

**git pull from the DSC106 public  
repo to follow along today.**

# D3.js Deep Dive

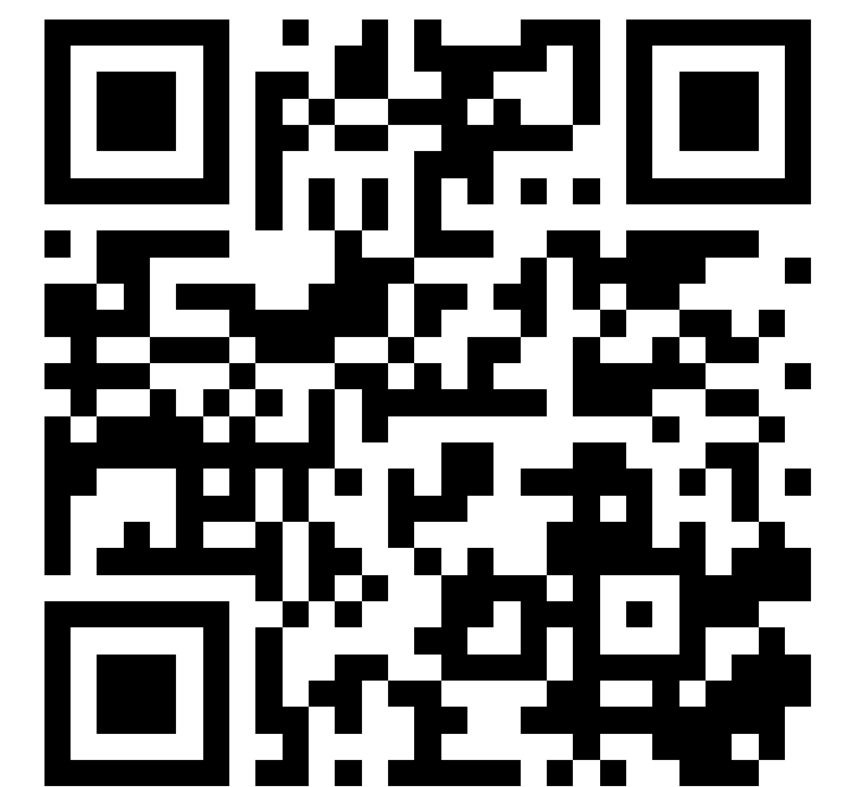
---

**DSC 106: Data Visualization**

Sam Lau

UC San Diego

Join at  
**slido.com**  
**#103 020**



# Announcements

Lab 5 out, due Friday.

Project 2 peer feedback due Friday.

Project 3 out, due on 2/16.

## **FAQs:**

1. Office hour policy: if you don't sign up for an OH slot but show up anyway, probably won't be able to ask your question.
2. One OH slot = one checkoff. If you have 2 labs to get checked off (e.g. slip day), you need to sign up for 2 slots.

# Project 2 Peer Feedback

Opportunity to get feedback from your peers.

"I like / I wish / What if?" format.

Worth 5% of your final grade, graded by completion.

# Project 3: Interactive Visualization

Choose a dataset (recommend reusing Project 2 data).

Create one interactive graphic to let readers explore the data.

E.g. panning, zooming, brushing, annotations, etc.

Must use D3.

Must complete in teams of 2-3.

Pro-tip: Explore lots of options using pen-and-paper. Then, keep scope of project very tight! Do one thing well.

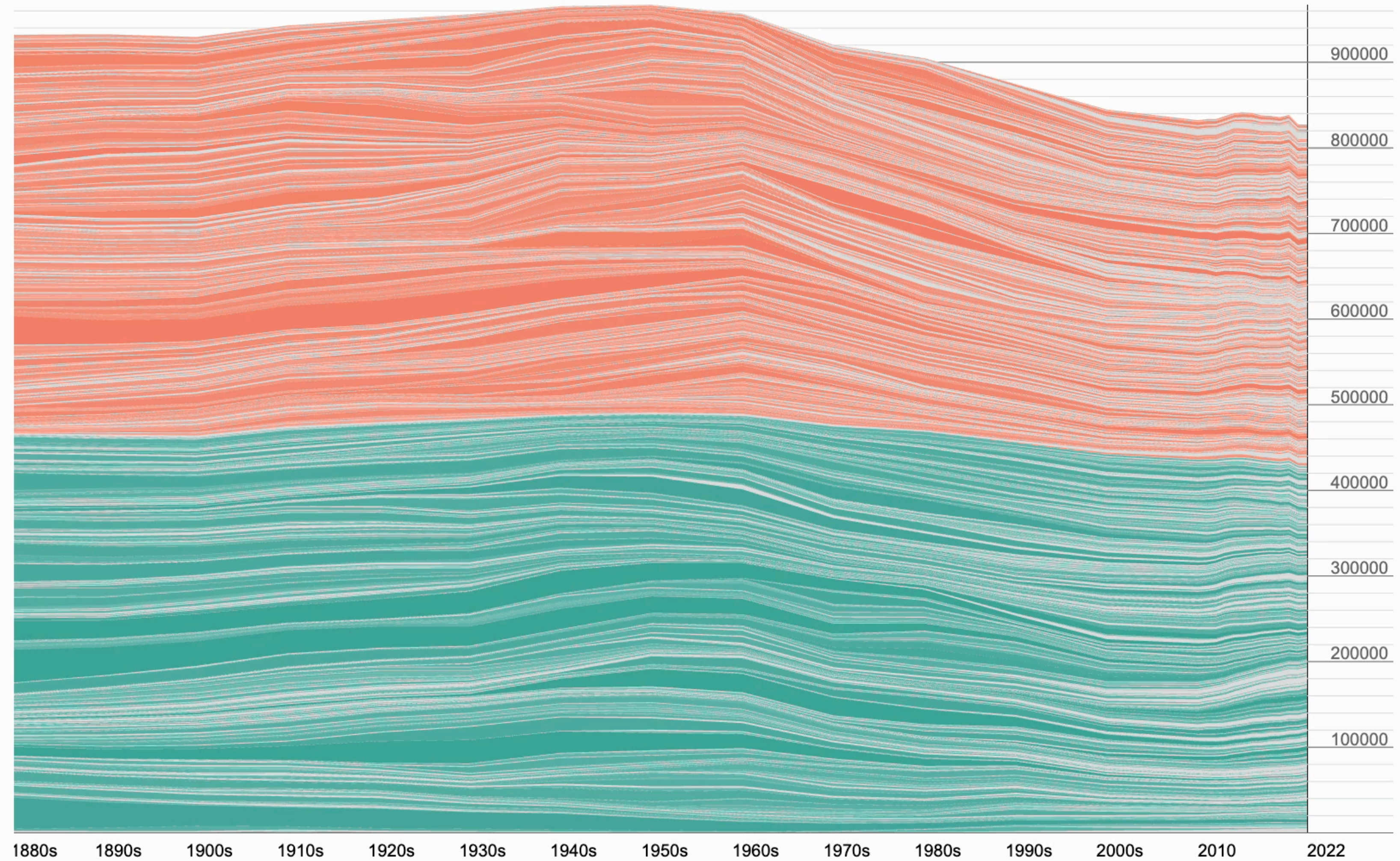
Starts with Ends with Contains Exact Match

Girls Boys Both

↑ Type a name

Total Compare

per million births



<https://namerology.com/baby-name-grapher/>

# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

Drawing axes

Adding interactivity

# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

Drawing axes

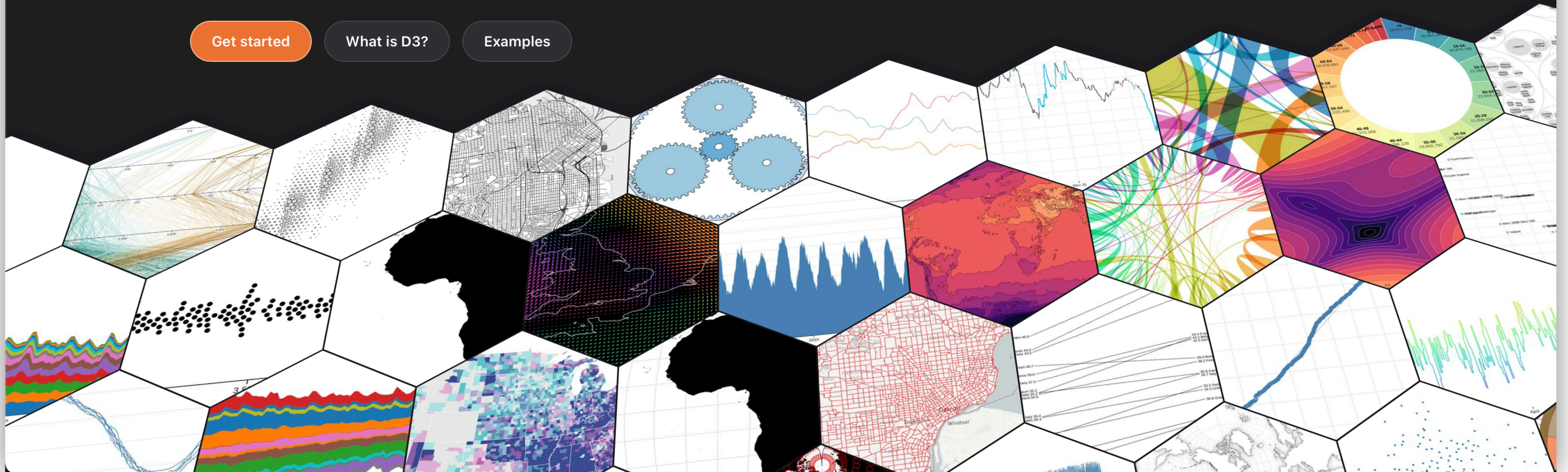
Adding interactivity

# The JavaScript library for bespoke data visualization

Create custom dynamic visualizations with unparalleled flexibility



- Get started
- What is D3?
- Examples





# The JavaScript library for bespoke data visualization

Create custom dynamic visualizations with unpaired data

Bespoke = fully custom



- Get started
- What is D3?
- Examples

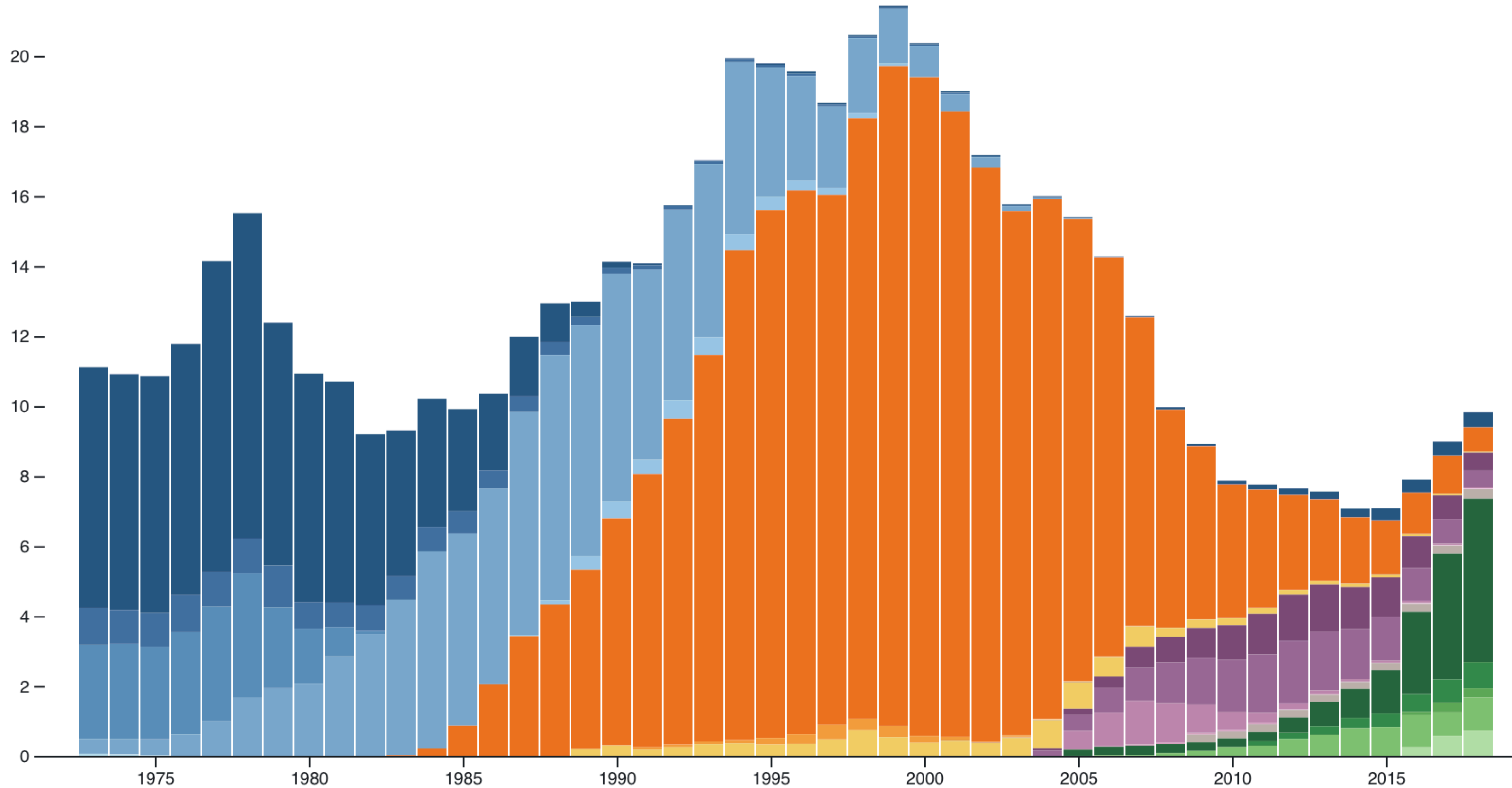


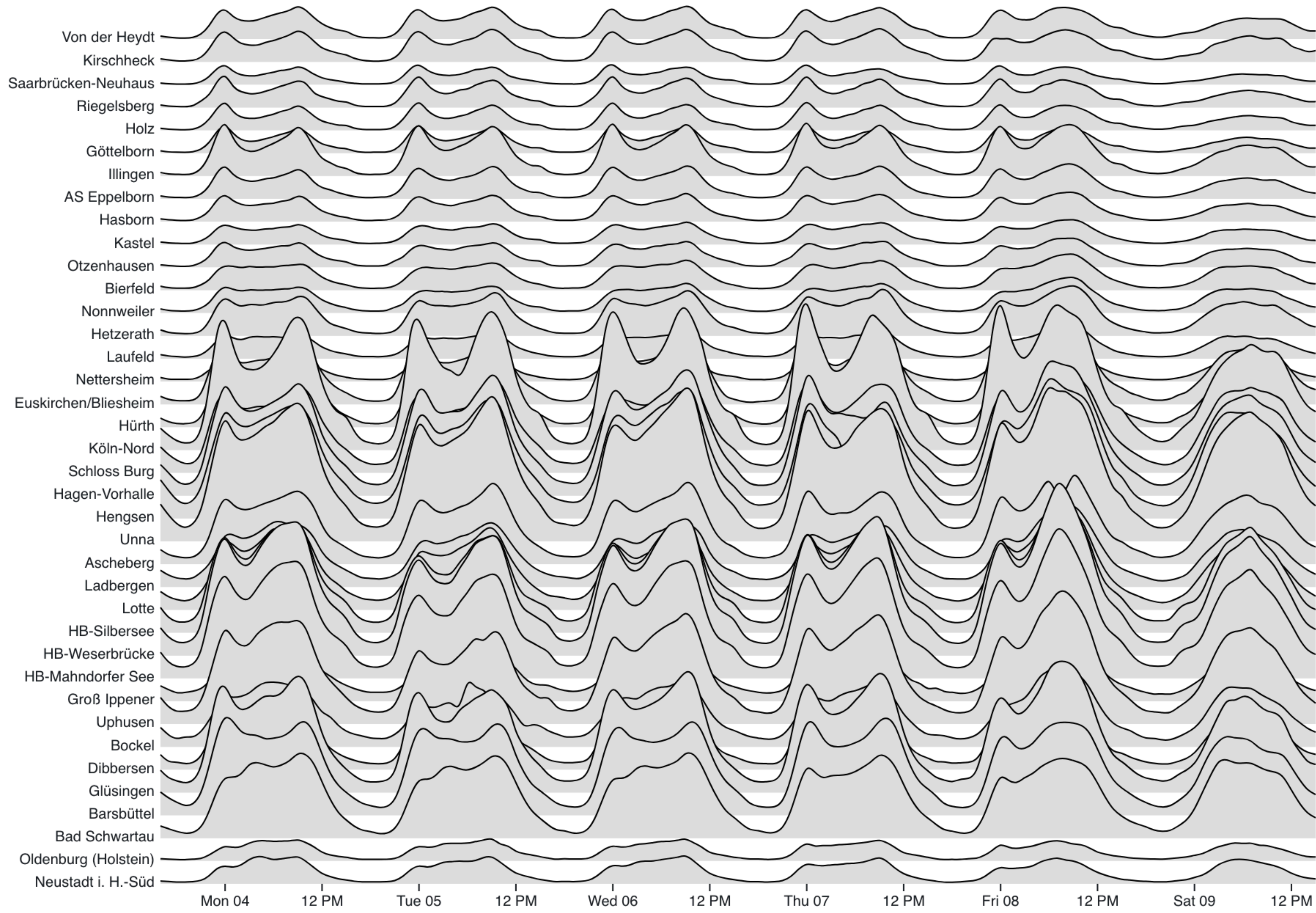
# Revenue by music format, 1973–2018

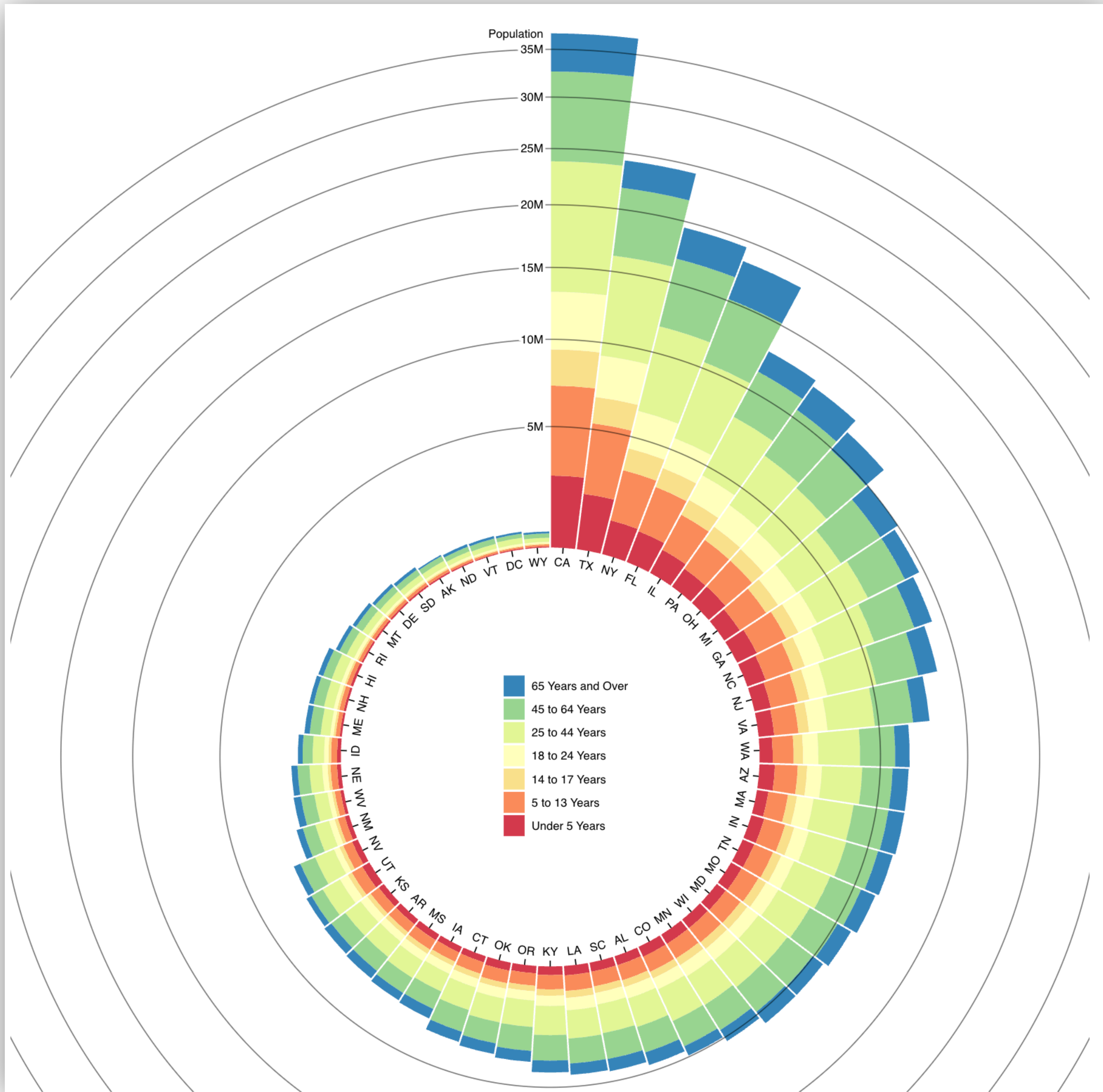
Data: [RIAA](#)



22 – Revenue (billions, adj.)

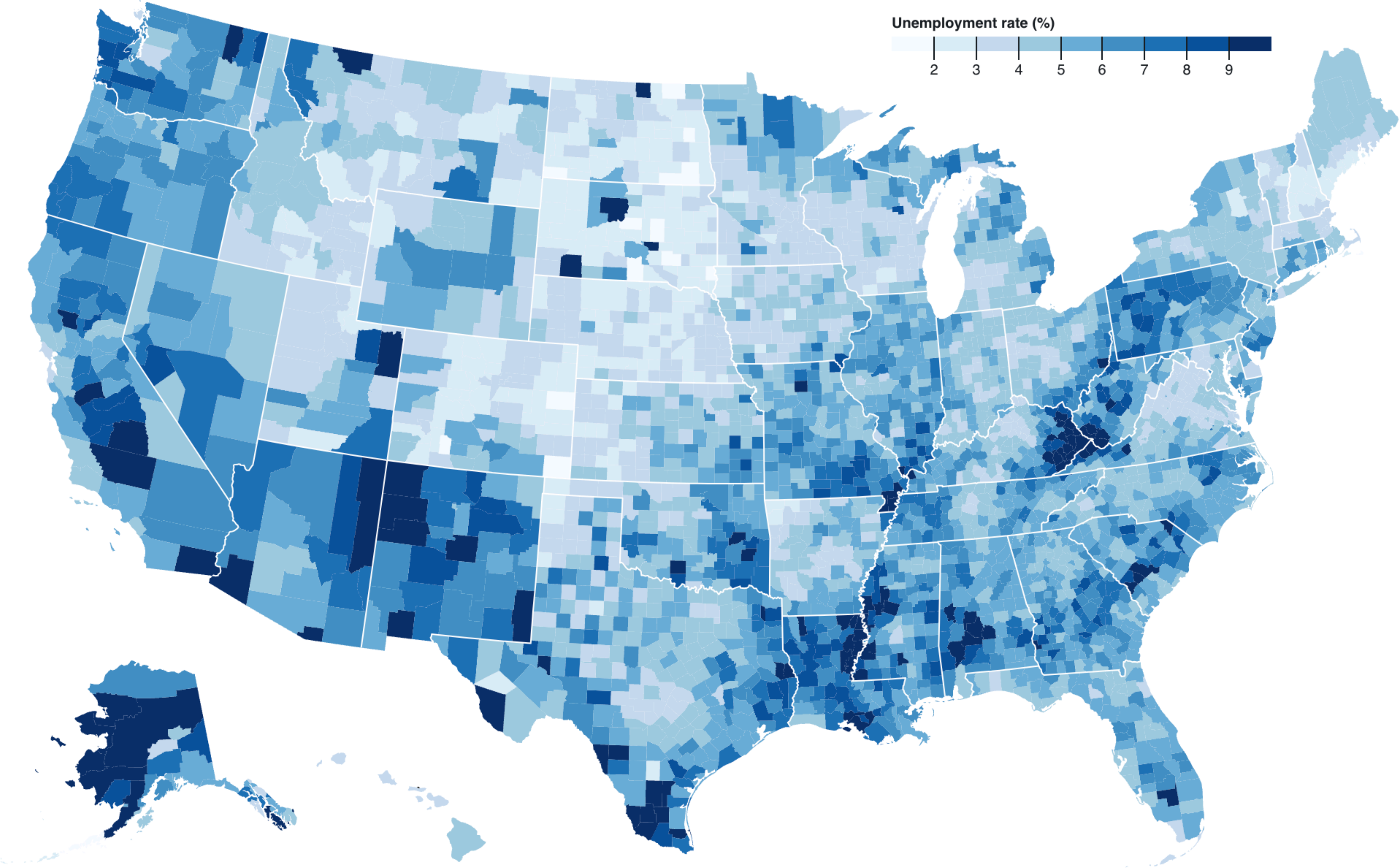






# Choropleth

Unemployment rate by U.S. county, August 2016. Data: [Bureau of Labor Statistics](#).



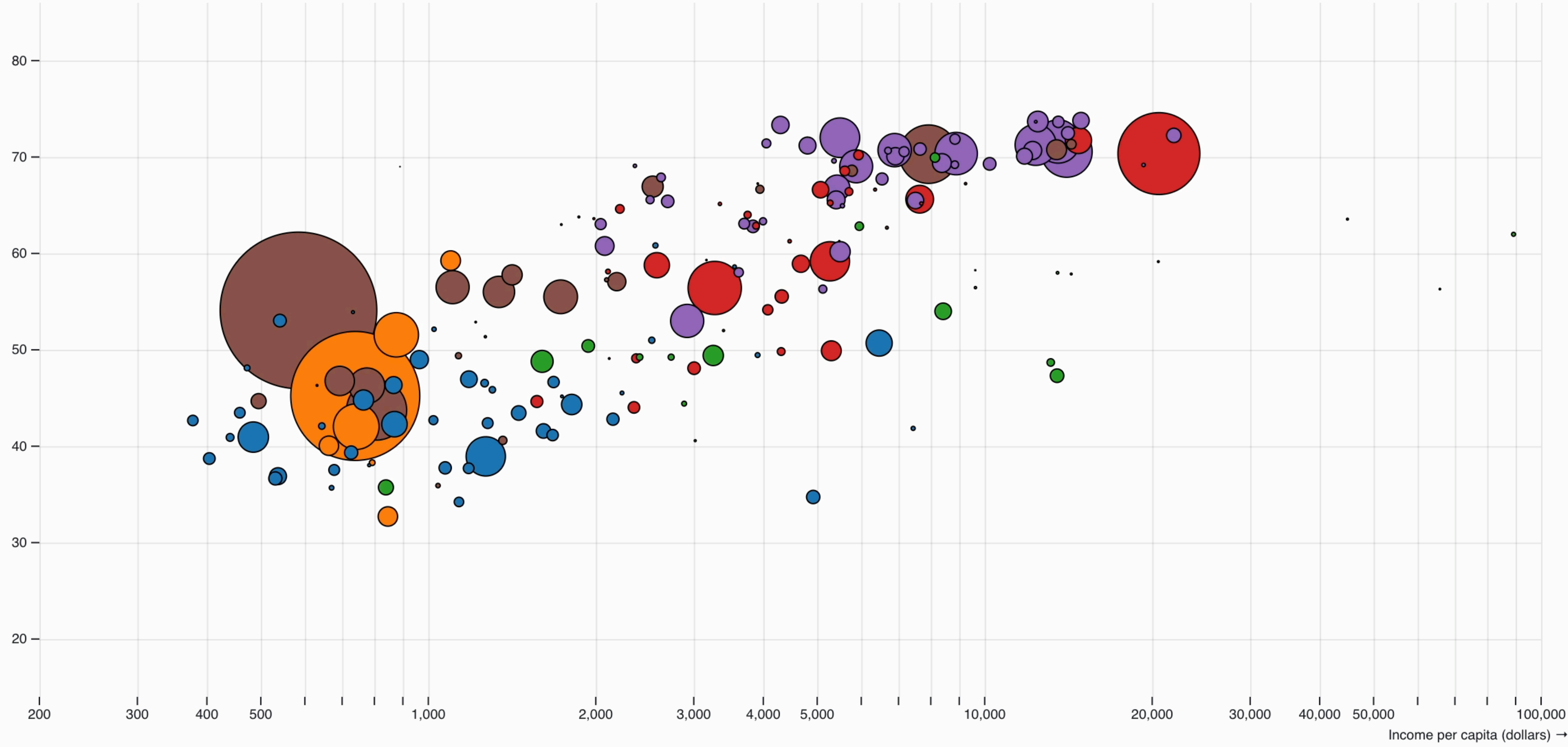
Pause



1964

- Sub-Saharan Africa
- South Asia
- Middle East & North Africa
- America
- Europe & Central Asia
- East Asia & Pacific

↑ Life expectancy (years)



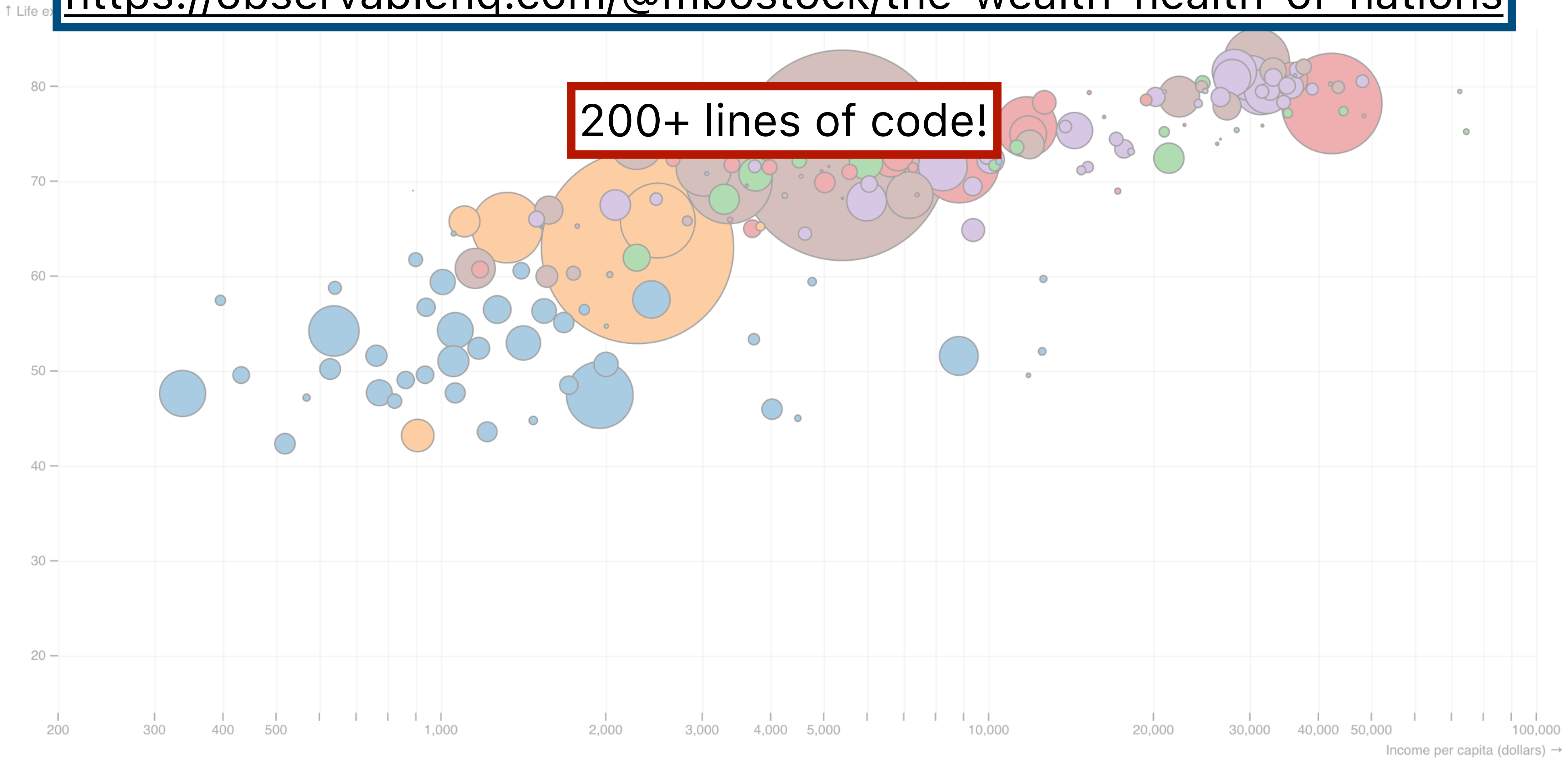
Play

2005

Sub-Saharan Africa South Asia Middle East & North Africa Americas Europe & Central Asia East Asia & Pacific

<https://observablehq.com/@mbostock/the-wealth-health-of-nations>

200+ lines of code!



# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

Drawing axes

Adding interactivity



# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

Drawing axes

Adding interactivity

**date**                      **value**

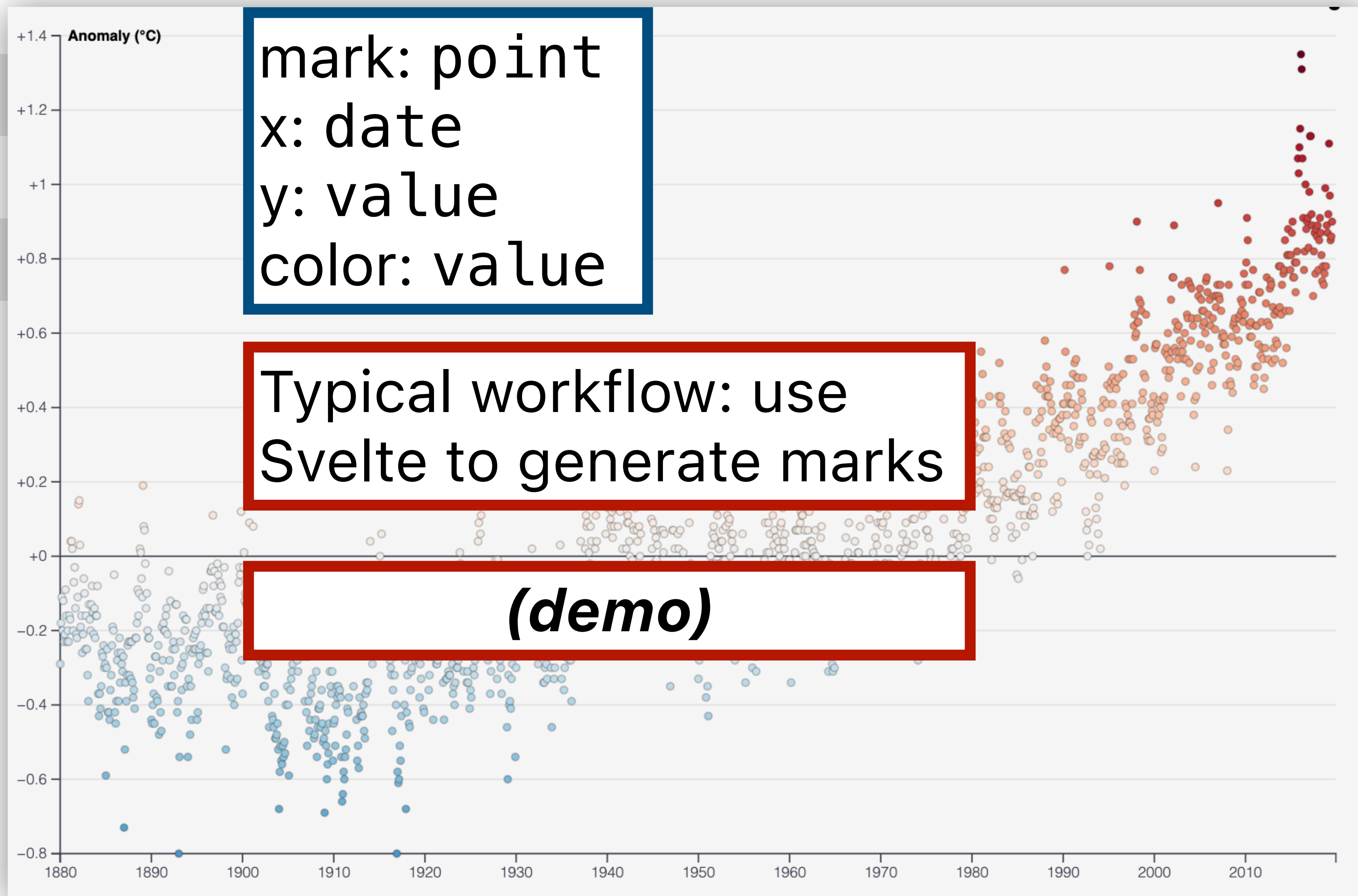
Dec 31, 1879    -0.29

Jan 31, 1880    -0.18

Feb 29, 1880    -0.11

Mar 31, 1880    -0.2

...



# Diving into D3

What is D3 good for?

**Drawing marks**

Encoding channels

Drawing axes

Adding interactivity

# Diving into D3

What is D3 good for?

Drawing marks

**Encoding channels**

Drawing axes

Adding interactivity

**date**                      **value**

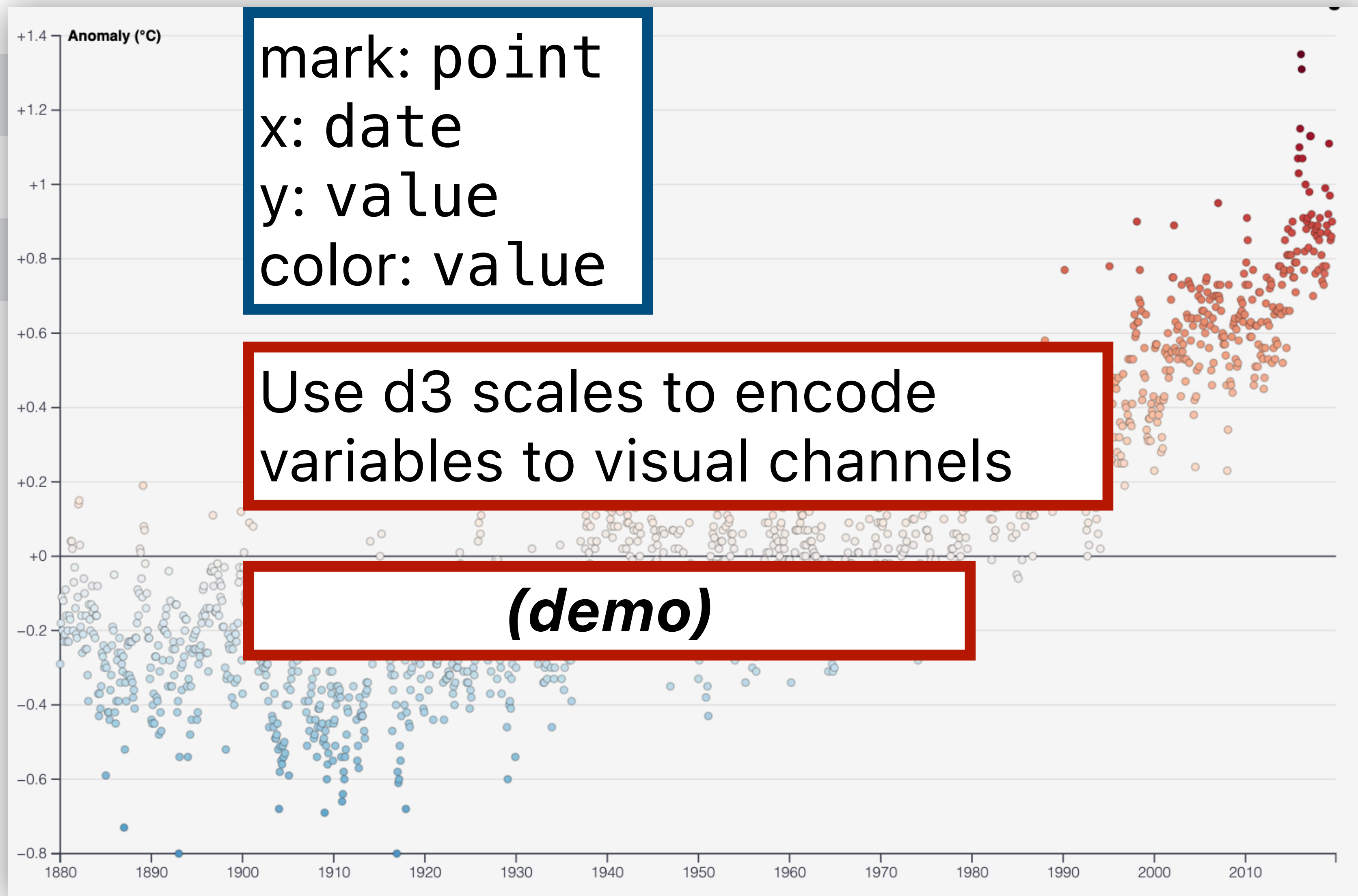
Dec 31, 1879    -0.29

Jan 31, 1880    -0.18

Feb 29, 1880    -0.11

Mar 31, 1880    -0.2

...



# Diving into D3

What is D3 good for?

Drawing marks

**Encoding channels**

Drawing axes

Adding interactivity

# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

**Drawing axes**

Adding interactivity

**date**                      **value**

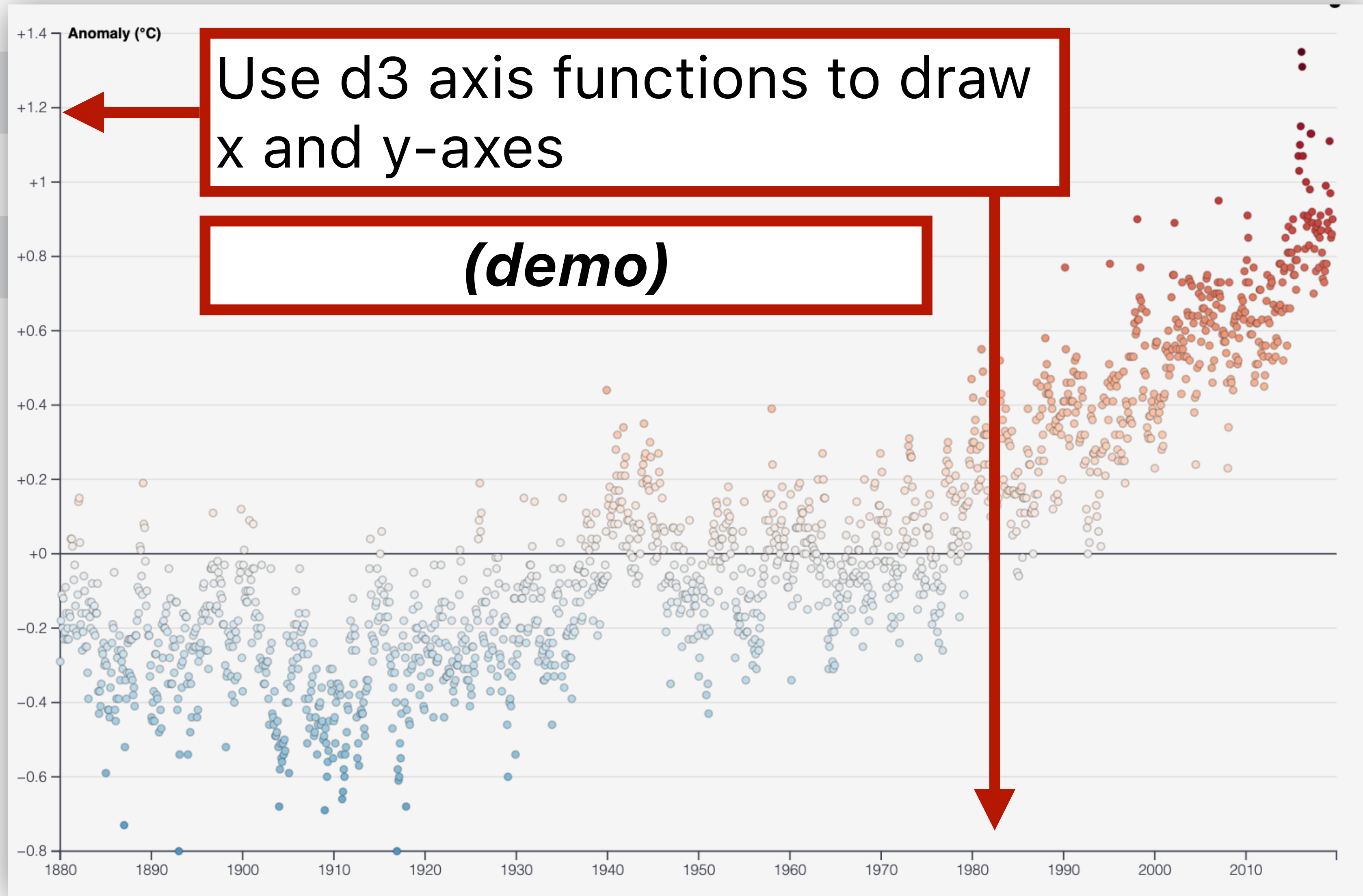
Dec 31, 1879    -0.29

Jan 31, 1880    -0.18

Feb 29, 1880    -0.11

Mar 31, 1880    -0.2

...





# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

**Drawing axes**

Adding interactivity

# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

Drawing axes

**Adding interactivity**

**date**                      **value**

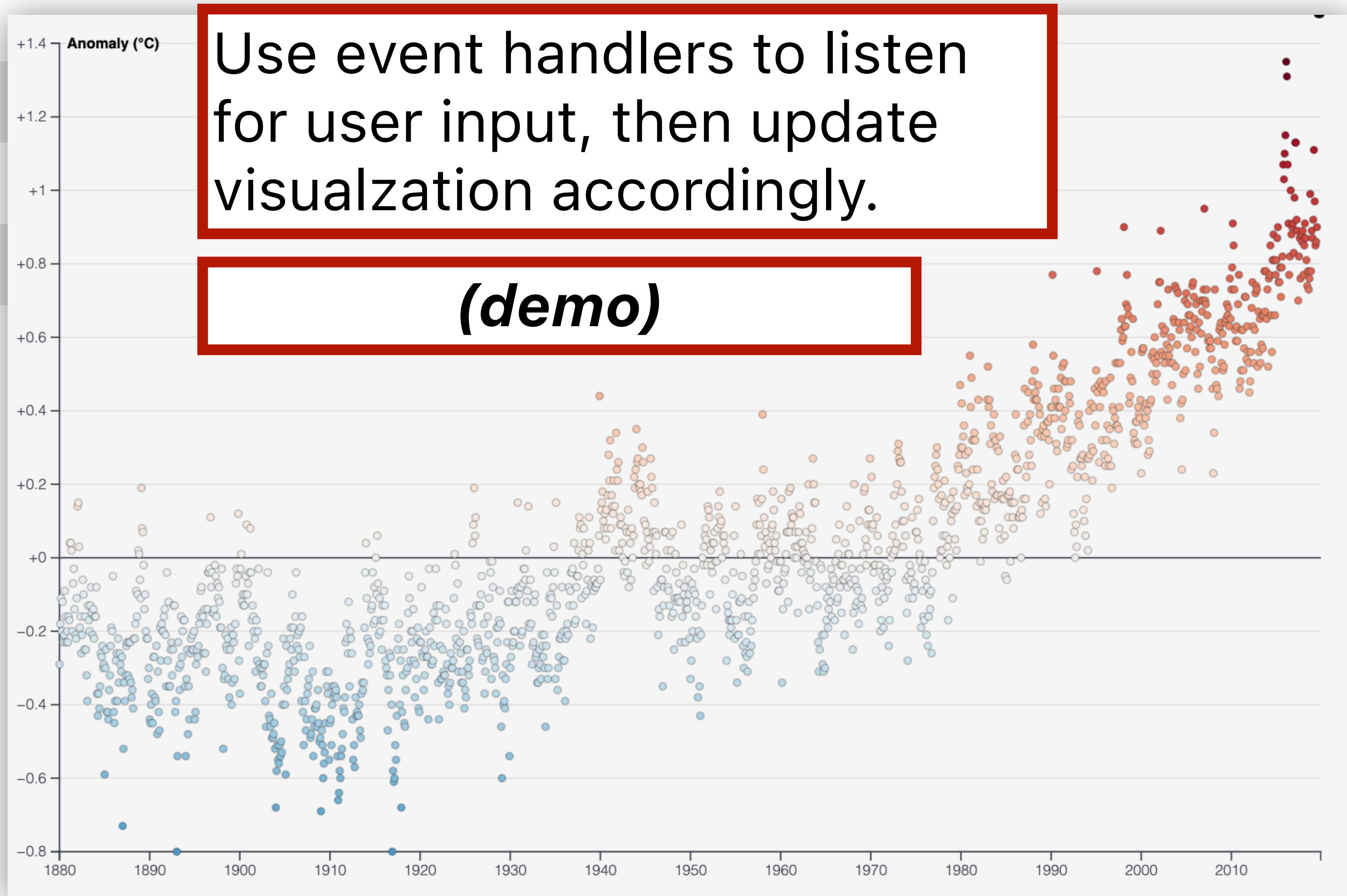
Dec 31, 1879    -0.29

Jan 31, 1880    -0.18

Feb 29, 1880    -0.11

Mar 31, 1880    -0.2

...



# Diving into D3

What is D3 good for?

Drawing marks

Encoding channels

Drawing axes

Adding interactivity

# You Try: Understanding D3 Code

Visit the D3 website ([d3js.org](https://d3js.org)), click on Examples in top navbar.

Choose one visualization that looks interesting (but not too complicated).

Describe the code in English.

Respond: What do you feel like you understand well about D3?

What do you feel like you don't understand well?

Join at  
**slido.com**  
**#103 020**

