

Data Humanism in Visualization

Summer 2022

Guidelines for making accurate and informative graphs have long existed. These include choosing the right type of plot, selecting a good color palette, adding informative axes labels, and so on. These guidelines are based on our perception of length, area, shape, and color, and on the kinds of data being plotted. More recently, additional guidelines are being created that have an equity lens that aims to avoid reinforcing stereotypes and biases conveyed through choices of graphing elements. A core consideration is to bring empathy into data visualization by considering how the communities whose data are being plotted and the target audience will perceive the graphs. Today, more people are interacting with visualizations in the media. Unlike in the past, the community of people on which the data were collected are reading and interpreting plots. These changes have led to a more in depth study of how bias can enter into a plot through the symbols and language used in its presentation.

1. Giorgia Lupi carried out an unusual project where she and another information designer mailed postcards to one another every week for a year. Each week, they agreed on a topic about themselves, collected data, drew a graphic, and mailed it to each other. This project led Lupi to identify what she calls “data humanism” in visualization.

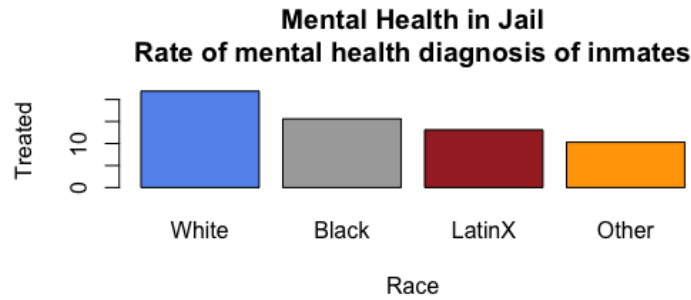
Watch the short TED talk by Giorgia Lupi. What does Lupi mean by *data humanism*?

2. Read the 4-page paper “Applying Racial Equity Awareness in Data Visualization” by Schwabish and Feng of The Urban Institute. (Also available as a blog post). Note that the authors are not focusing on trickery in plots, where the visualization is purposefully distorting or hiding the truth. They are discussing design choices that have a more inclusive approach to the people represented by the visualization.

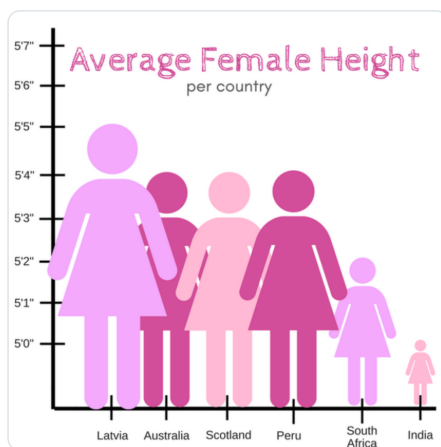
Summarize each of sections 2 through 9 of the paper into one to three main points.

Consider the following plots from a data humanism and equity perspective. Identify shortcomings of each plot and suggest how it might be fixed.

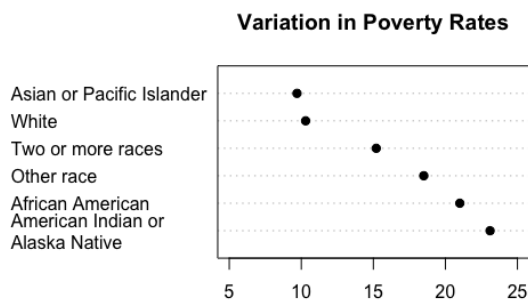
3. For background, according to Kaba et al, “the care of persons with mental illness in the United States is inextricably linked to the criminal justice system. Approximately one third of these persons have an identified mental illness diagnosed before or during incarceration. Treatment and discharge planning for this population represent considerable challenges.” Do you see any problems with color, labels, ordering?
4. The figure below breaks several of the traditional guidelines for graphics, as well as the new standards. Compare the icon for Lithuania and India. How much bigger is the



Lithuanian? That is, how many icons for India would fit inside the one from Lithuania. Does that make sense? What is causing this misrepresentation?



- Below, the percentage of individuals living below the poverty line are plotted according to race. Bring what you know about the composition of these categories to suggest a possibly more informative plot.



- Use your summary of Schwabish & Feng and the experiences that you just gained from critiquing and fixing plots to create a list of five equity-focused guidelines for visualization. Your list should include the topics: language, order, color, and comparisons. They may combine ideas from more than one of the eight sections in the article.