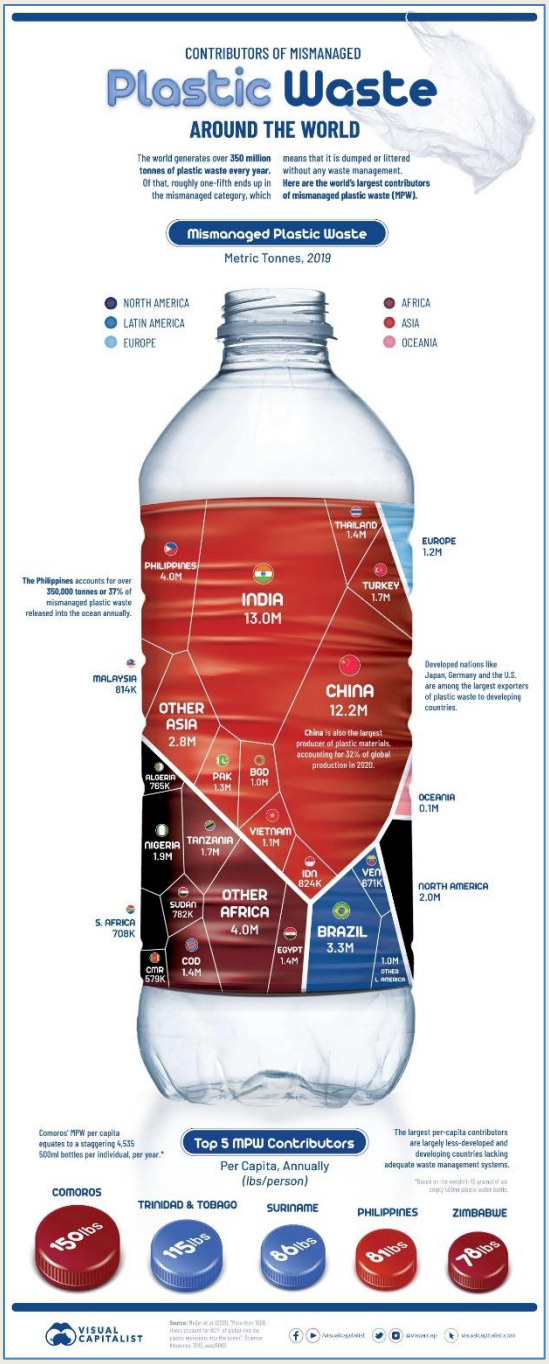
In Class Activity – November 17th, 2022

Evaluating an Information Graphic



What is the graphic's purpose? Is it designed to present a quick overview, give prompts for deeper analysis, create talking points, etc.?

The purpose of the graphic is to show the mismanagement of the disposal of plastic waste across the world. Each continent has a specific color code. It is reasonable to assume that this infographic was designed with a deceptive purpose. It is unclear who the audience is supposed to be.

Are there chart types or visualization tropes that you recognize?

The top 5 Mismanaged Plastic Waste (MPW) per capita (per person) are visually shown in a format that is similar to a bar chart. Another way to view it is through the lens of a bubble map. The size of the bottle caps is the weightage of waste assigned to each country as a percent of total.

Are there custom, novel, or unconventional chart types that you recognize? If so, how do you think they were created?

The type of visualization used in the infographic is 'Voronoi Tree Map'. I believe there were a number of tools that were used to create this infographic. The tree map was possibly created in Python and then an editing software such as Adobe Photoshop was used to mold the tree map into the shape of a bottle. And then the infographic was designed using a tool such as Canva.

Does “actual data” underlie the graphic? Does it reveal the data? Is the data transparent? Is it properly sourced?

Yes, actual data does underlie the graphic. The infographic does a good job at revealing numbers and data points, but the scale has not been properly defined. Therefore, it is hard to comprehend the relationship between the data points. We cannot make an educated guess to determine if this infographic covers all the available data or if it is only showing a part of it. The data comes from an environmental study that was conducted in April 2021 - https://www.science.org/doi/10.1126/sciadv.aaz5803

Who is its audience? How much graphical or statistical literacy will they need to read it? Is this graphic designed for a lay or professional user? Policy makers?

The audience for this infographic is possibly the general public. In a more realistic sense, I believe that this infographic will be distributed at an environment convention. But, as for the actual intended audience; it is not possible to make any accurate assumptions by just looking at the infographic. That said, the infographic is easy to read. That does not mean that it is easy to comprehend. On first glance, this infographic paints a rather deceptive picture. And it takes a minute to truly understand that the data is not representing the countries that produce the plastic waste but rather is displaying the mismanagement of the disposal of plastic waste. One would need a basic understanding of visual media and mathematics to understand this infographic. I think it is designed in this way to give lay users the wrong impression of majorly Asian countries. I would hope that policy makers are able to discern the not-so-subtle issues in this infographic before making important policy decisions.

Is there anything that looks misleading? Is anything missing?

The scale that is used for each country’s section on the tree map is not linear. The size of the section that each country gets do not add up. It is not known if this infographic covers every country and if not, which countries are left out and why. The purpose behind creating this infographic is not very clear. The authors of this infographic have built deceptiveness into the title of the infographic. They are clearly focusing on the term ‘Plastic Waste’ but are trying to

underplay that the fact that the infographic showcases data about the mismanagement of plastic waste by countries as opposed to actual plastic waste.

Is it trying to be persuasive? Is there an argument? If so, is it effective? Are the designer's biases clear? How could it be impactful?

I have covered these points in my previous answers. But just to recap, the infographic is trying to be persuasive. It is trying to push the narrative that the following countries like China, India, and Brazil are the top contributors in plastic waste across the world. And the infographic certainly is effective in leading one to believe that China, India, and Brazil are the problematic countries. But since the design is biased, it is safe to assume that the designers had ulterior motives for designing this infographic.

Could you create a similar graphic using conventional visualization software? If so, what software application(s) would you use?

Since the underlying visualization is a tree map, it is quite easy to design one is something like Power BI or Tableau. However, turning it into a Voronoi Tree Map might not be that simple. I believe we might be able to shape it into a bottle or any other object using a tool such as Adobe Photoshop.

If you were to redesign elements of it, what might you change? In the box below, create a new drawing (Insert/Drawing/New) and experiment…

I would change/update the following items:

- Title
- Use a visual format that is easier to comprehend
- I would want to make it easier to be able to compare the values for countries
- Alternative visualizations: Plastic Lids as a Pie Chart