

Visualizations

Week 5: Calling Bullshit

Thoughts on last week's reading?

- [Simpson's paradox](#): an interactive data visualization from VUDlab at UC Berkeley.
- Case studies: [Musicians and mortality](#) and [Track records](#)
- *Optional* (academic article): Koehler, Jonathan J. [One in Millions, Billions and Trillions: Lessons from the People V. Collins \(1968\) for People V. Simpson \(1995\)](#), Journal of Legal Education (V. 47).

Misleading Graphs

Bad Graphs:

- Incomplete data
- Leaving gaps/changing the scale in vertical axes
- Uneven shading/colors
- Unfair emphasis on some sections
- Distorting areas in histograms
- Use of 3-dimensions instead of two

Good Graphs:

- A title
- A labelled axis
- A key

Data visualizations tell stories. Relatively subtle choices, such as the range of the axes in a bar chart or line graph, can have a big impact on the story that a figure tells.

Images and their Origins

Every picture has its own story, and as a consequence, every picture has a different way to validate it. In many cases you won't be able to do so.

[Google Inside Search](#) or [TinEye Reverse Search](#) are good places to start.

[Photo Tampering Throughout History](#)

- What can I do to verify the accuracy of an image?
- What's an indication of falsifying images?
- What can trigger doubt that an image might be inaccurate?

Backtrack Journal

Pick an online image that stood out to you this week and find its origins:

- Where did you first see it?
- Who (or what) brought it to your attention?
- Who created it?
- Also try to compile links from the originating content to your eyeballs (and where you shared it).



Assigned Reading

- Good and Bad graphs
- Tools and tricks: Misleading axes

- Optional: Edward R. Tufte. “Chartjunk: vibrations, grids, and ducks.” The Visual Display of Quantitative Information, 1983.

Next Week: Predatory publishing,
scientific misconduct, and algorithms
