

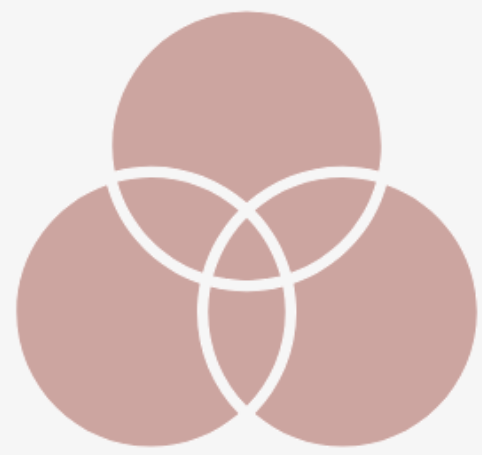


Northwestern
University

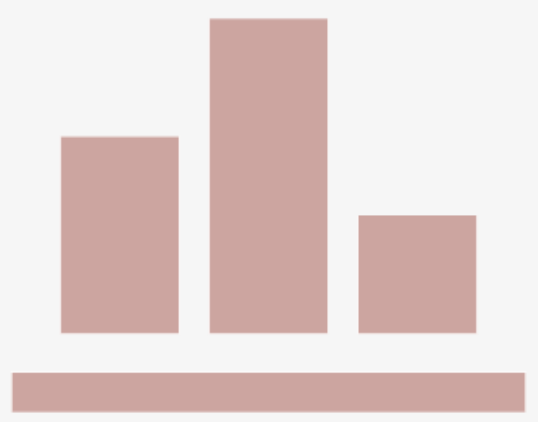
Exploring Different Chart Types – Part 2

Week 7





RELATIONSHIP



COMPARING CATEGORIES



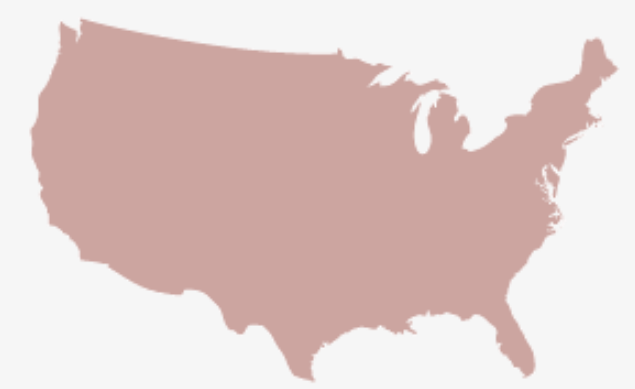
DISTRIBUTION



TIME



PART-TO-WHOLE



GEOSPATIAL



RELATIONSHIP



COMPARING CATEGORIES



DISTRIBUTION



TIME



PART-TO-WHOLE



GEOSPATIAL



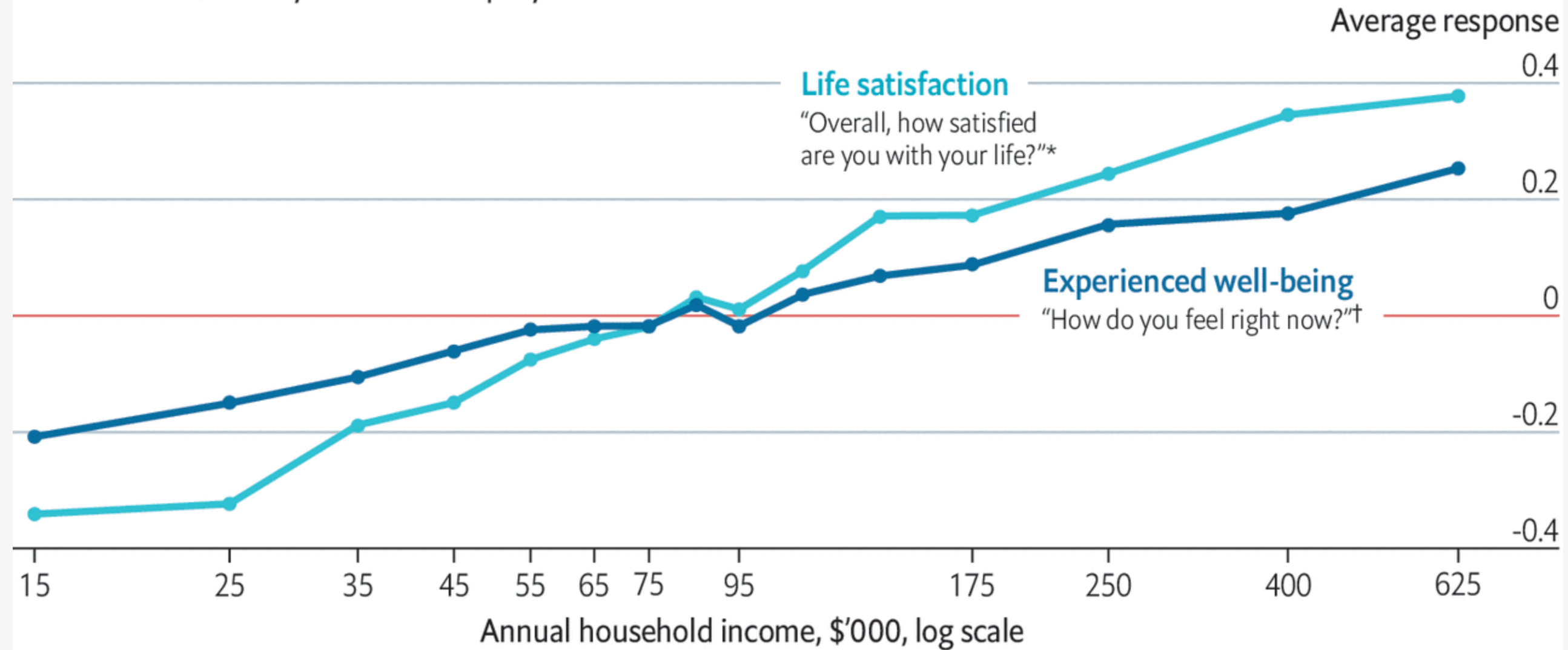
TIME



Line Chart

The grinny coefficient

United States, survey of 33,391 employed adults



Source: "Experienced well-being rises with income, even above \$75,000 per year", by Matthew A. Killingsworth, PNAS 2021

*"Not at all" to "extremely"

†"Very good" to "very bad"

The Economist



TIME

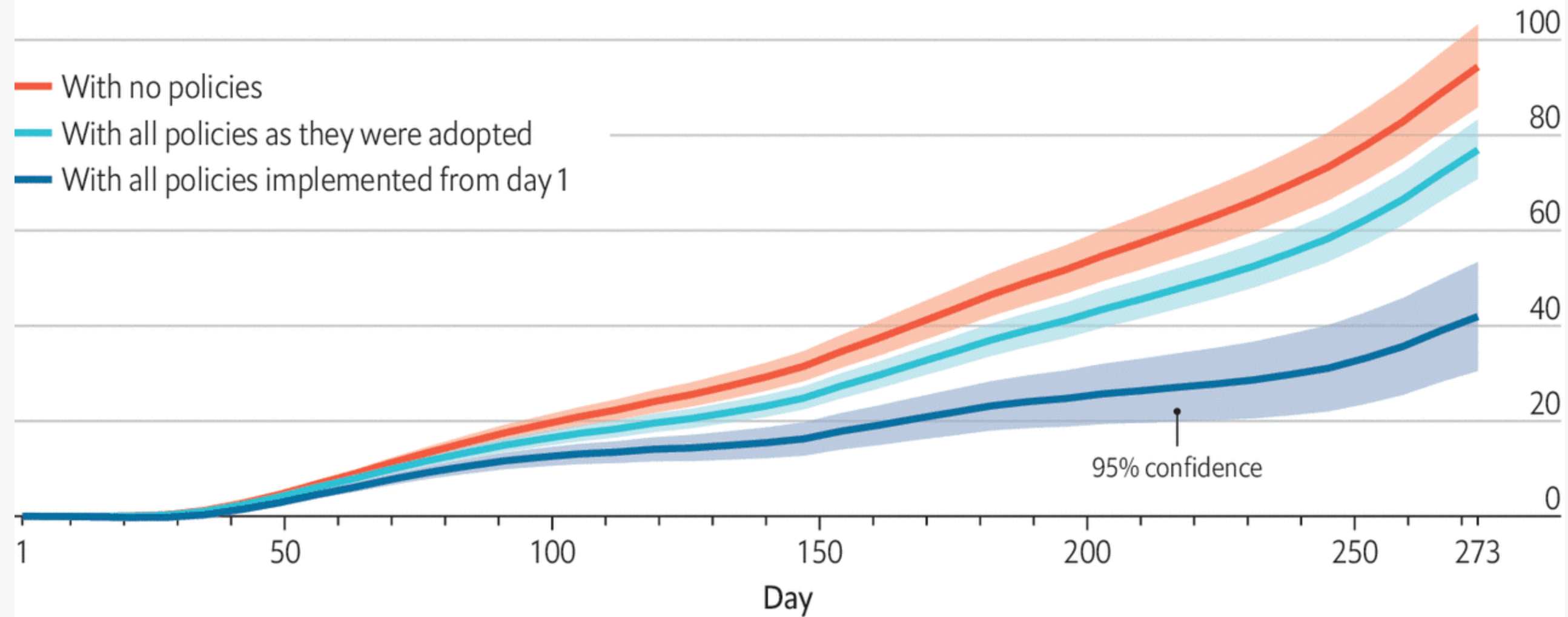


Line Chart

Shelter in place

United States, predicted cumulative covid-19 deaths per 100,000

From a model investigating the impact of housing policies such as eviction bans and guaranteeing utilities



Source: "Housing precarity and the covid-19 pandemic" by K. Jowers et al., 2021, National Bureau of Economic Research (working paper)

The Economist

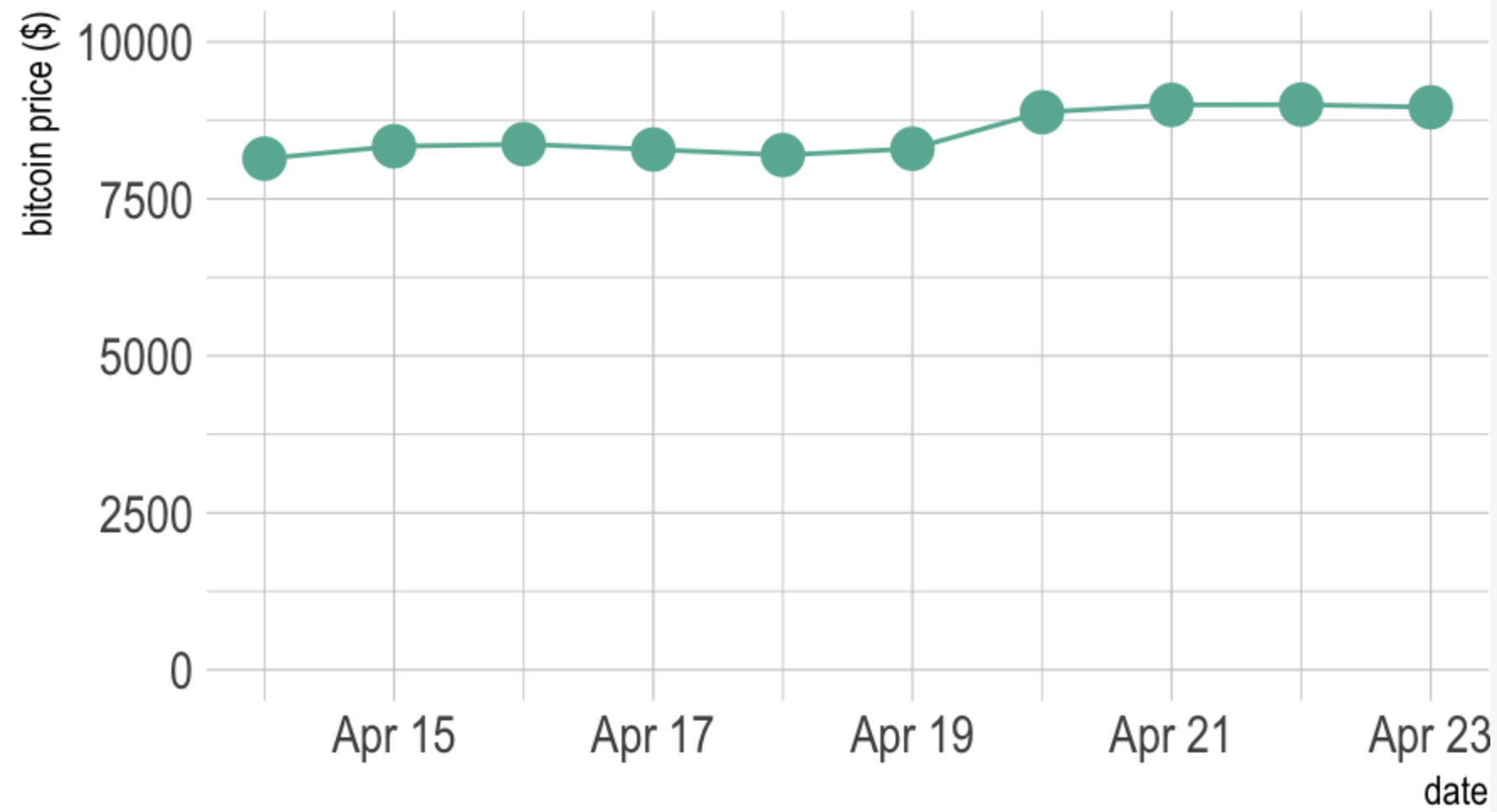
Source: <https://www.economist.com/graphic-detail/2021/02/19/americas-eviction-moratorium-has-probably-saved-thousands-of-lives>



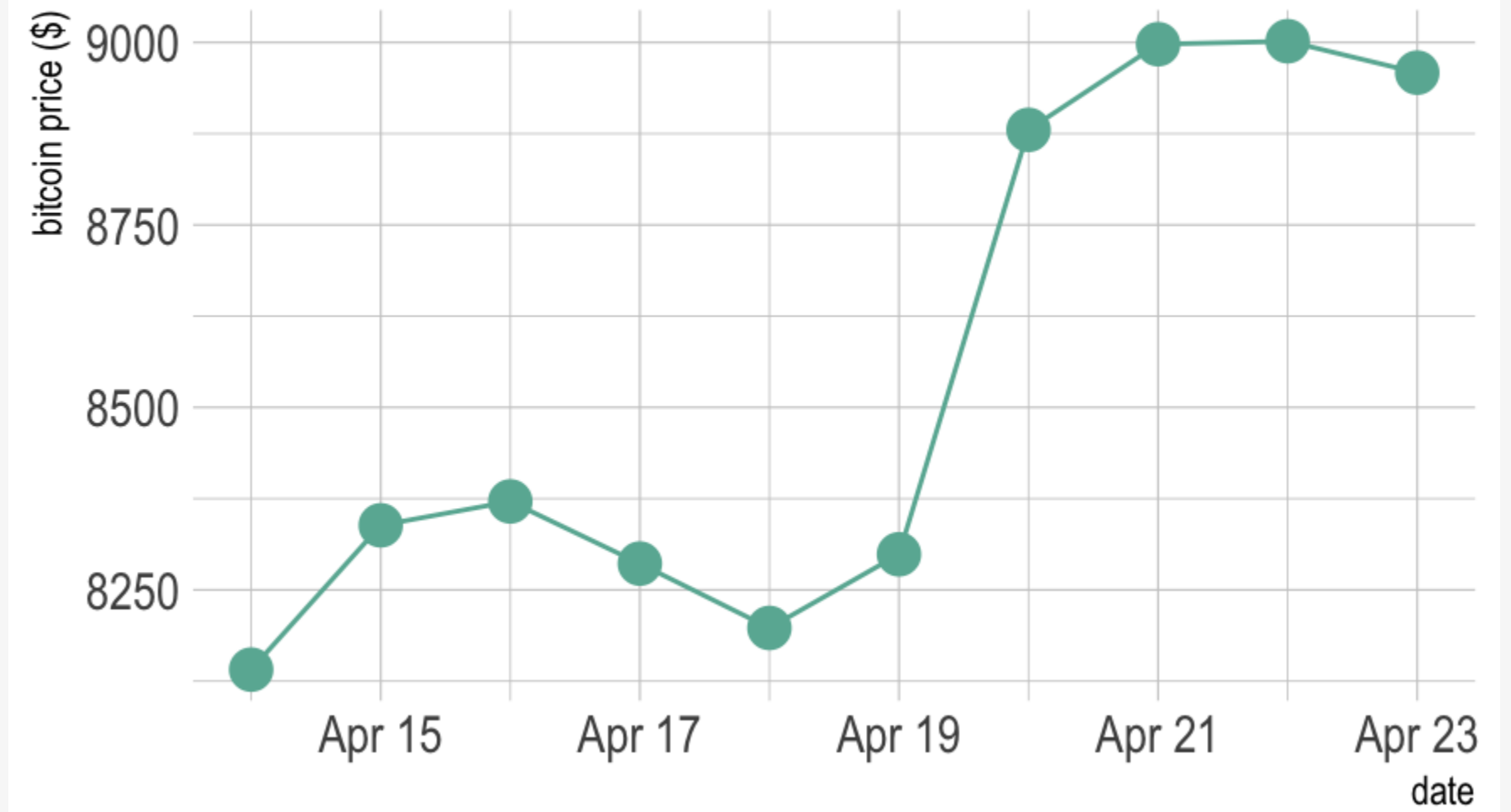
TIME



Not cuting



Cuting



Source: <https://www.data-to-viz.com/graph/line.html>

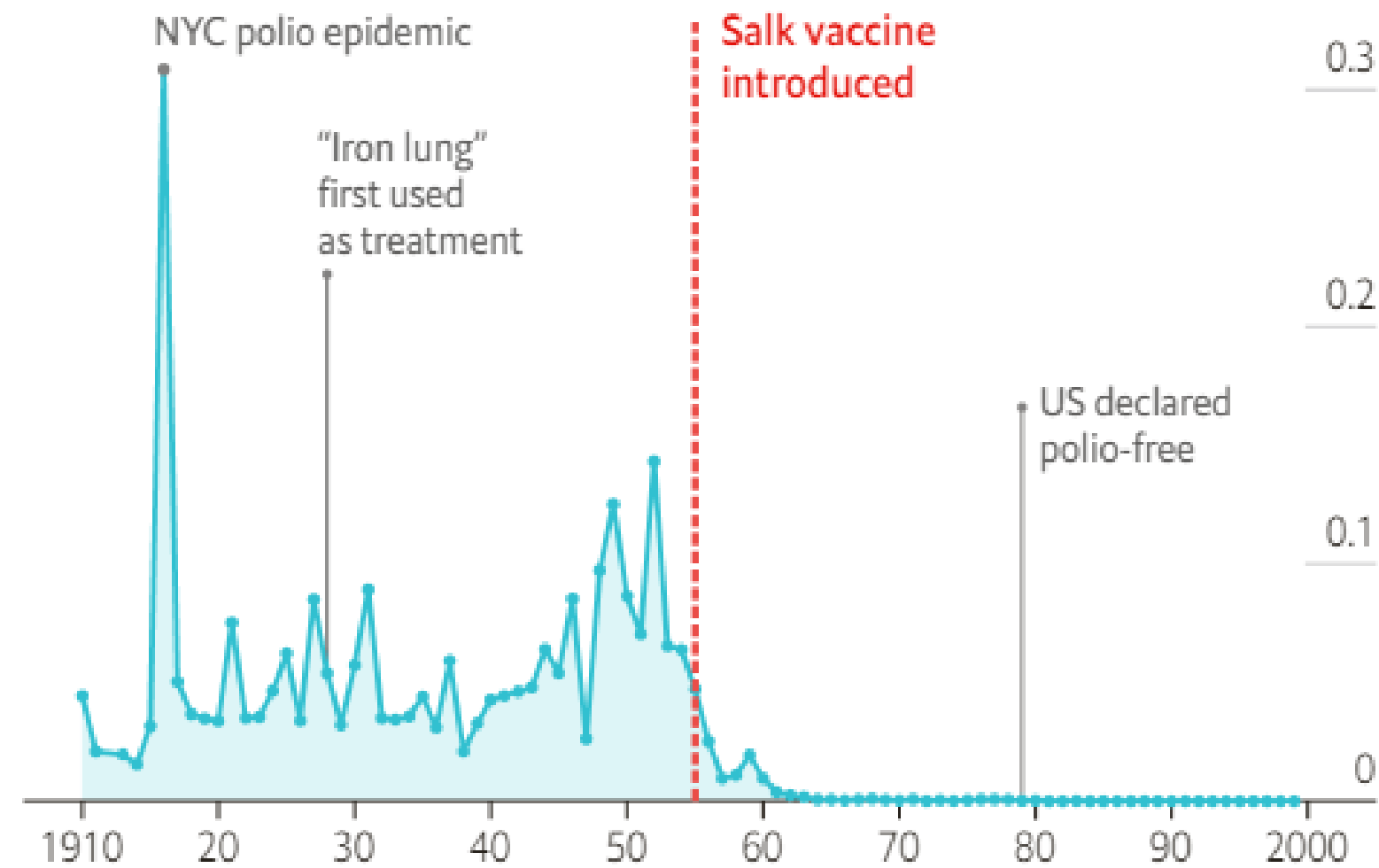


TIME

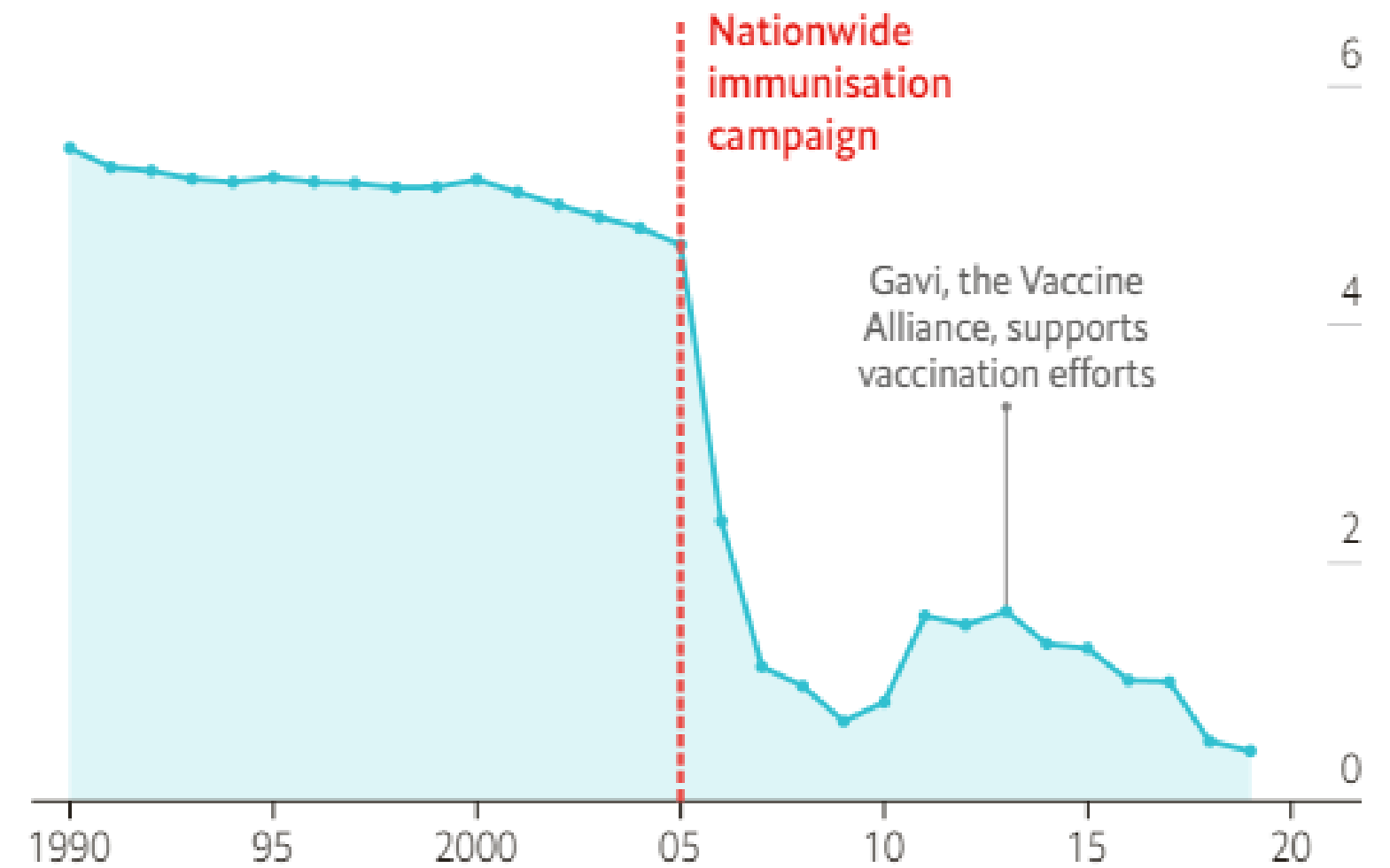


Area Chart

Polio, United States, % of all deaths



Measles, Nigeria, % of all deaths



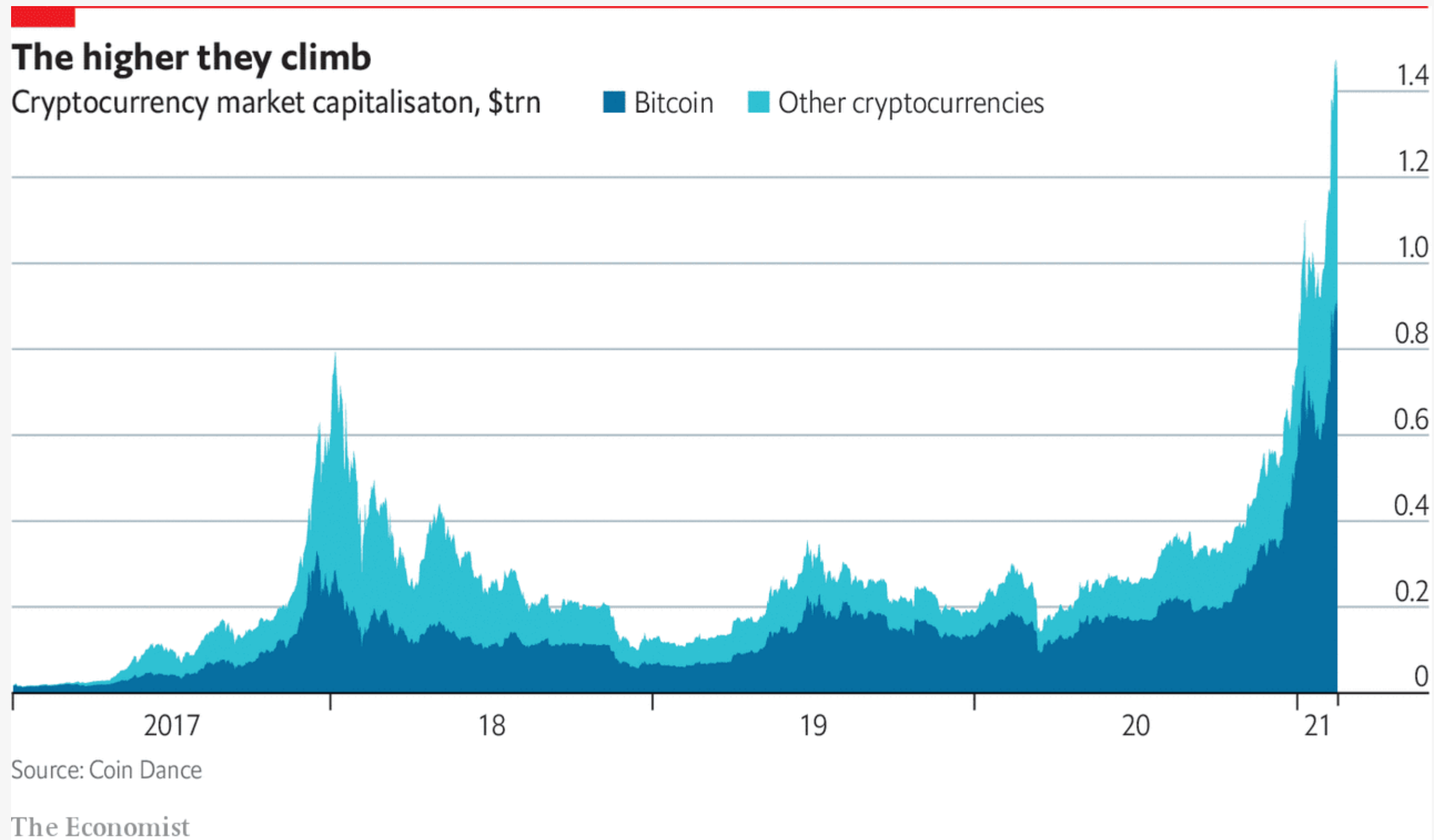
Source: <https://www.economist.com/graphic-detail/2021/01/23/the-smallpox-vaccine-took-decades-to-bear-fruit>



TIME



Stacked Area Chart



Source: <https://www.economist.com/graphic-detail/2021/02/16/bitcoin-hits-50000-for-first-time>



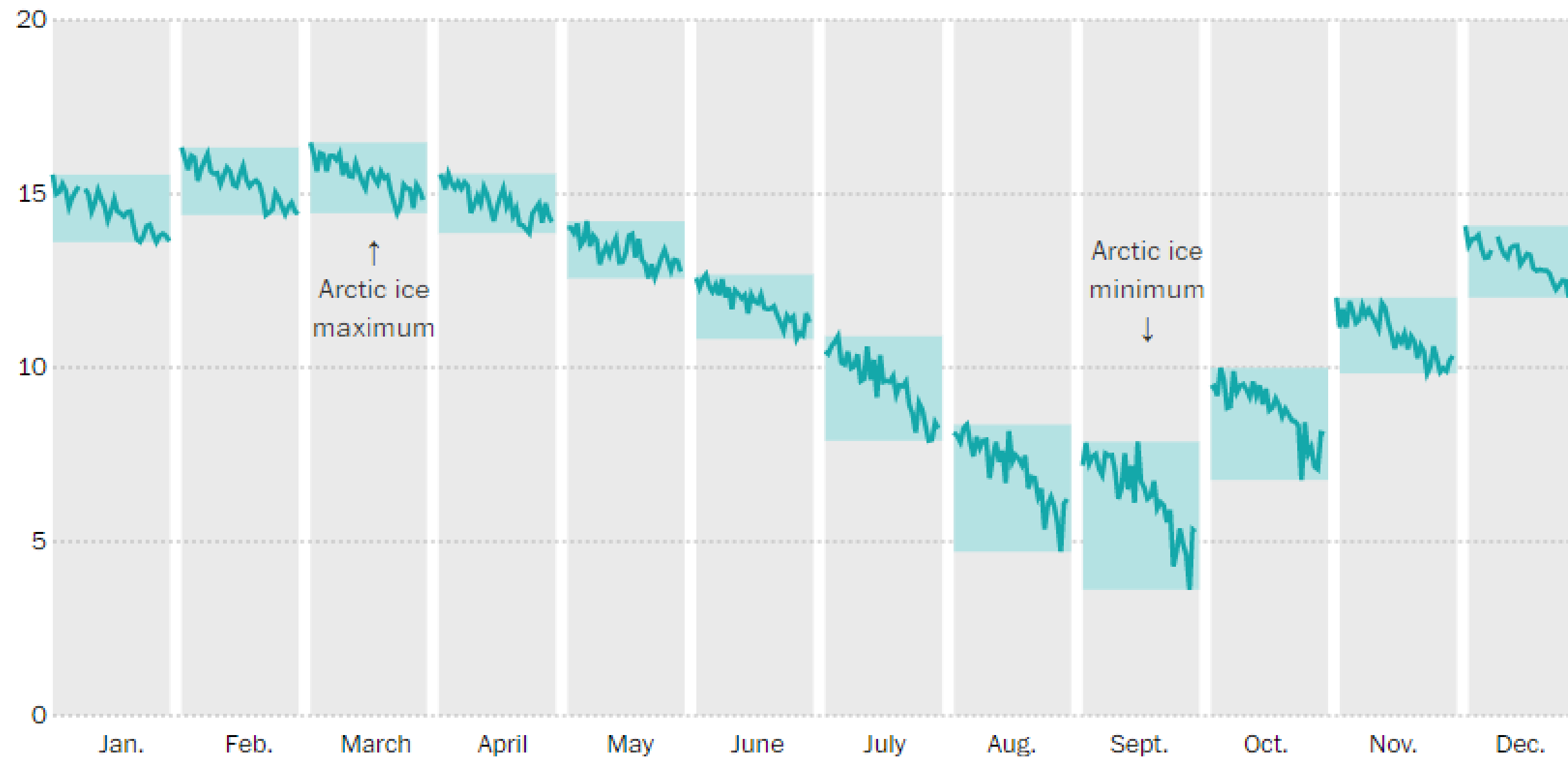
TIME



Cycle Graph

Monthly levels of ice extent, 1979 to 2015, in millions of square kilometers

Arctic sea-ice extent has experienced an unmistakable downward trend in every single month since 1979.



Source: <https://www.washingtonpost.com/graphics/national/arctic-ice-2015/>



TIME

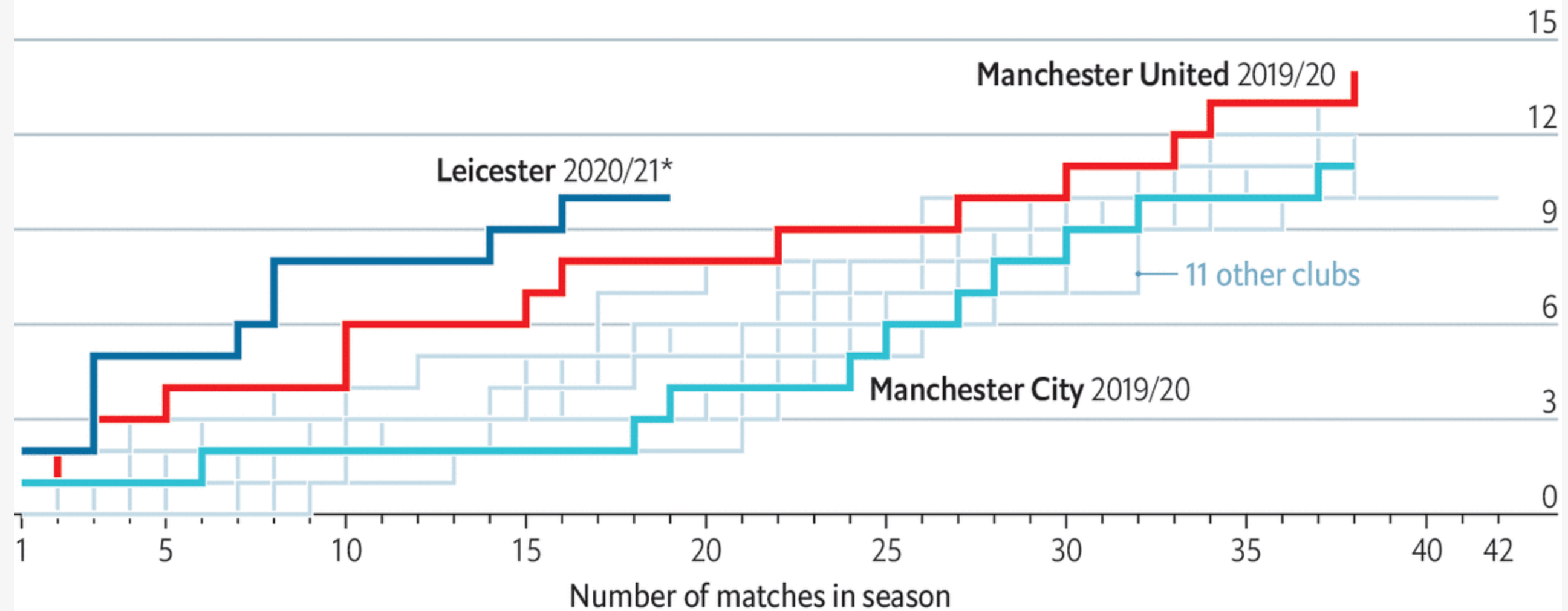


Step Chart

Kicking up a fuss

English Premier League, number of penalties awarded

Clubs with the most penalties, 1992/93-2020/21



Source: Transfermarkt

*At January 29th 2021

The Economist

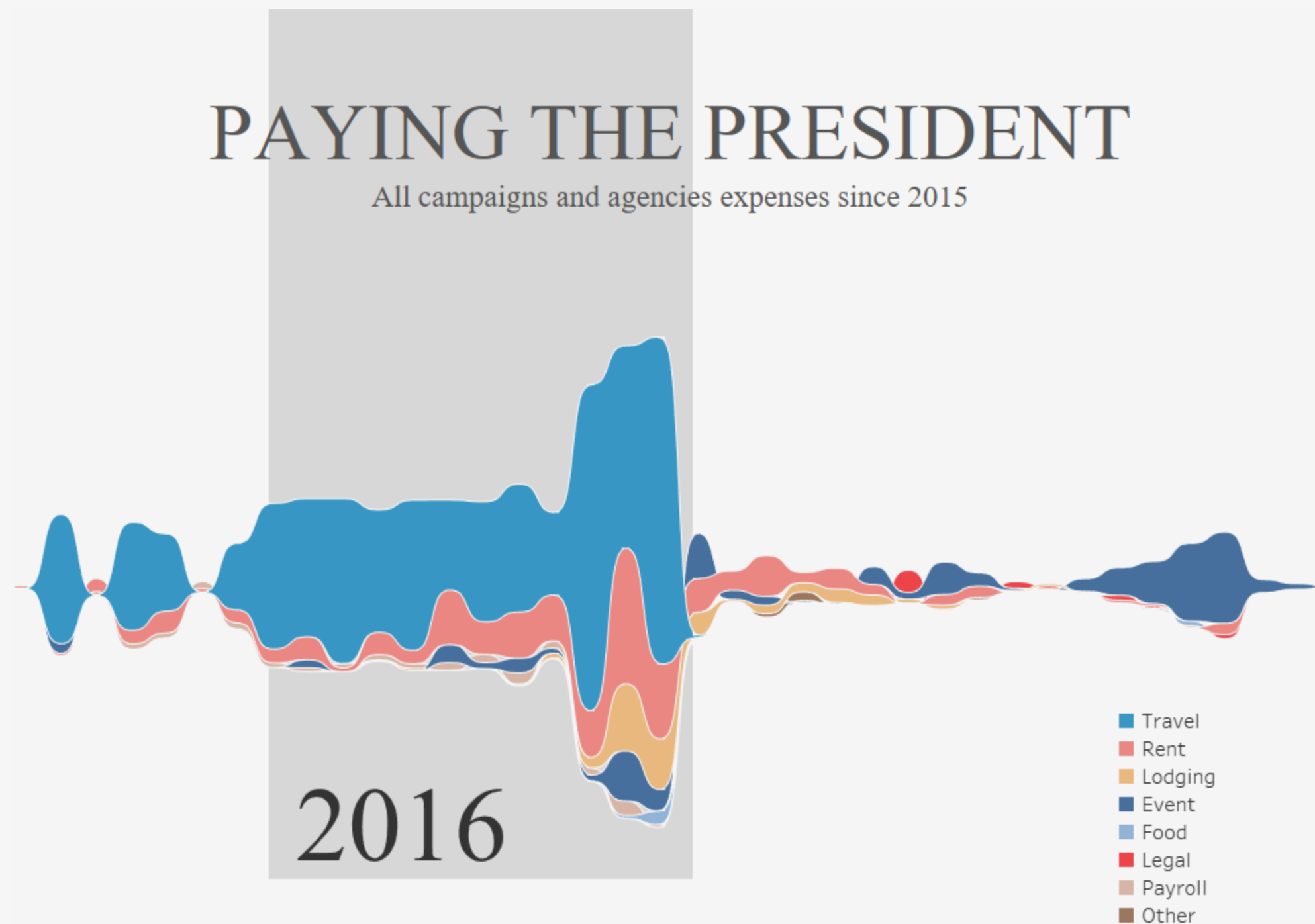
Source: <https://www.economist.com/graphic-detail/2021/01/29/why-penalties-are-becoming-more-common-in-elite-football>



TIME



Streamgraph



DATA SOURCE: ProPublica

design : @ltavernier7

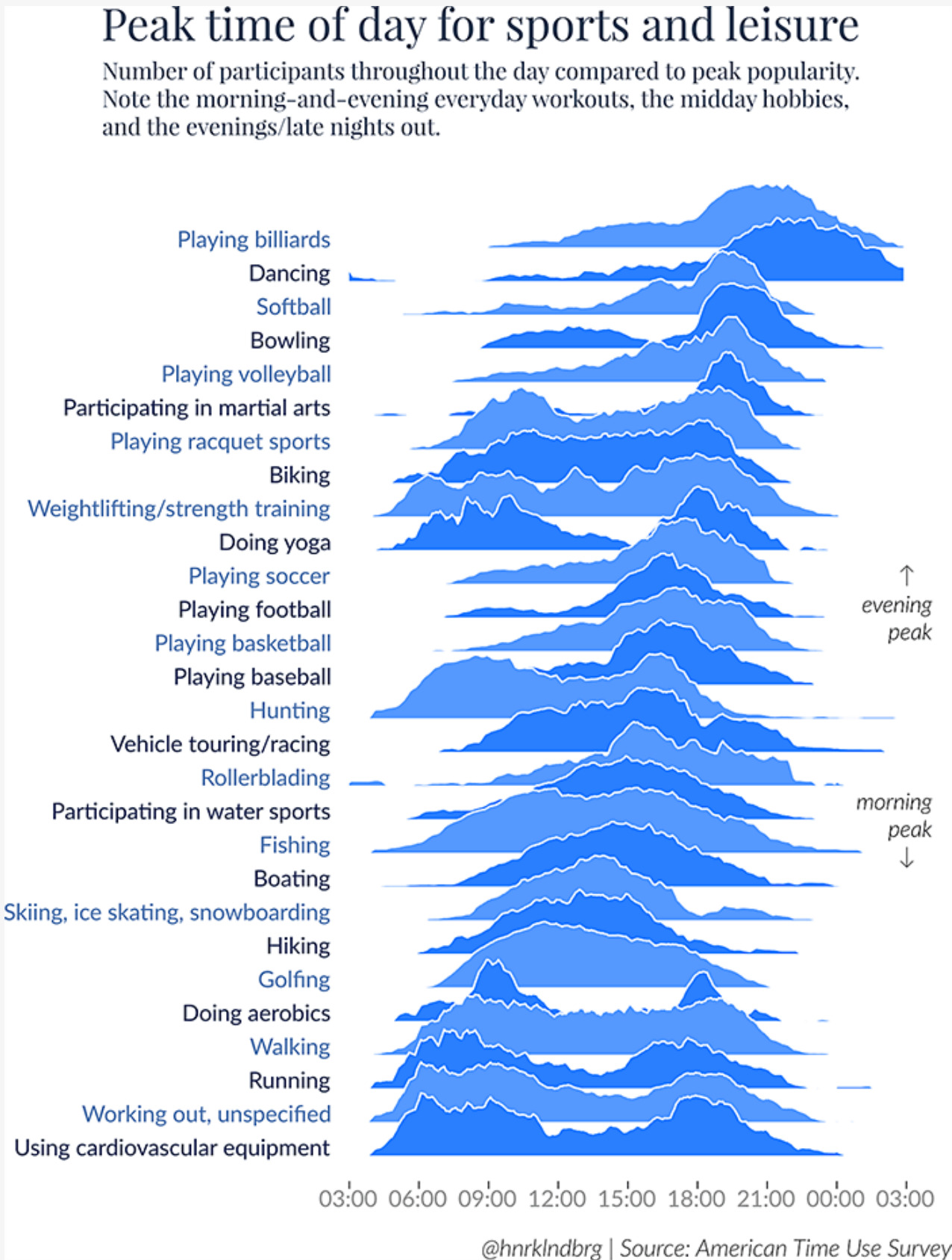
Source: <https://greatified.com/2018/09/17/how-to-build-a-stream-graph-in-tableau-software/>



TIME



Joy (Ridgeline) Plot



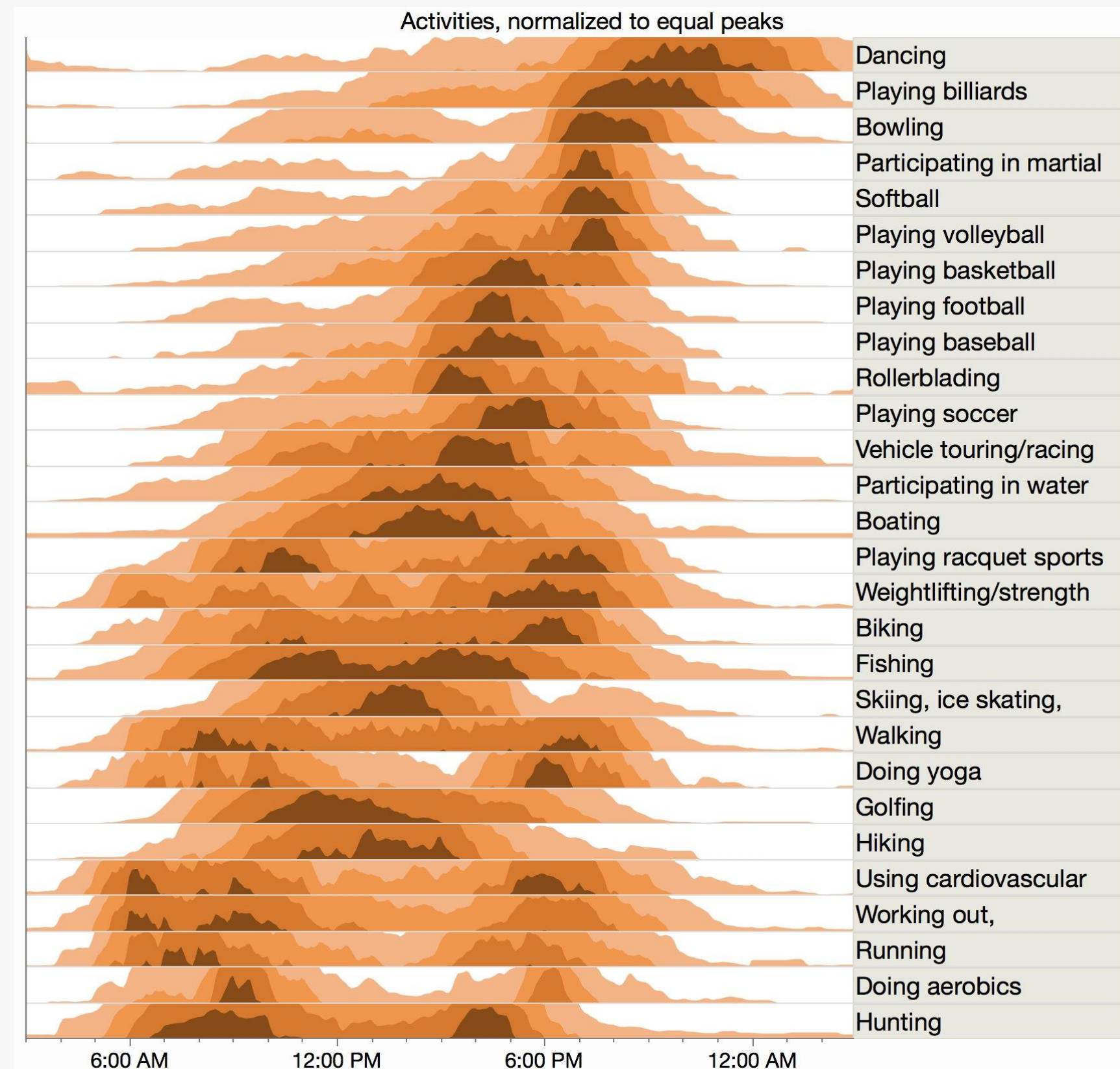
Source: <https://eagereyes.org/blog/2017/joy-plots>



TIME



Horizon Chart



Source: <https://twitter.com/xangregg/status/883763762381152256/photo/1>



RELATIONSHIP



COMPARING CATEGORIES



DISTRIBUTION



TIME



PART-TO-WHOLE



GEOSPATIAL



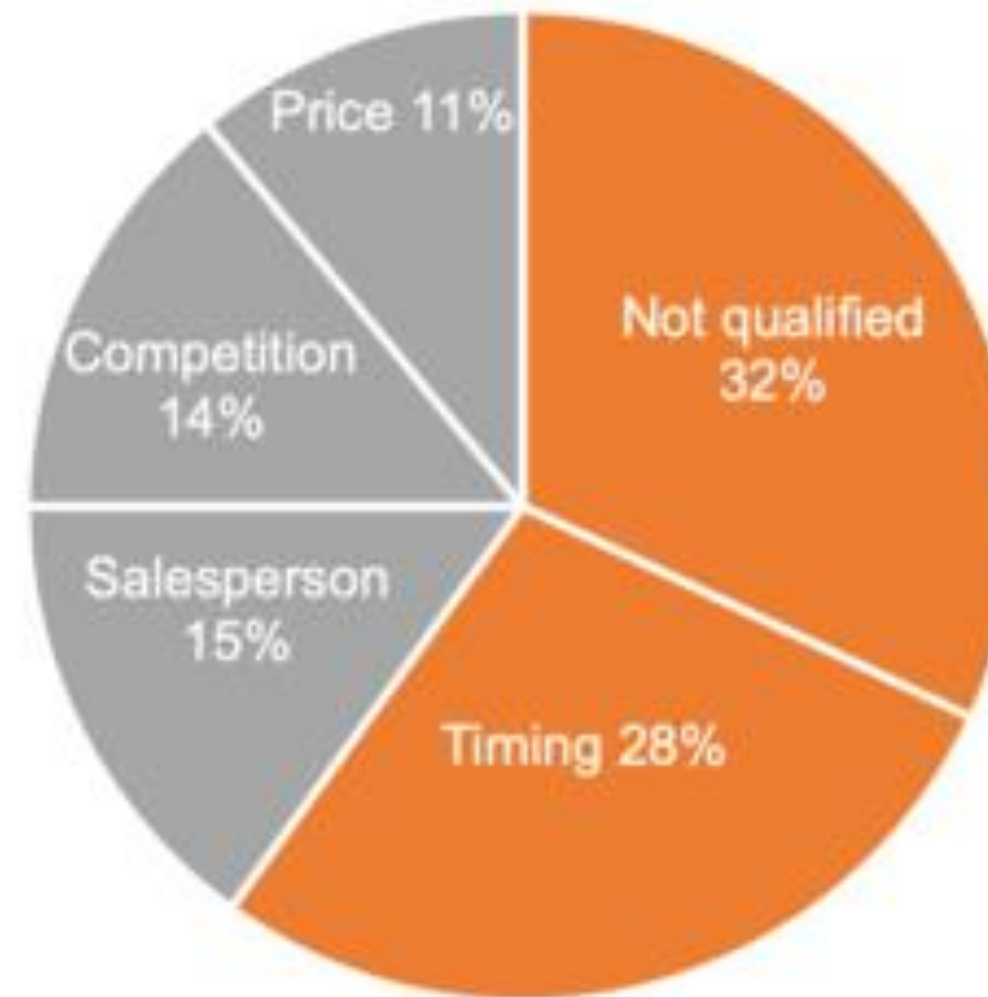
PART-TO-WHOLE



Pie Chart

Why we're losing deals

% of total deals lost (204)
from mmyy-mmyy



60% of deals were lost because we **didn't qualify appropriately** or timing was **outside of the customers' budgeting cycle.**

How might we improve our process?

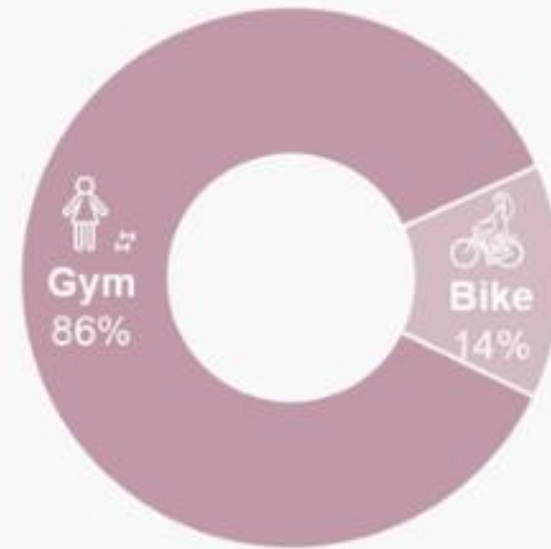
Source: <http://www.storytellingwithdata.com/blog/2020/2/26/how-to-make-a-better-pie-chart>



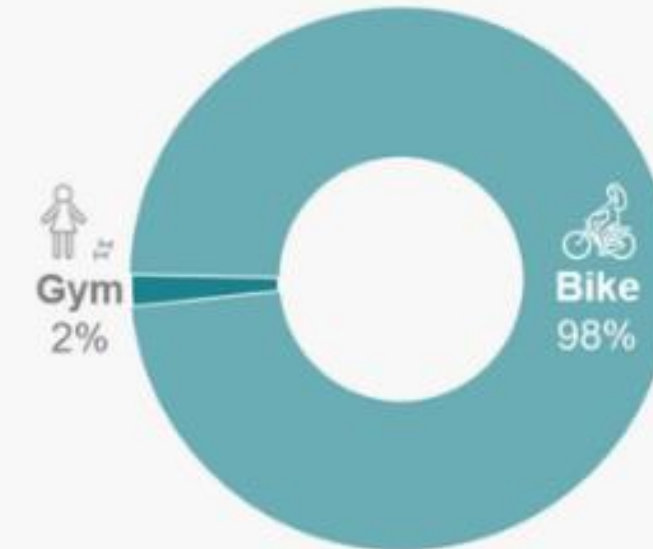
PART-TO-WHOLE



Donut Chart



24.5 hours working out a month
100%= time spent working out



20.5 hours working out a month
100%= time spent working out

Prior to the pandemic, I used to go to the gym 3-4 times a week and bike every few weeks. After the shelter-in-place orders, I started biking 3-4 times a week and only went to the gym once.

Source: personal data | Design: Rebeca Pop



Treemap

Where the carbon comes from

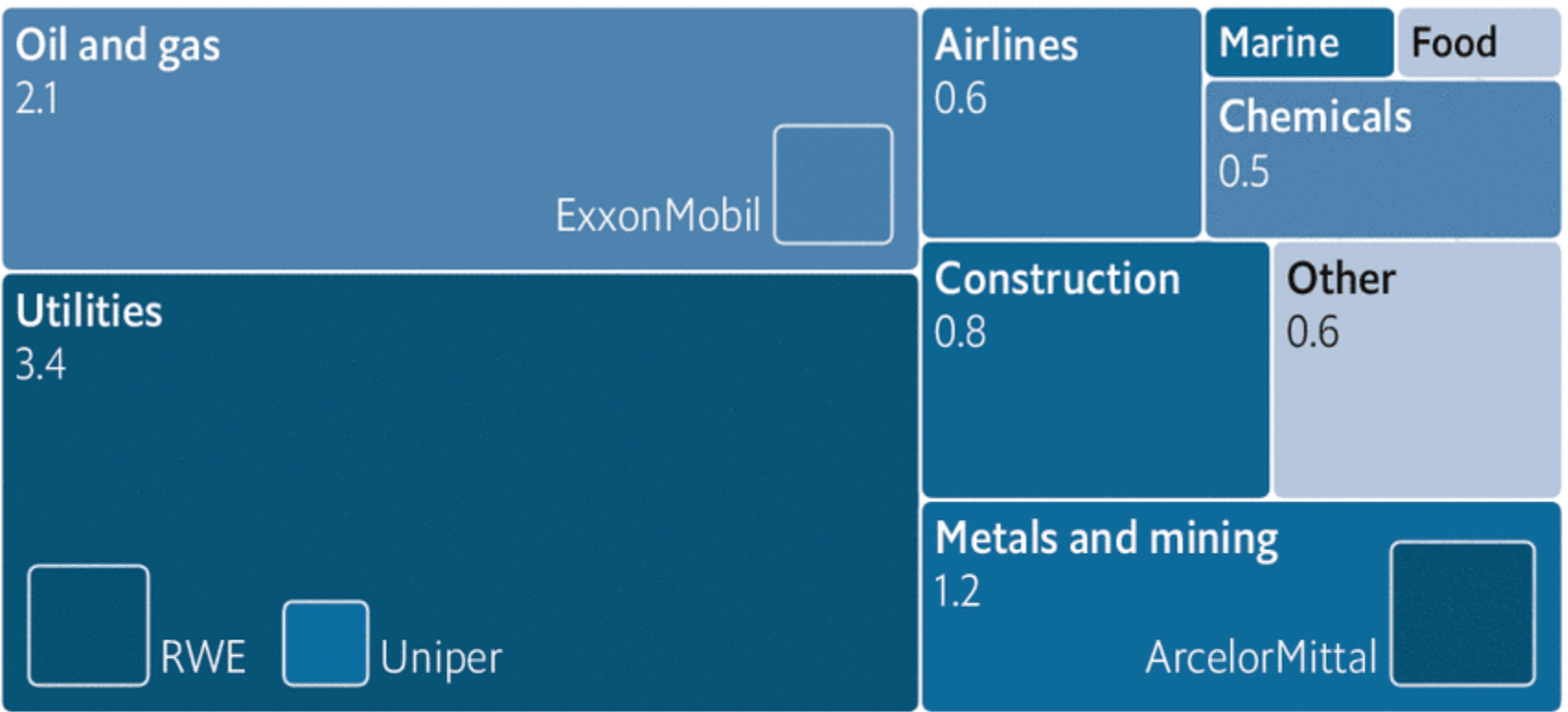
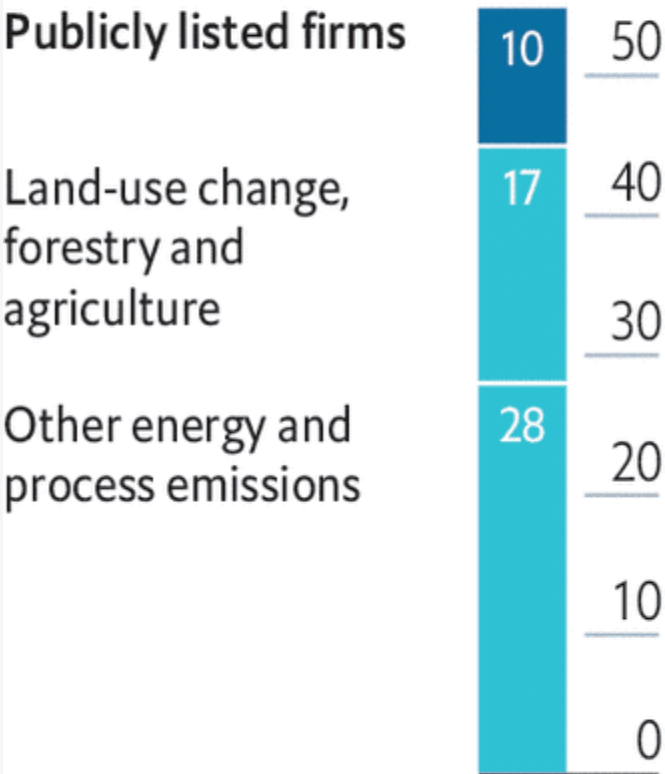
Direct emissions, 2018 or latest, gigatonnes of CO₂ equivalent

Carbon intensity*



All

Publicly listed firms



Sources: WRI; UN Environment Programme; Bloomberg; *The Economist*

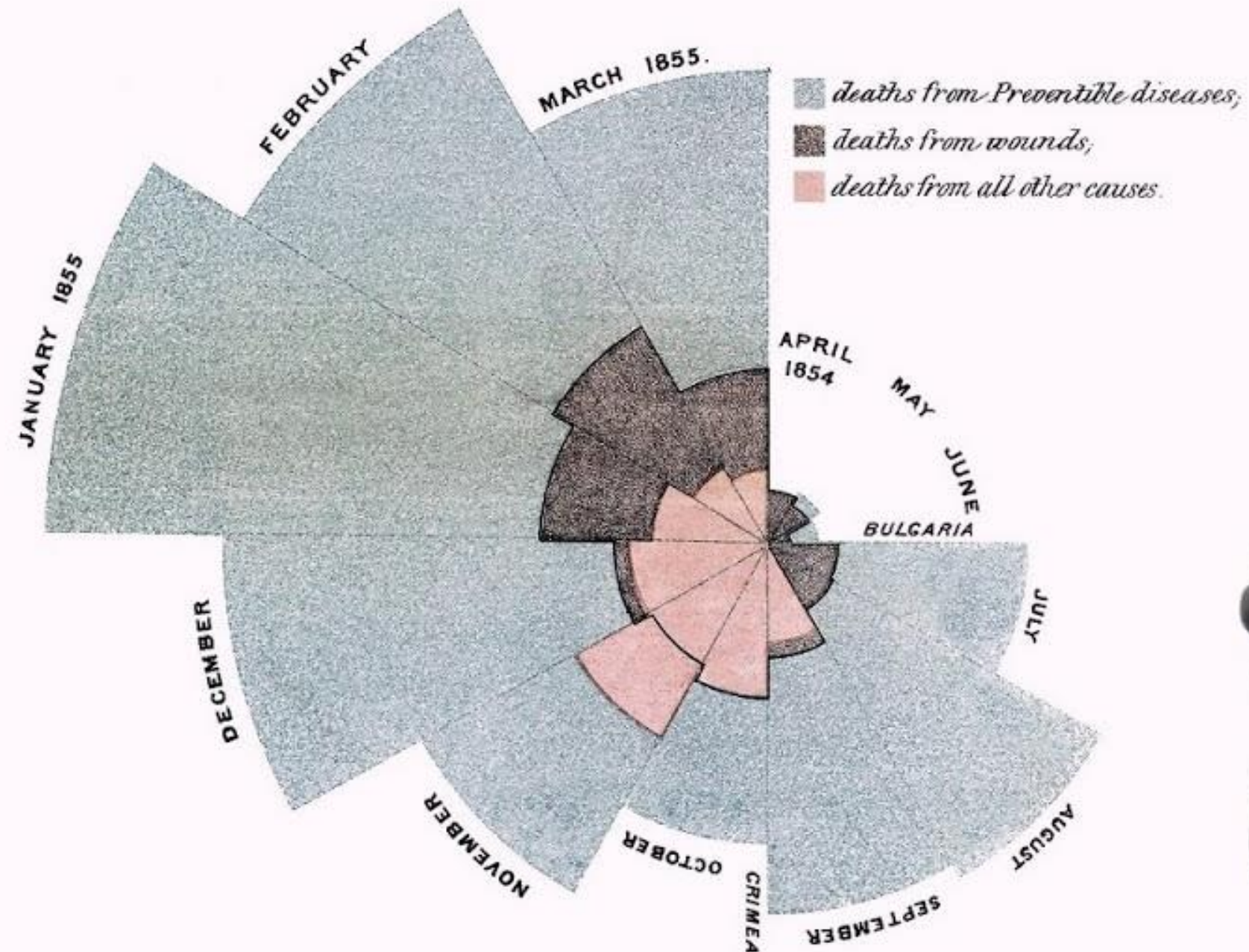
*Tonnes of CO₂e per \$ revenue, log scale [†]RWE is an outlier at 7,614

The Economist



PART-TO-WHOLE

Nightingale (Coxcomb) Chart



Source: <https://www.youtube.com/watch?app=desktop&v=ILzrYJ3OR7E>



RELATIONSHIP



COMPARING CATEGORIES



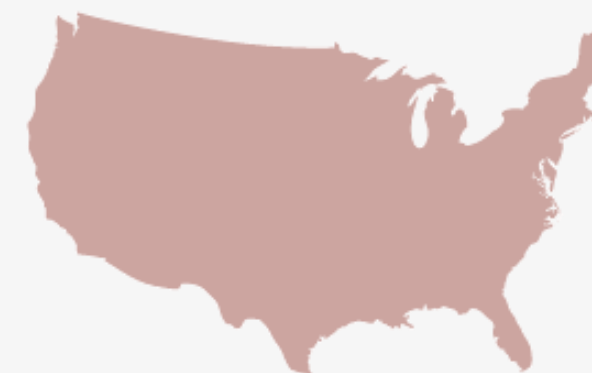
DISTRIBUTION



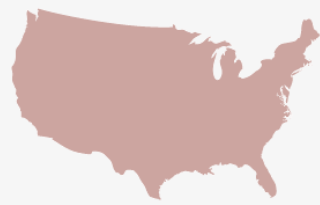
TIME



PART-TO-WHOLE



GEOSPATIAL



GEOSPATIAL



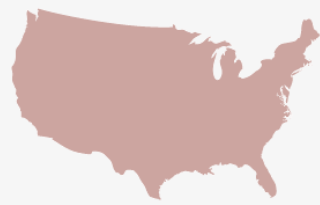
Choropleth Map

Hostile territory

Abortion restrictions in Latin America, 2019 or latest



Source: <https://www.economist.com/graphic-detail/2020/12/30/argentina-legalises-abortion-joining-a-small-latin-american-group>

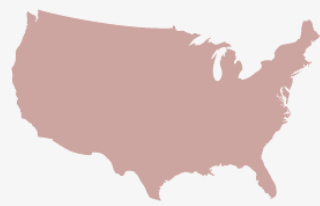


GEOSPATIAL

Connection/Flow Map



Source: https://github.com/holtzy/data_to_viz/blob/master/story/IMG/Surfer_travel.png

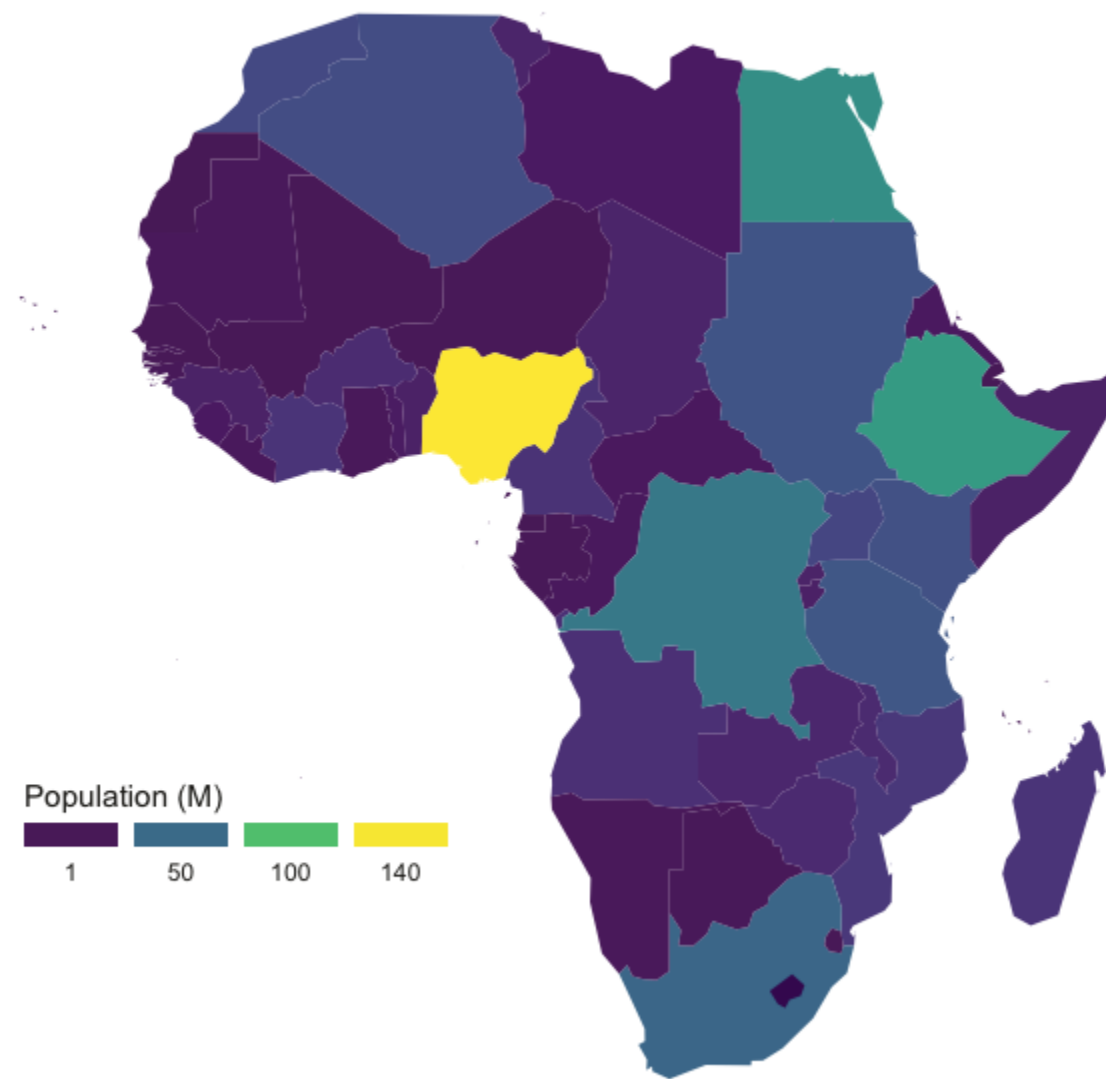


GEOSPATIAL

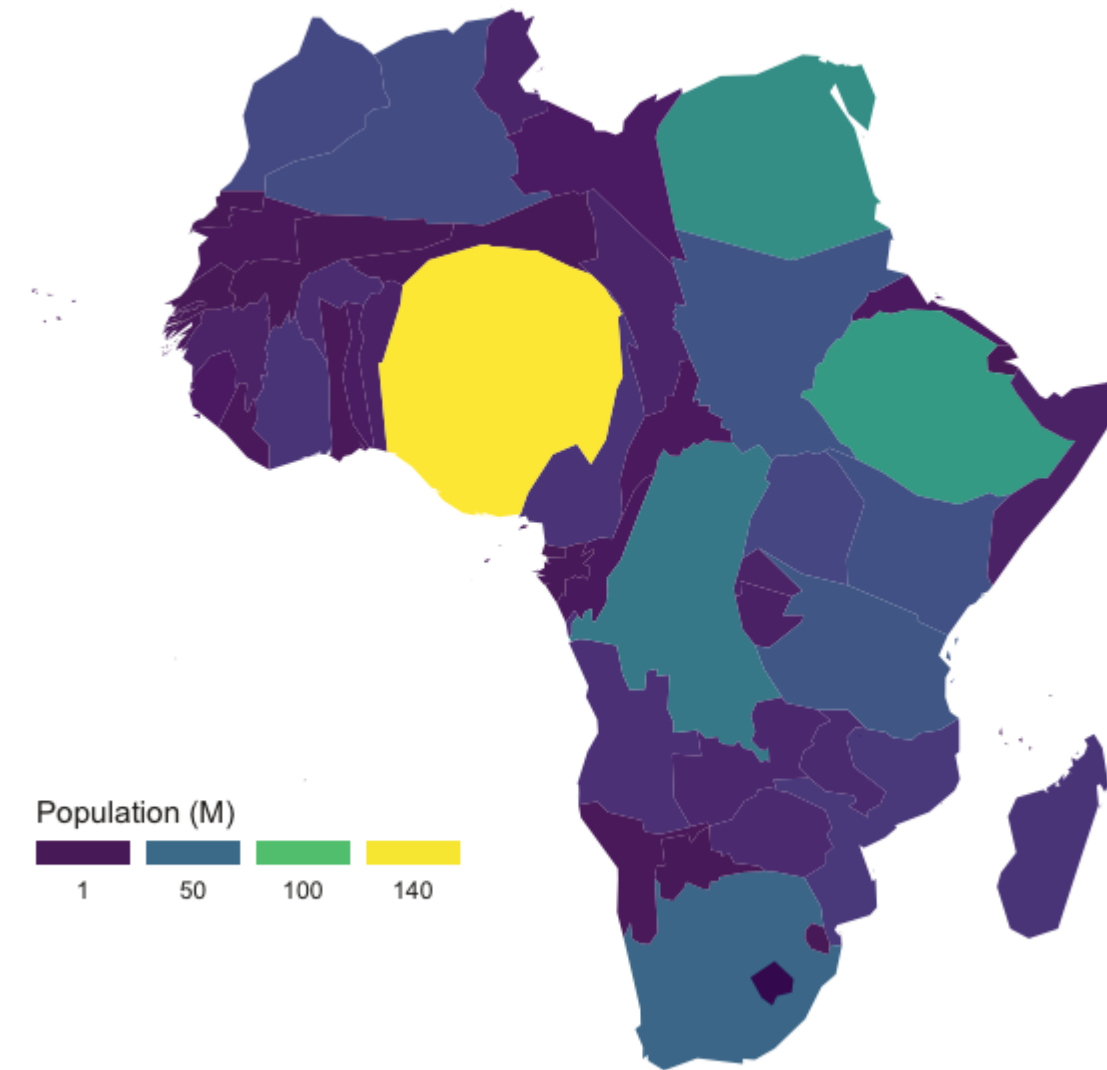


Cartogram + Choropleth

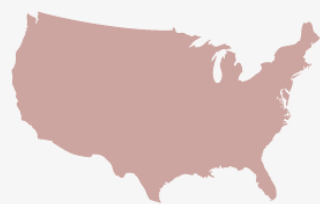
Real boundaries



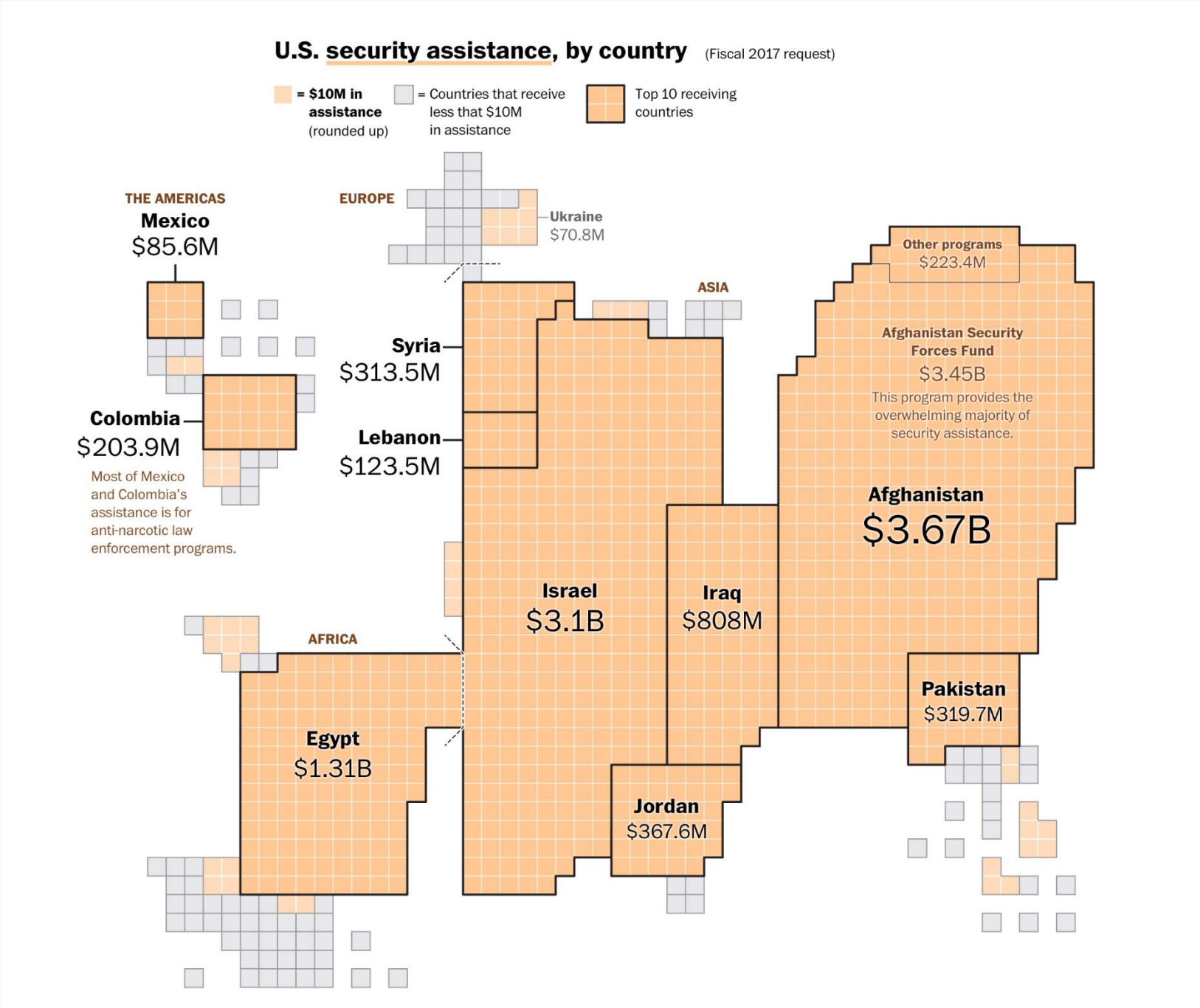
Cartogram



Source: <https://www.data-to-viz.com/graph/cartogram.html>



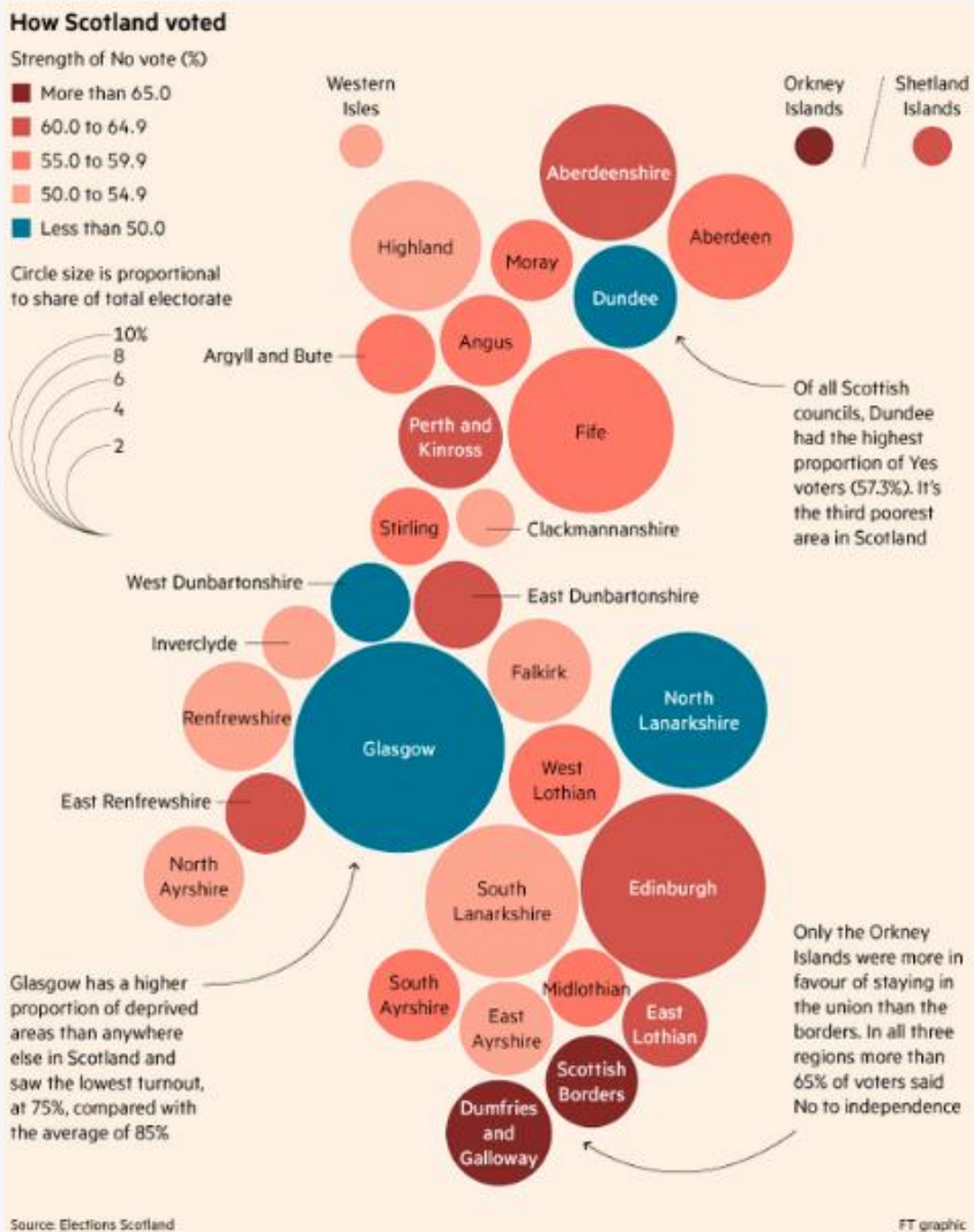
Mosaic Cartogram



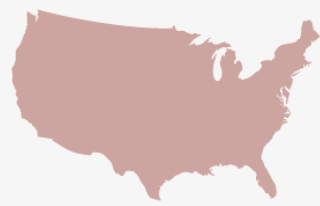
Source: <https://datavizproject.com/wp-content/uploads/2016/01/Sk%C3%A6rbilledede-2017-10-20-kl.-16.27.33.png>



Bubble Cartogram



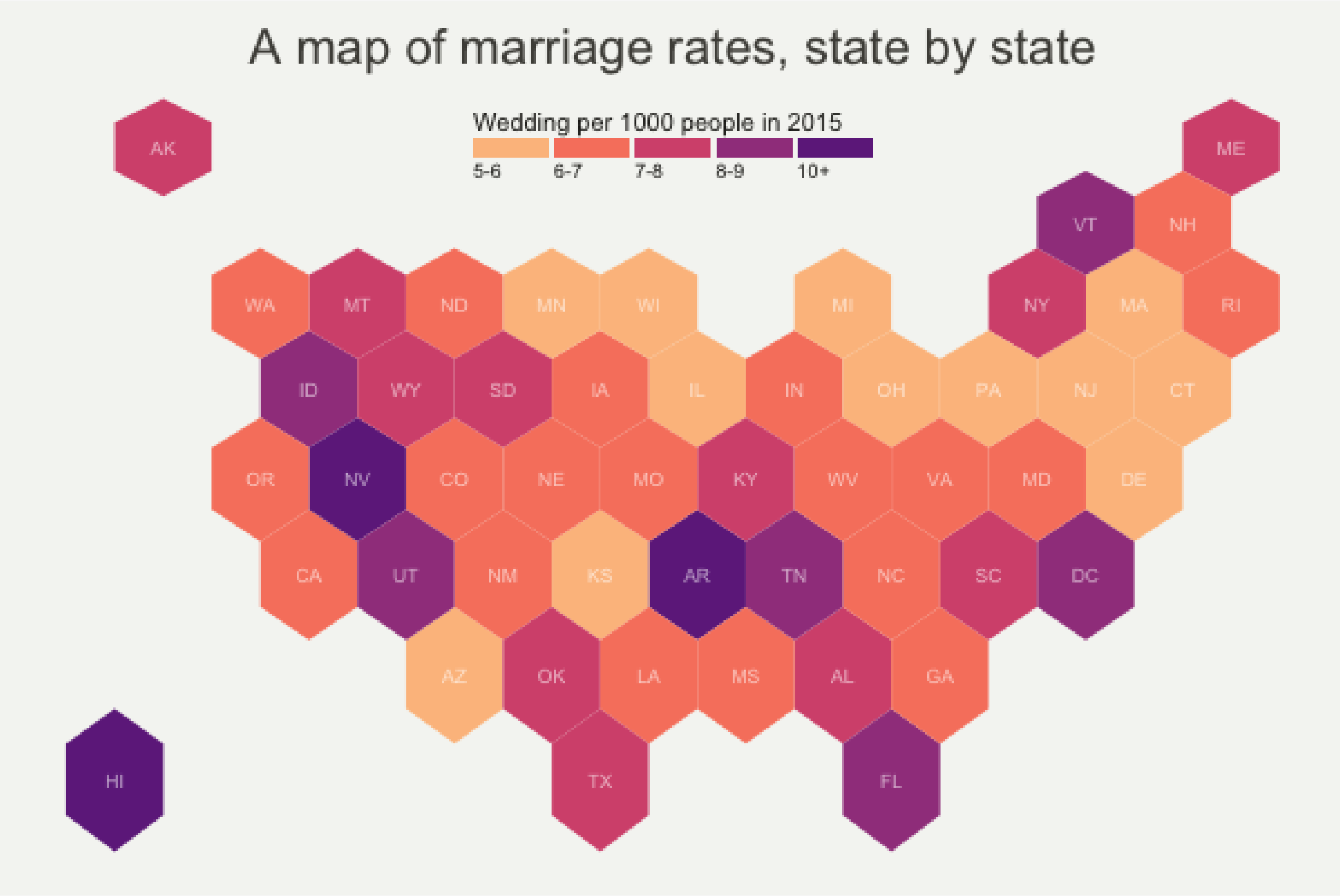
Source: <https://datavizproject.com/wp-content/uploads/2016/01/Sk%C3%A6rbilledede-2016-01-25-kl.-23.49.18.png>



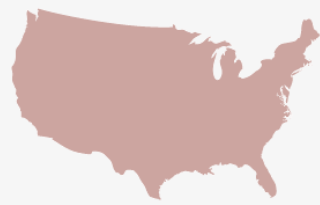
GEOSPATIAL



Hexbin Map



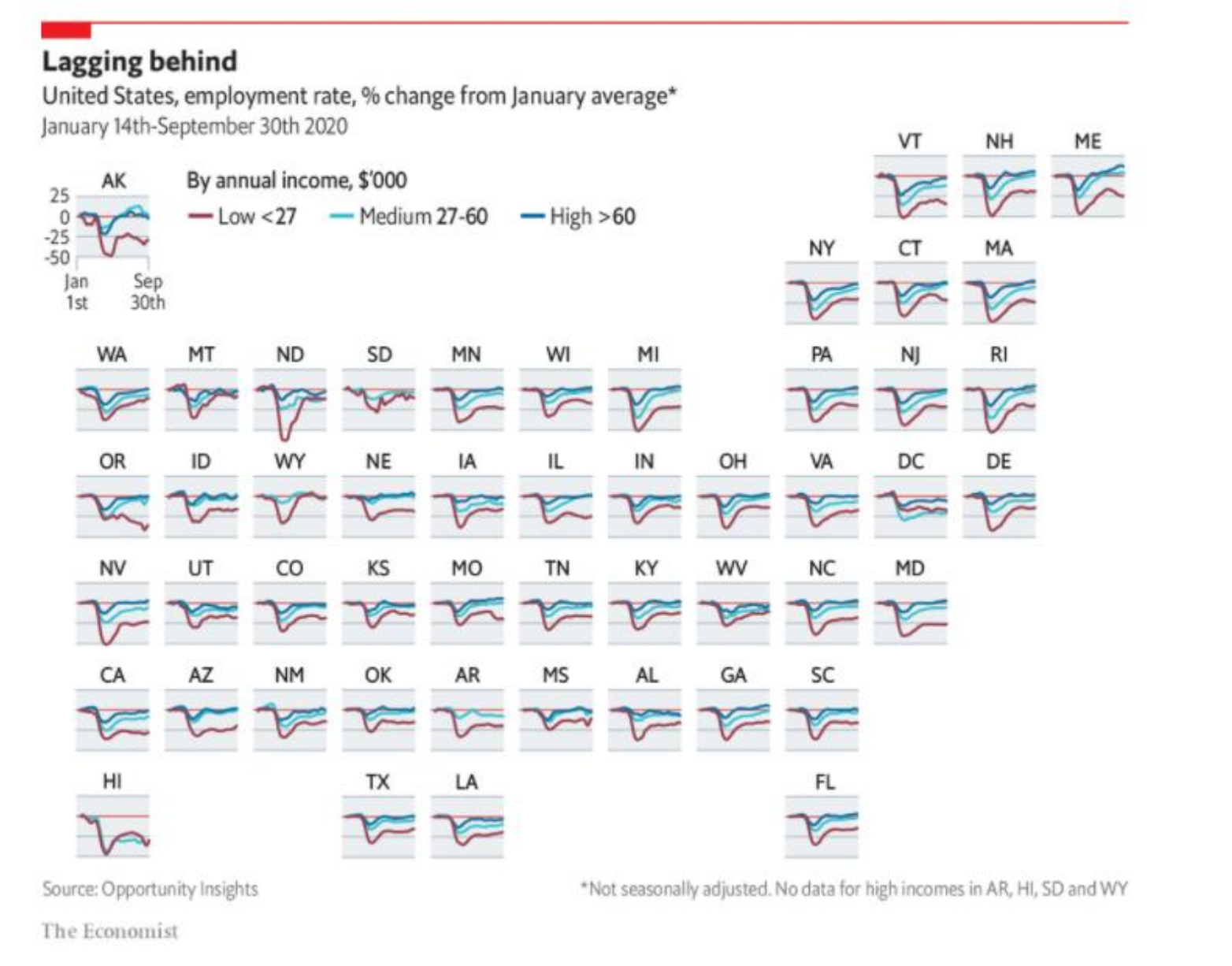
Source: <https://www.r-graph-gallery.com/hexbin-map.html>



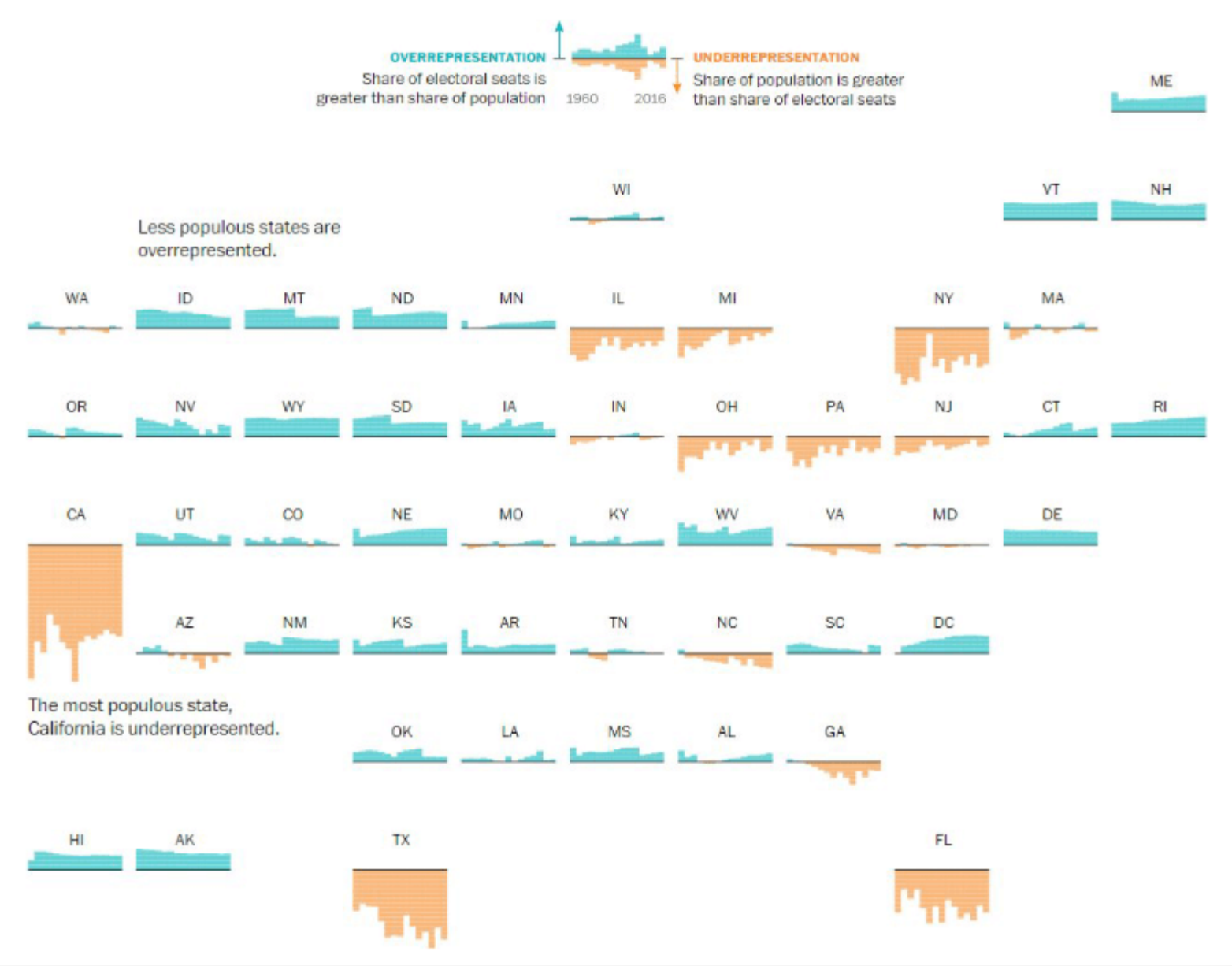
GEOSPATIAL



Tile Grid Map

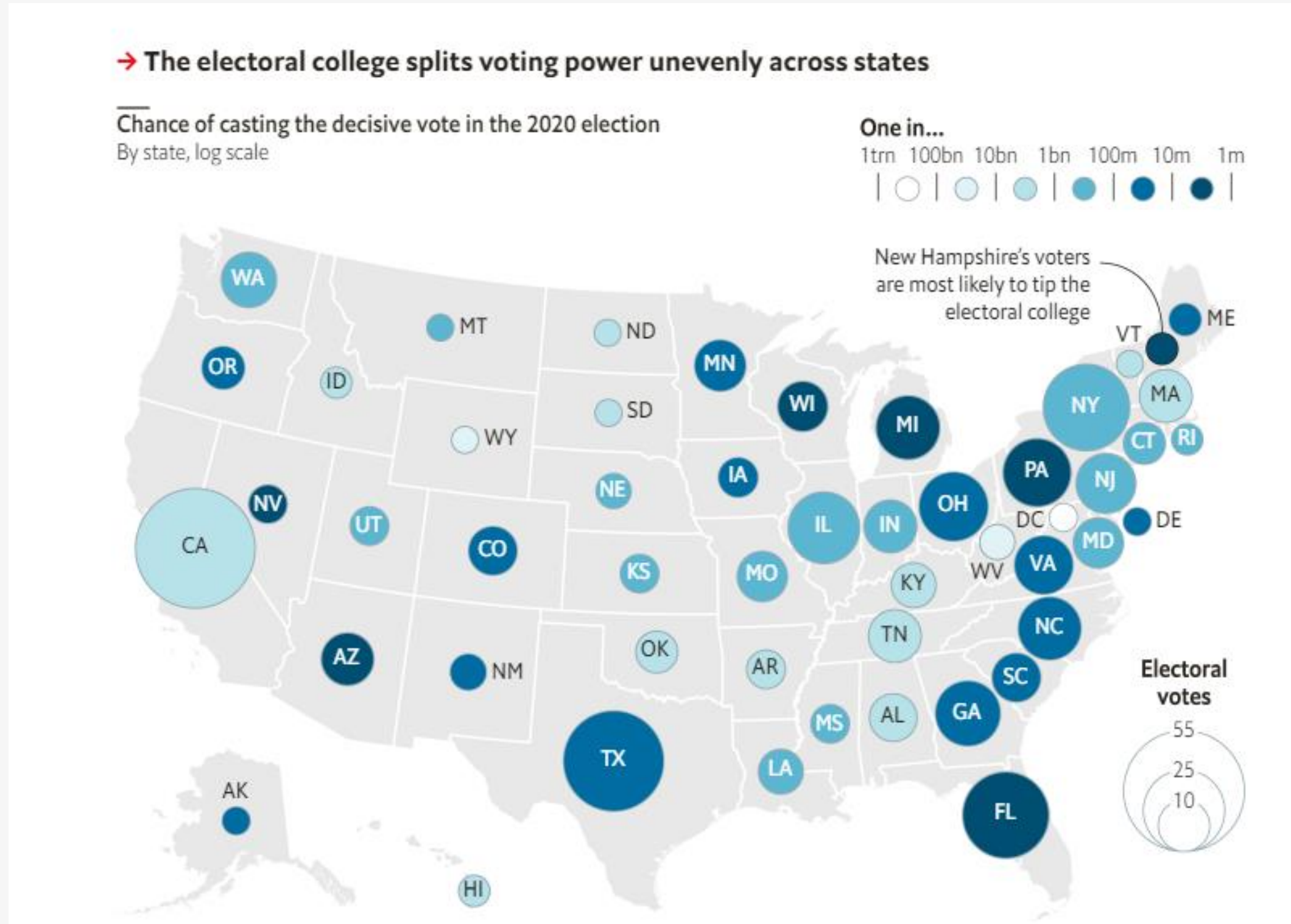


Source: <https://www.economist.com/graphic-detail/2020/12/01/the-recovery-of-low-wage-jobs-in-america-from-covid-19-has-halted>

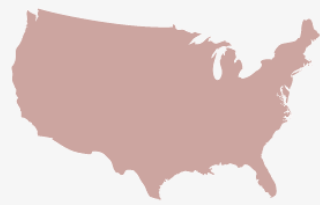


Source: <https://www.washingtonpost.com/graphics/politics/how-fair-is-the-electoral-college/>

Bubble (Proportional Symbol) Map



Source: <https://www.economist.com/graphic-detail/2020/08/15/how-americas-electoral-college-favours-white-voters>



GEOSPATIAL

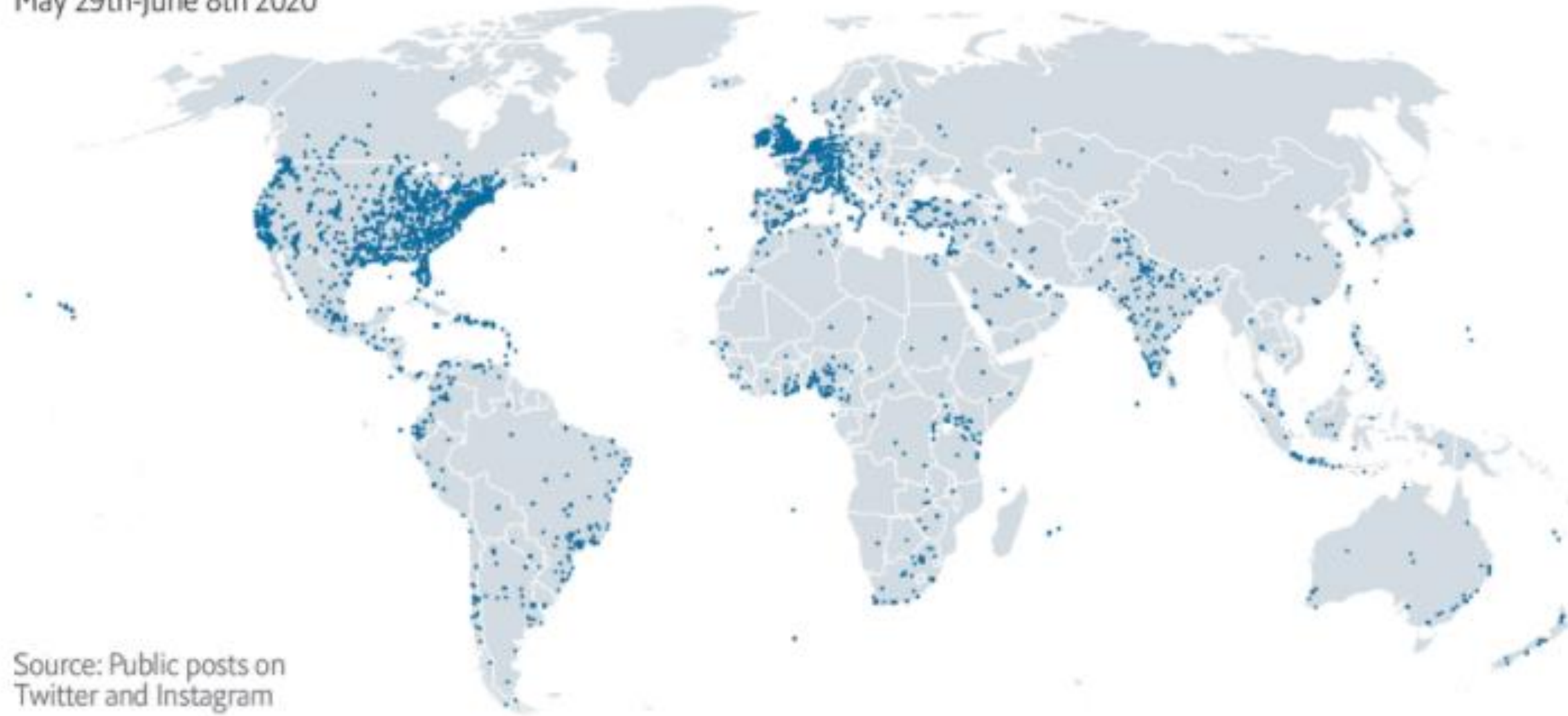


Dot Density

A person who mattered

Twitter and Instagram posts tagged #georgefloyd

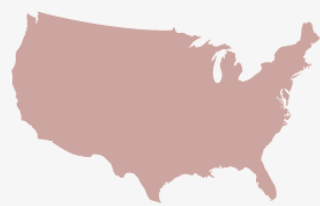
May 29th-June 8th 2020



Source: Public posts on
Twitter and Instagram

The Economist

Source: <https://www.economist.com/graphic-detail/2020/06/09/george-floyd-is-remembered-around-the-world>

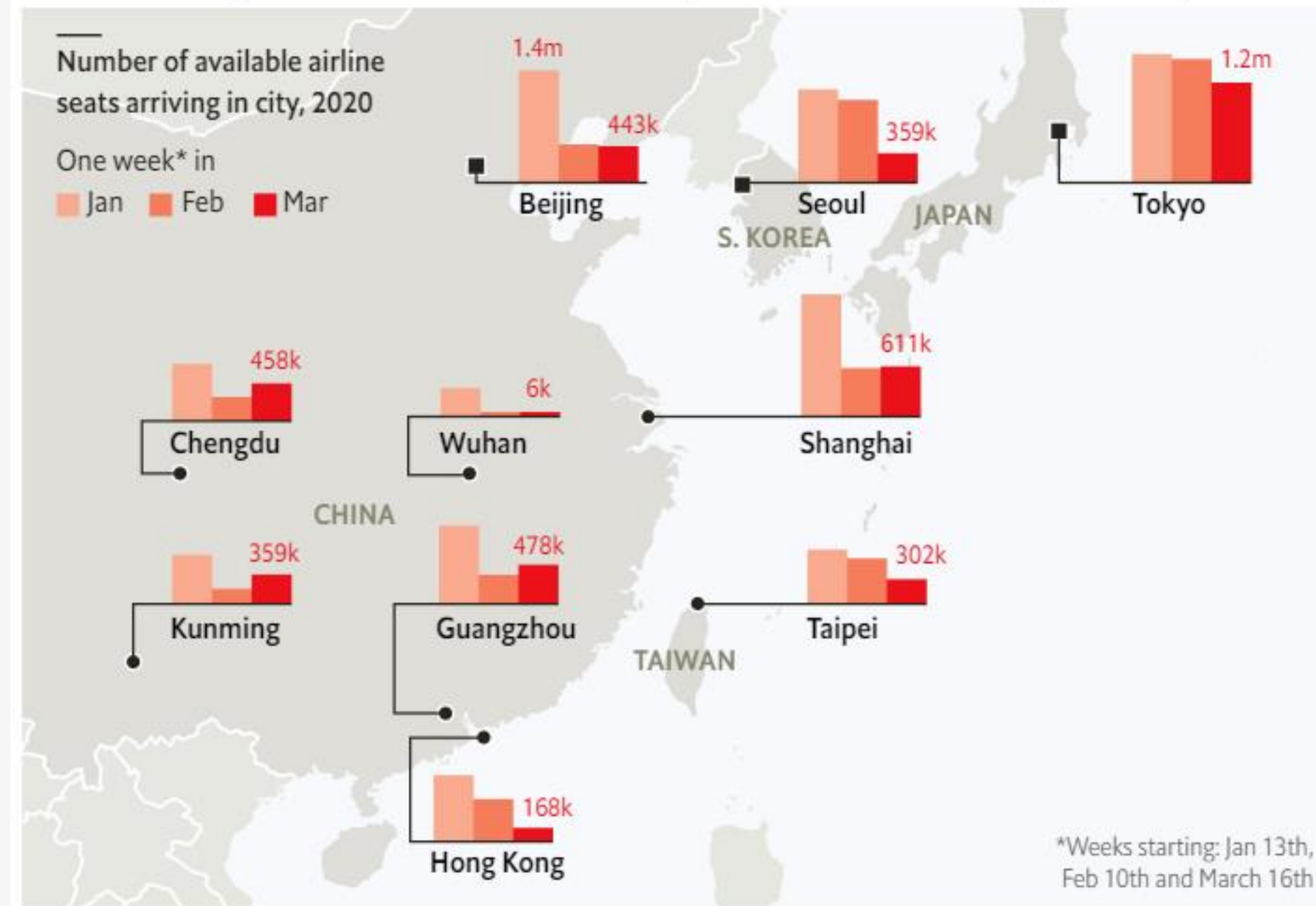


GEOSPATIAL

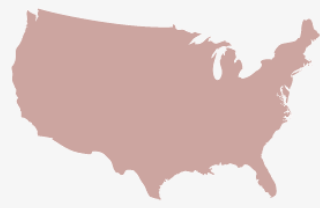


Bar Chart on Map

→ Inbound flights to some Asian cities fell by more than 75% during February

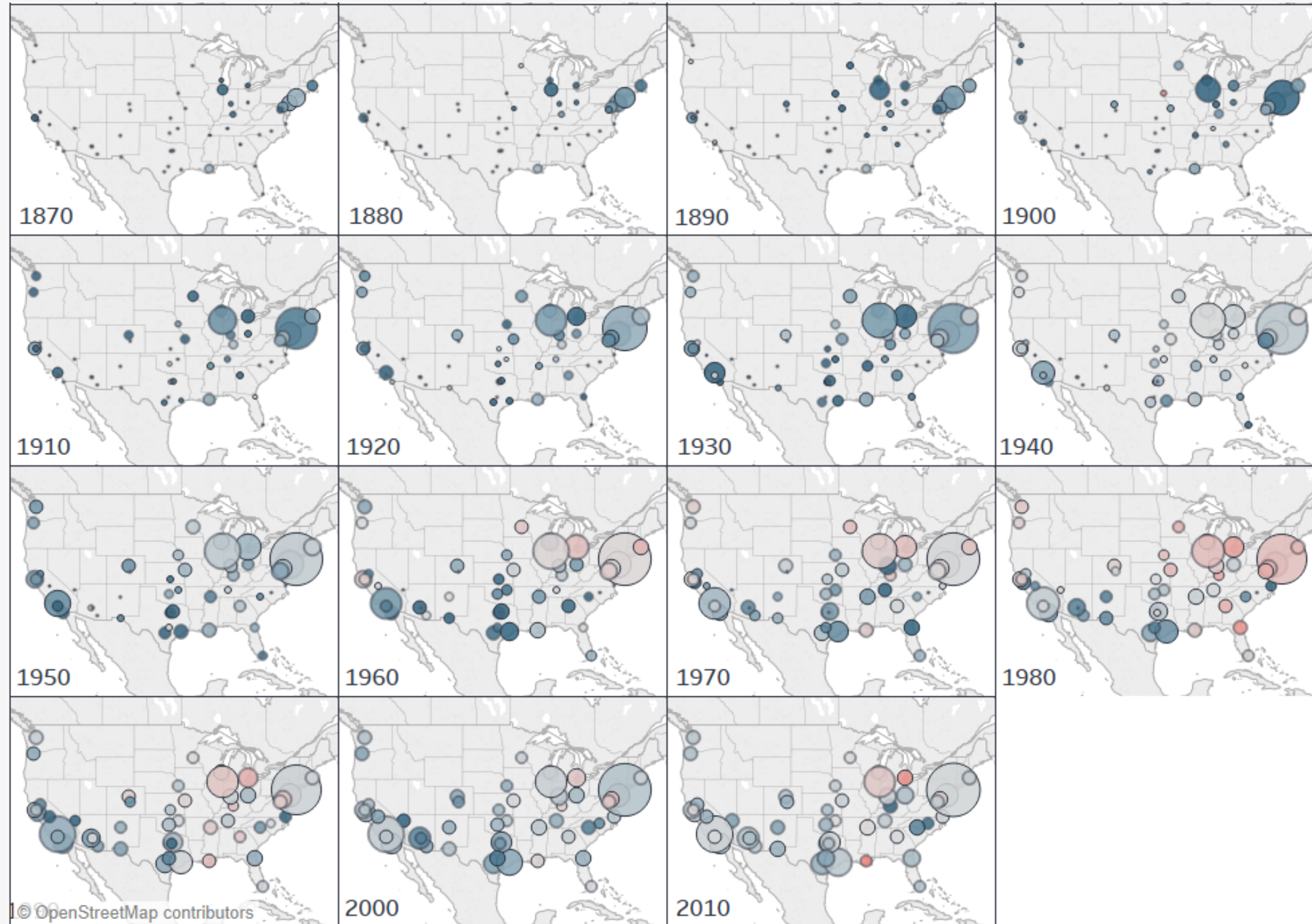


Source: <https://www.economist.com/graphic-detail/2020/03/21/as-western-flights-shut-down-chinese-routes-are-opening-again>

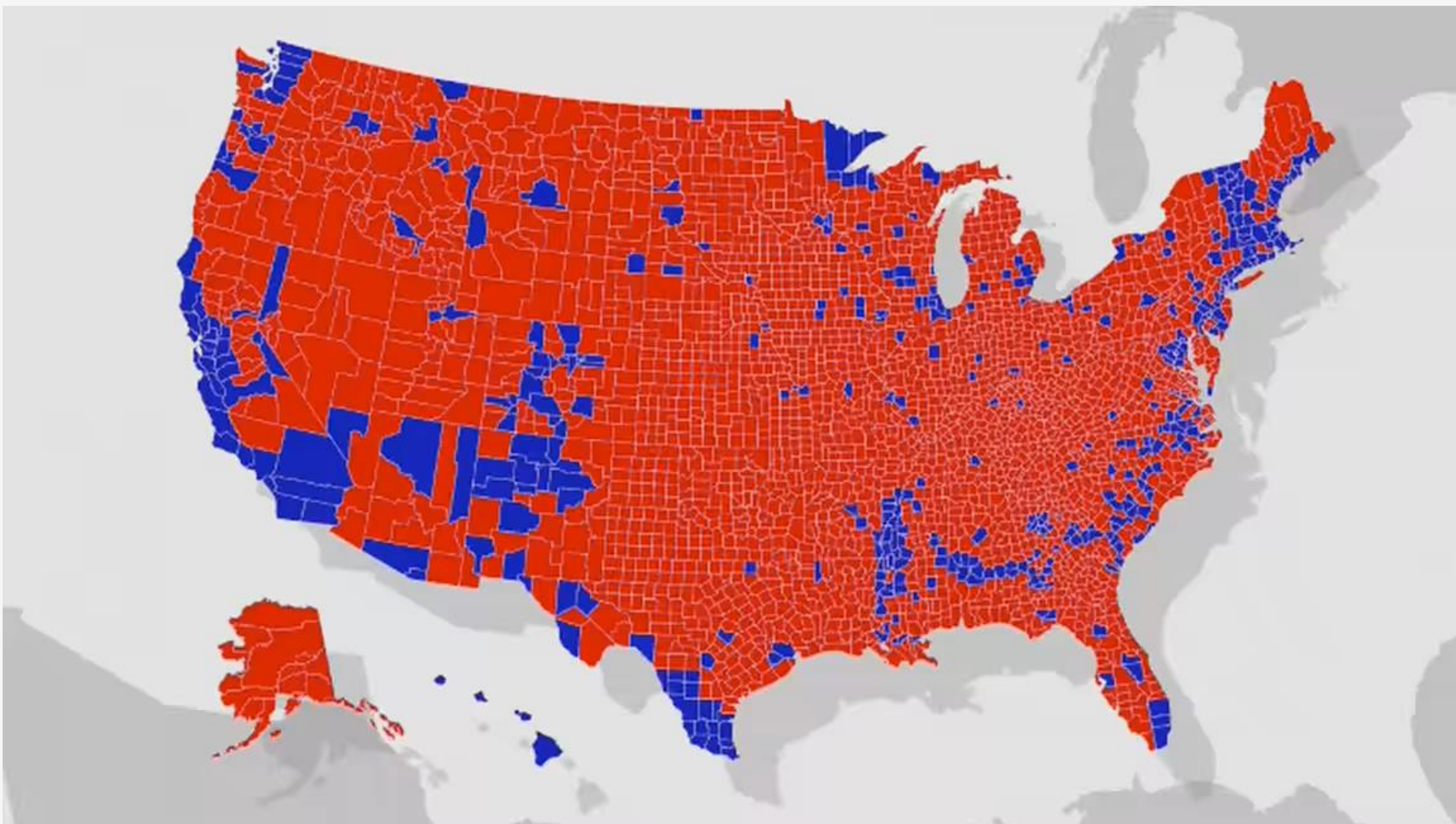


GEOSPATIAL

Small Multiple Map



Source: <https://playfairdata.com/how-to-make-trellis-tile-small-multiple-maps-in-tableau/>



Source: <http://try-to-impeach-this.jetpack.ai/>



EXERCISE

Use the data on retirement ages around the world to create a map in Tableau and answer the question: “How do retirement ages vary around the world?”.

You can use all the data points or some of them.

Provide a rationale for the map type you used.

Post your rationale and the map on Canvas.