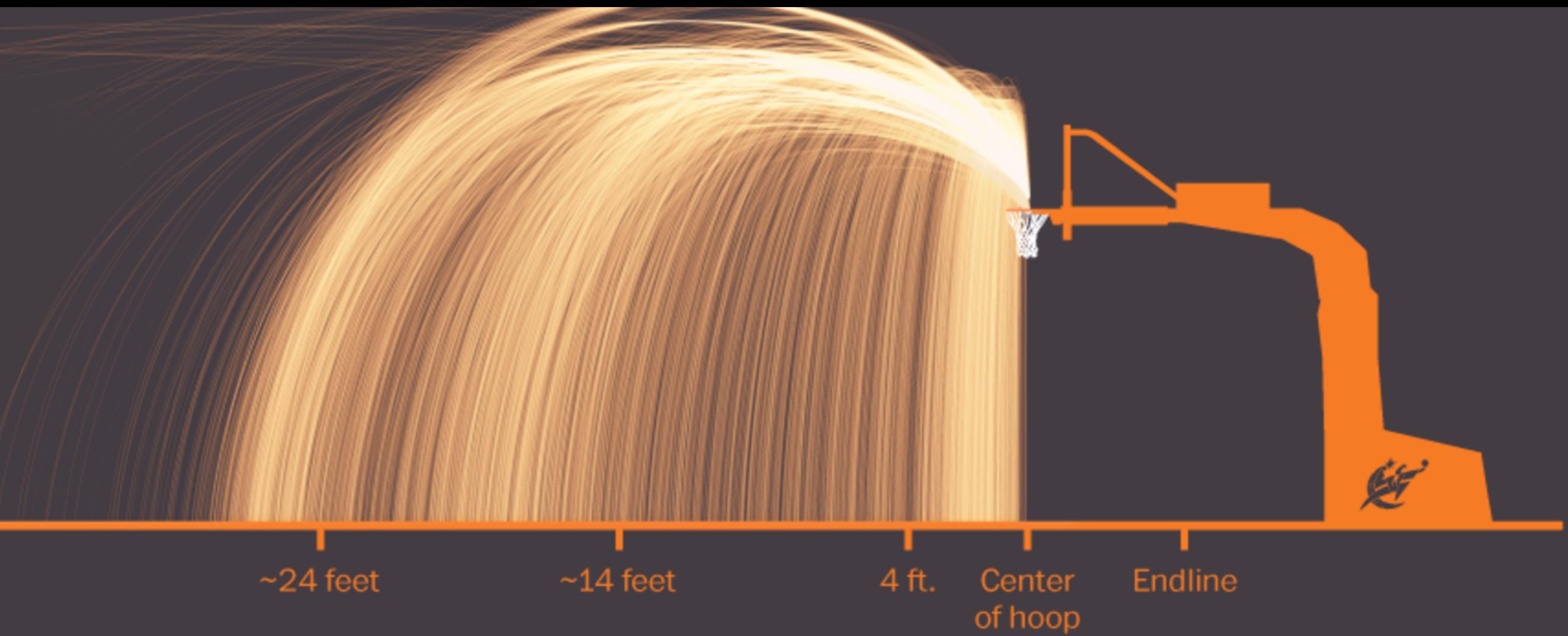
<https://www.nytimes.com/interactive/2016/03/11/us/elections/what-parties-debate-or-ignore.html>



Basketball

<http://www.washingtonpost.com/wp-srv/special/sports/wizards-shooting-stars/>

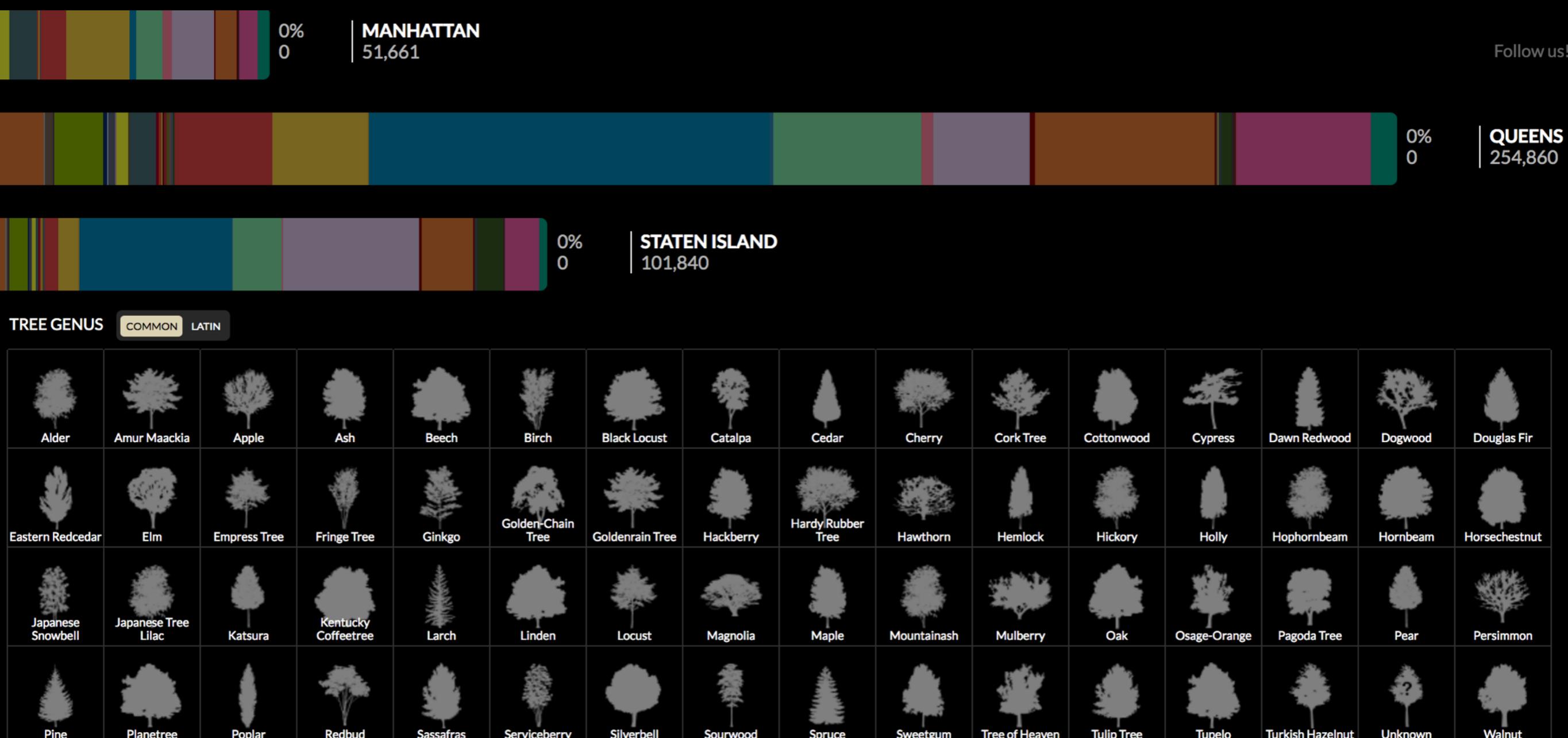
<https://www.nytimes.com/interactive/2016/04/16/upshot/stephen-curry-golden-state-warriors-3-pointers.html>



Environment

<https://www.theguardian.com/environment/ng-interactive/2014/dec/01/carbon-emissions-past-present-and-future-interactive>

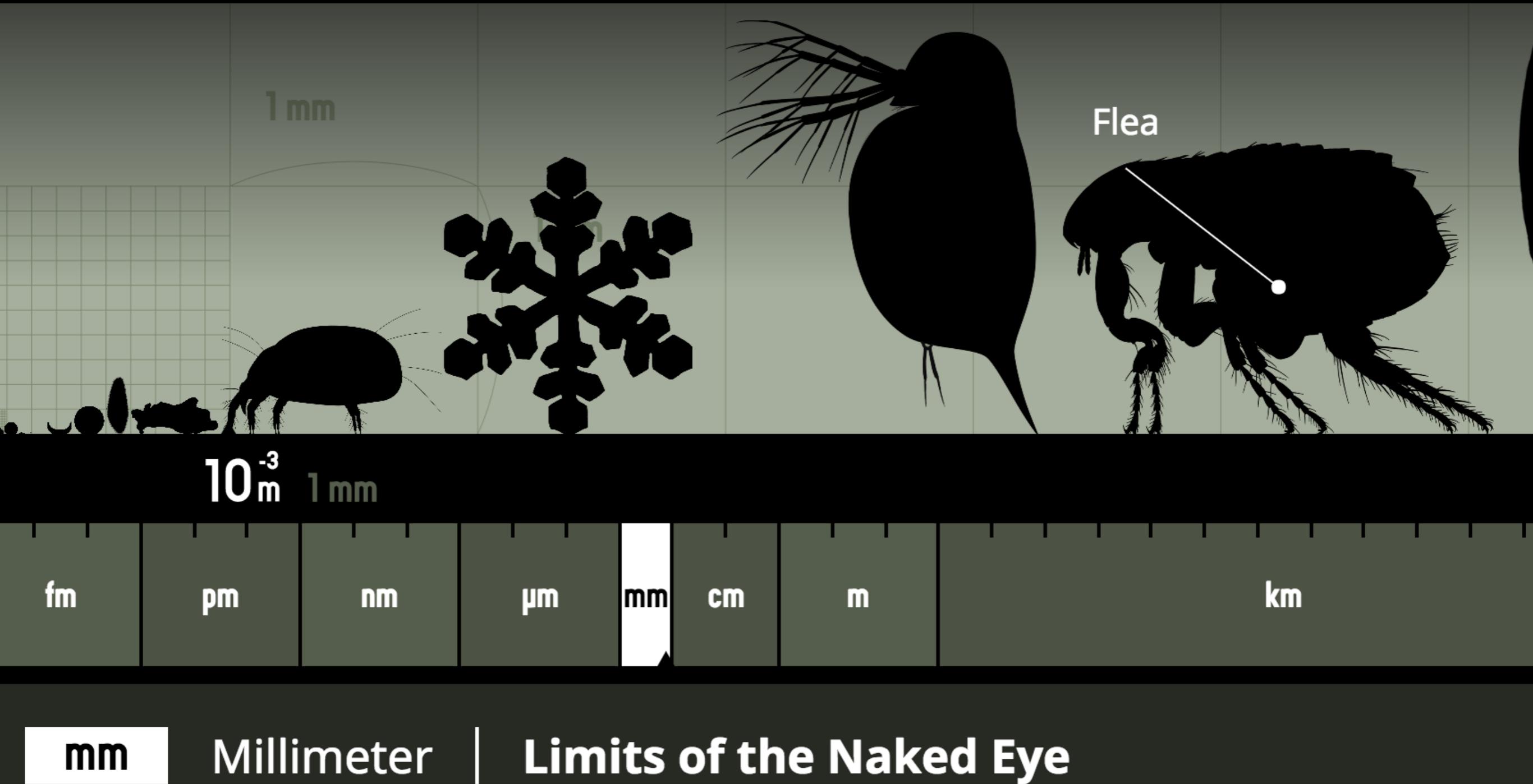
Trees (NYC open data: <https://opendata.cityofnewyork.us/>)
<https://www.cloudred.com/labprojects/nyctrees/>



Depth/Scale

<http://apps.washingtonpost.com/g/page/world/the-depth-of-the-problem/931/>

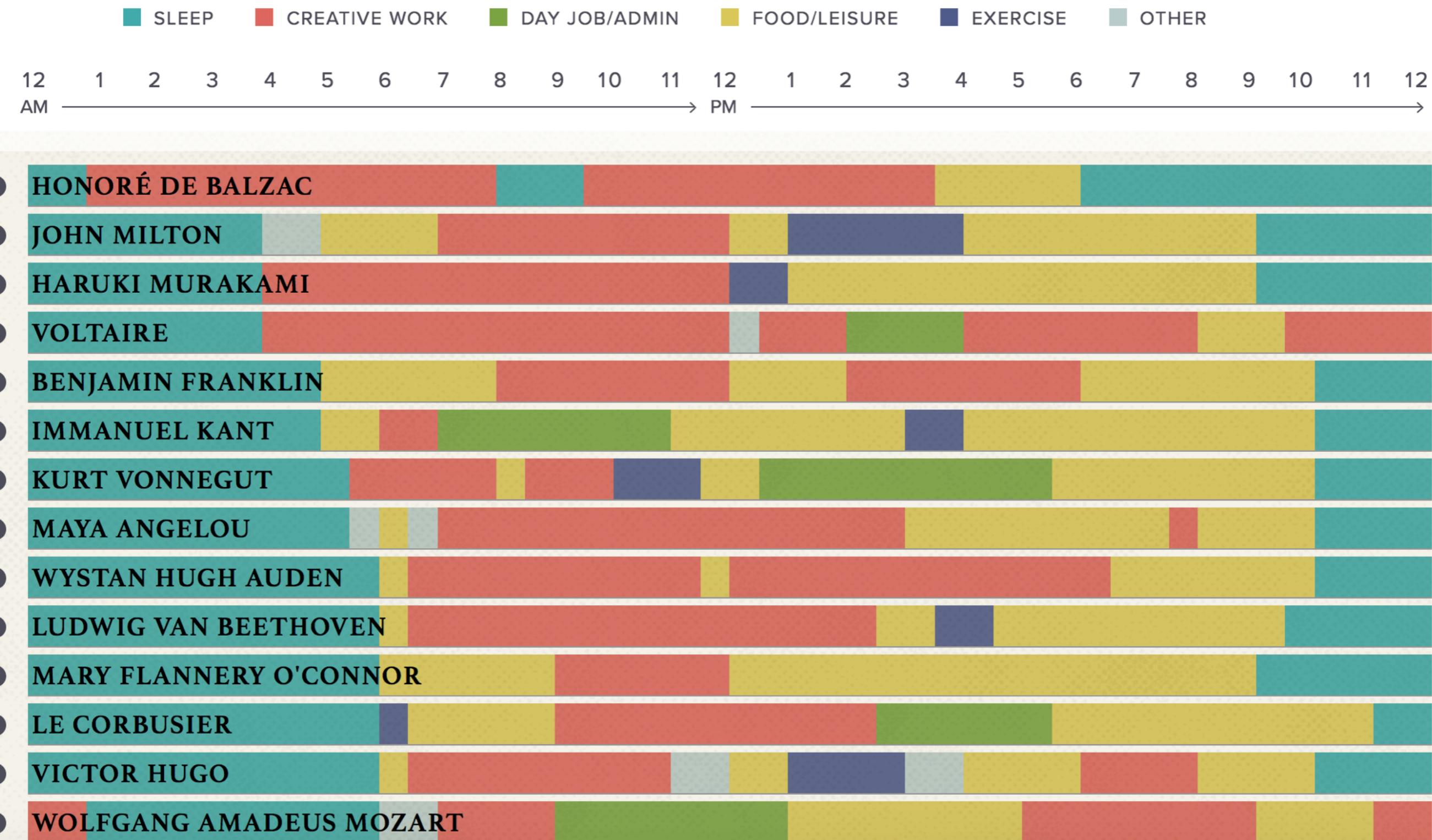
<http://www.nikon.com/about/sp/universcale/scale.htm>



Flat and Solid/Interactive and Weak

<https://podio.com/site/creative-routines>

<http://www.informationisbeautiful.net/>



Maps

http://www.slate.com/articles/life/the_history_of_american_slavery/2015/06/animated_interactive_of_the_history_of_the_atlantic_slave_trade.html

http://metrocosm.com/global-immigration-map/?utm_content=buffer113b2&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer

<http://metrocosm.com/us-immigration-history-map.html?ref=producthunt>

