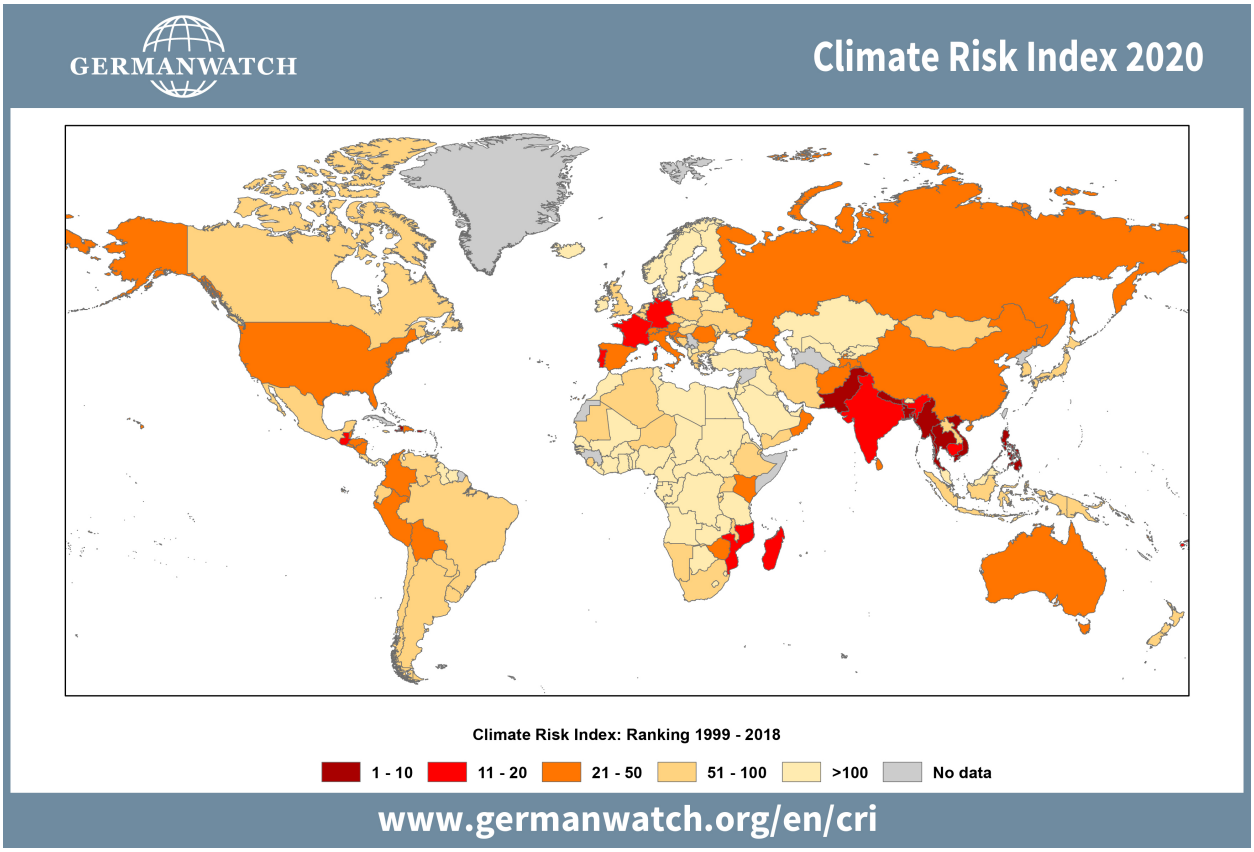
Homework Week 1

1. Good & Bad Visualizations

a. Good visualization:



Global Climate Risk Index 2020

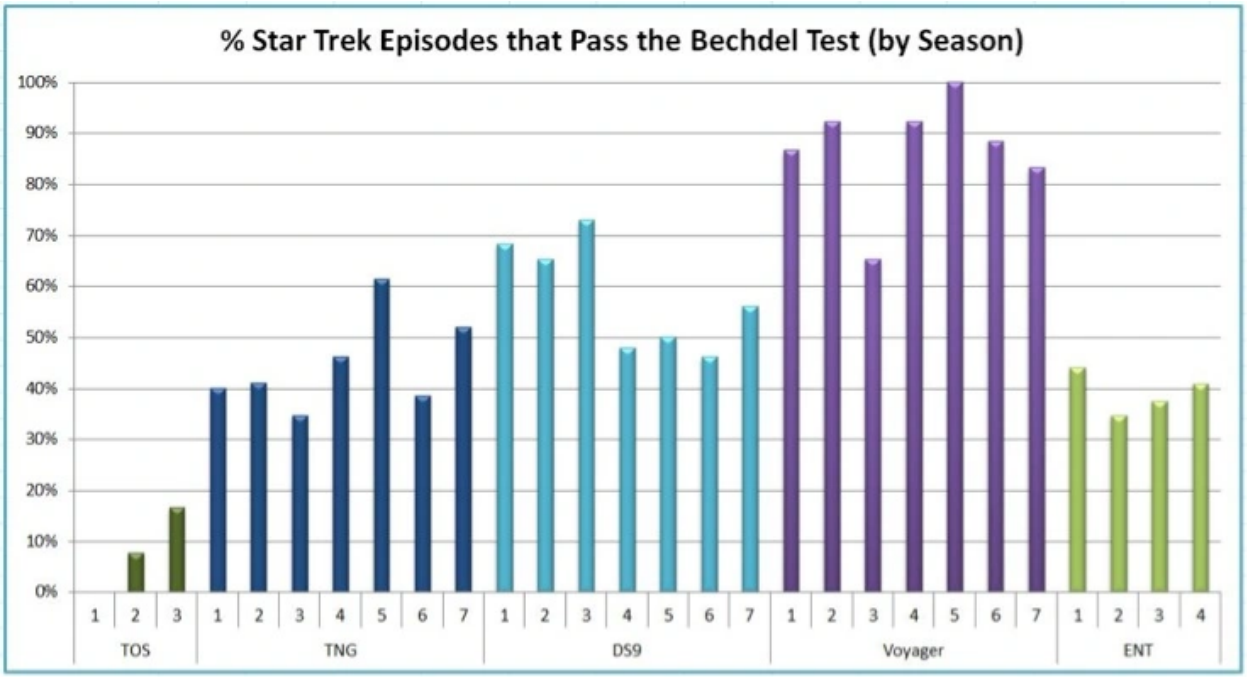
Source: Germanwatch

URL: https://www.germanwatch.org/sites/germanwatch.org/files/2019-12/climate_risk_index_2020_world_map_1999-2018.jpgv

Title: Global Climate Risk Index 2020

Scale: 5

b. Bad visualization:



Graph: Star Trek Bechdel Test Results by Season

Source: The Mary Sue

URL: https://www.themarysue.com/star-trek-bechdel-test/

Title: Star Trek Bechdel Test Results by Season

Scale: 2

c. Critiques:

Good visualization (Global Climate Risk Index 2020):

This visualization effectively depicts the impact of climate change, with countries that are most affected shown in darker shades. It is good because it presents a clear message with easy-to-understand visual cues. The color scale is used appropriately to represent the data, and a legend is provided to help the viewer interpret the map correctly. The authors were most likely trying to raise awareness about which countries are most at risk for climate change, and they succeeded in doing so. An improvement to this visualization could be the addition of ranks for each country, which would make it easier for the viewer to understand the exact rankings.

Bad visualization (Star Trek Bechdel Test Results by Season):

This visualization is difficult to understand due to the lack of clear labels and unnecessary encoding of data. There are multiple colors and shapes used, which make it hard to discern what each represents. The authors were likely trying to show how Star Trek fared in the Bechdel Test in different seasons, but their representation of the data is confusing. To improve this visualization, they could use bar charts to show the scores for each season more clearly, with a single color for passed tests and another color for failed tests. This would simplify the chart and make it easier to understand.

2. Exploratory vs. Explanatory Visualizations

You Draw It: How Family Income Predicts Children's College Chances

- This visualization is explanatory because it provides a narrative about how family income affects the chances of children going to college, inviting the user to guess the relationship by drawing lines first.
- The authors tried to answer the question: "How does family income predict the likelihood of children attending a college or university?"
- From the visualization, I learned that higher family income correlates significantly with increased college attendance rates. There is a significant gap in college chances between high-income and low-income families.
- The likely audience is people interested in understanding the impact of financial background on educational opportunities, such as policymakers, parents, students, and educators.
- The point of view is that family income greatly influences the chances of children attending college, emphasizing the importance of addressing the inequality of educational opportunities based on financial backgrounds.

An Interactive Visualization of Every Line in Hamilton

- This visualization is exploratory as it allows users to freely navigate and interact with the data to find interesting patterns in the Hamilton musical song lyrics.
- The authors tried to answer questions like: "How are characters connected in Hamilton?", "How do they interact, and what themes are most common or significant throughout the musical?"

- From the visualization, I gained insights into the intricate relationships between Hamilton characters, themes, and their lyrical interactions.
- The likely audience is fans of Hamilton or individuals interested in analyzing the musical, character relationships, and the evolution of themes.
- The message is more neutral and focused on providing an interesting and engaging way to discover connections and themes within the musical.

Bussed Out - How America Moves Its Homeless

- This visualization is explanatory because it reveals the trend of American cities moving homeless populations by providing interactive visualizations and explanations.
- The authors tried to answer the question: “Where do homeless people in US cities go, and how are they relocated while addressing homelessness?”
- The visualization shows that many cities actively move their homeless populations to other places and that the problem is nationwide, rather than just a local concern.
- The likely audience includes people interested in understanding the homelessness crisis in the United States, such as policymakers, housing advocates, and concerned citizens.
- The point of view is critical of the practice of bussing out homeless individuals and focusing on the need to address this systemic problem that affects numerous cities across the country.