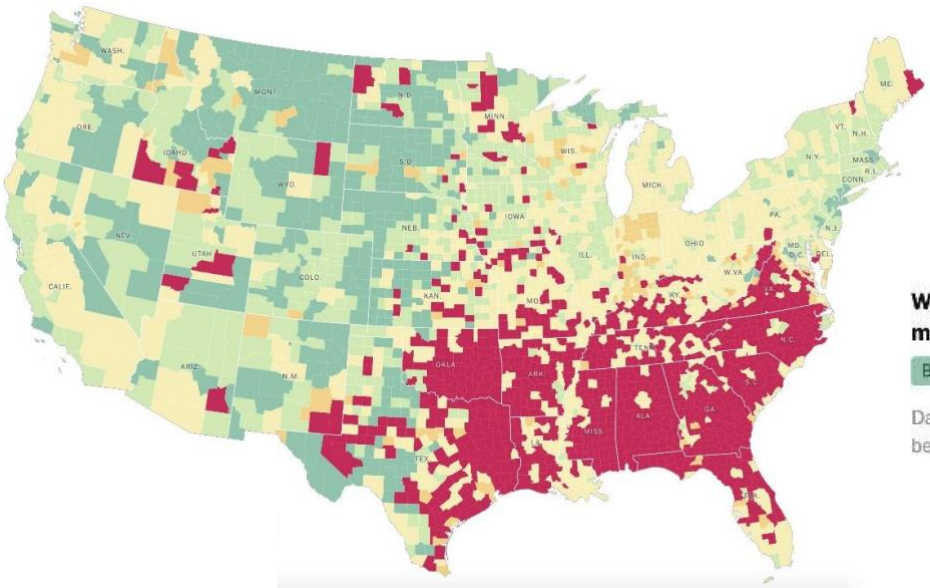
Center for Science Outreach

Data Visualization of Coronavirus

- Data can provide information to support an argument.
- Data can be **quantitative** (numeric) or **qualitative** (non-numeric, descriptive). See this link for more details!
- **Graphs, tables, charts and maps** can all be used to visualize data, but the format can influence how people understand (or misunderstand!) the data.
- Maps have been used a lot recently to show information about COVID-19 in different locations, but **not all maps are created equal**. We will explore how maps are used to present and/or misrepresent data here.

Why do these maps matter?

Many places have "Safer at Home" orders that aim to reduce the spread of COVID-19. However, some people have been unable or unwilling to reduce their travel. Consider this map from early April that measured when people started "staying home."



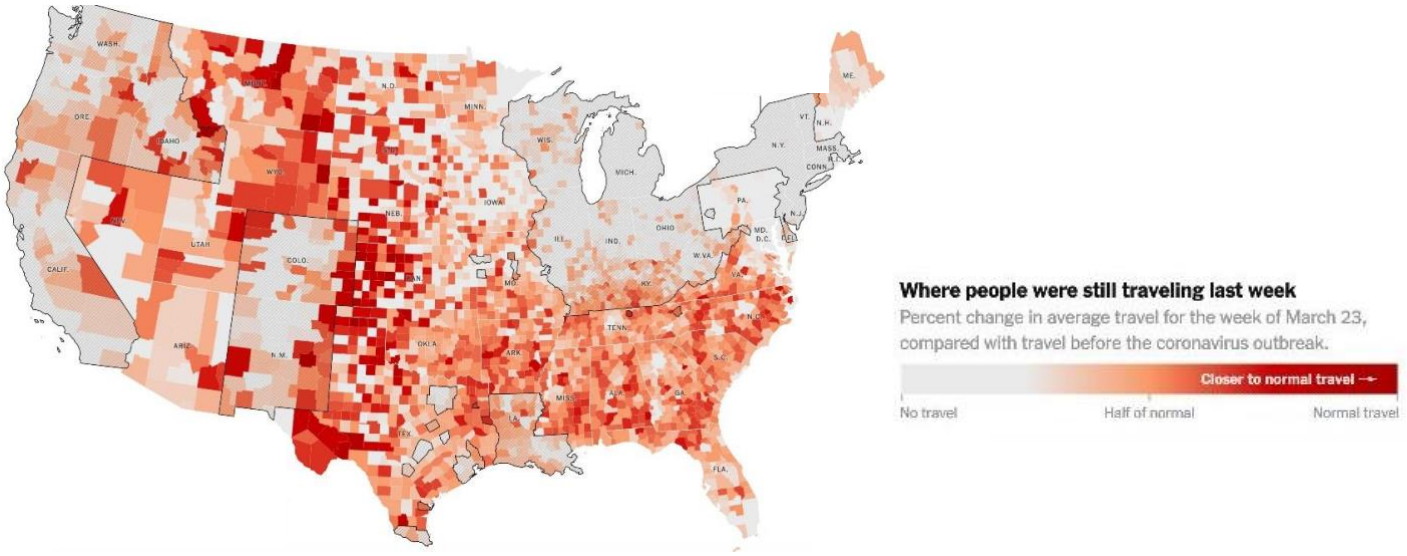
This map sparked a lot of controversy and some bad-mouthing of the Southern states. Based on what is depicted here, does it elicit an emotional response in you? What assumptions do you make or do you think other people make about how these states responded to the Coronavirus pandemic? Where do you think people were traveling to?

Help us collect some data on this activity by completing a short survey here! Thanks!

Interested in more data?

Explore Google Trends to see what people are Googling! Example: Cupcake Search Results

You can also check out data that focuses on global populations, Americans, or the city of Nashville



The map above is visualizing similar data. Does this map elicit the same response as the first? Do you think Southern states responded differently to the pandemic than other states? Does one map give more information than the other? If so, how? The original article is here.

Risks for Bias in Data Visualization

Science and data are supposed to be unbiased. However, scientists are people and people have biases. Consumers of data also view the data through the lens of their own bias. If data is presented in a biased manner, it may misrepresent arguments and lead to misinformation. We have to be careful when communicating data that we are honoring it by visualizing the true results, not what we want people to see. Check out this article on bias, misinformation and techniques for data visualization, or watch this short video.

Data Scientist vs Data Analyst video

Careers in Data

Thomas Edison said, “The value of an idea lies in the using of it.” It does society no good to gather data if we can’t read it or use it to improve our quality of life in some way. The media often uses data to influence our decision-making, so it would benefit us to have the basic skills to understand it. Data science as a career field is also booming, as someone has to collect and process our data. Check out this video on data careers.

Meta question: what did you think of the ways data was represented in the video?