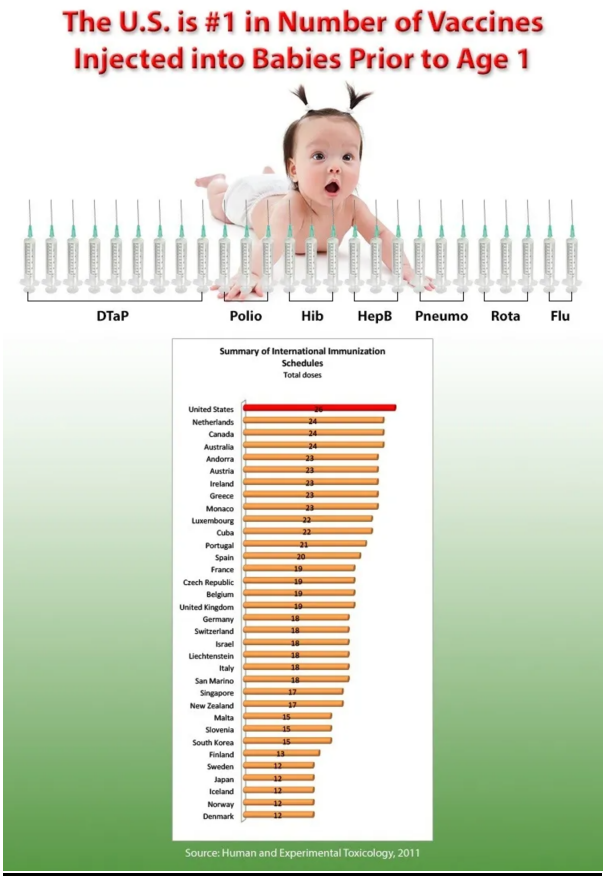
Identifying Techniques in Misleading Visualizations

We just spent some time understanding the commonly used techniques to create misleading data visualizations. Let's try to identify them in real world examples! Do **not use** SearchEngines/LLMs for this exercise, solve it using common sense and the techniques presented in the lecture.

Exercise:

1) Infant Mortality and Vaccinations

Identify the techniques used in the following misleading data visualization:



(source: https://healthimpactnews.com/2013/is-there-any-logic-behind-vaccine-claims/)

2) Lake Mead Water Levels

The Lake Mead reservoir (a lake close to Las Vegas, photo on the right by Nikola Majksner on unsplash) is a major water source for multiple states in the USA. The levels of water in Lake Mead therefore can have critical consequences.

All of the following visualizations are based on the same dataset of historical levels of water in Lake Mead and all of them are misleading, even though the contradict each other (Chart A and B argue for constant water levels, Chart C and D for decreasing water levels and Chart E for increasing water levels). (source: https://www.vislies.org/2017/gallery/)

a) Identify the techniques used in each of the following misleading data visualization.

b) So, what is the truth???

Chart A:

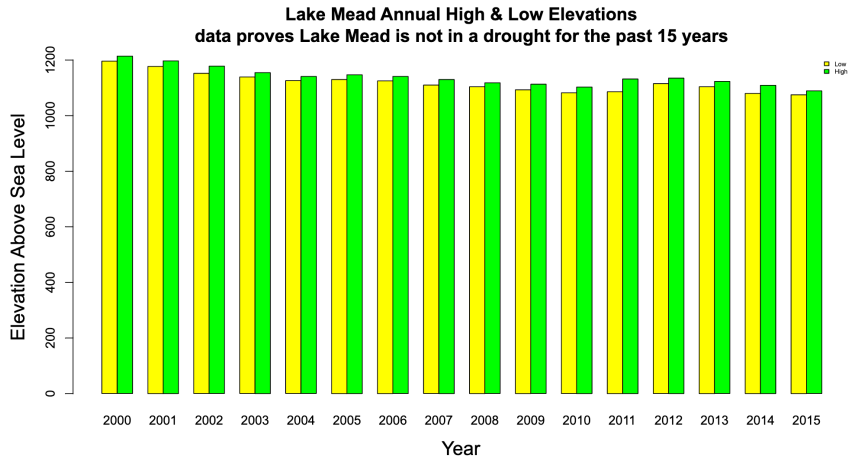


Chart B:

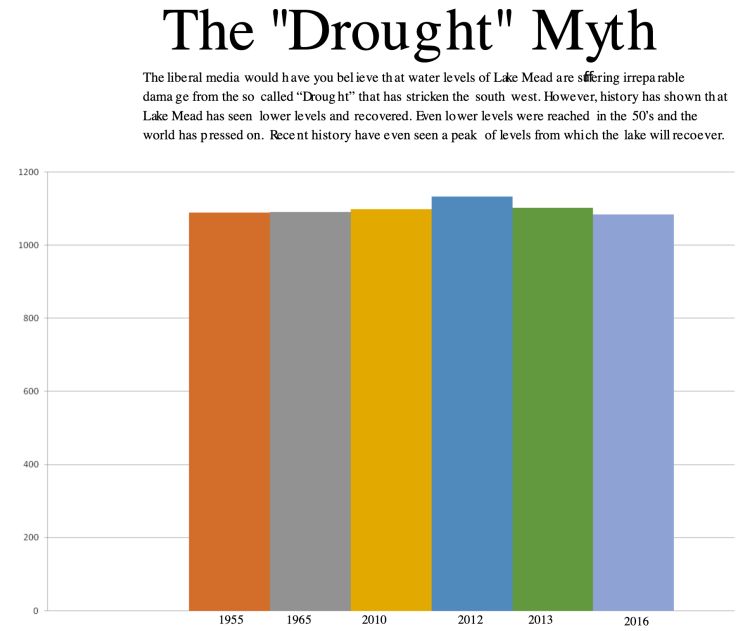


Chart C:

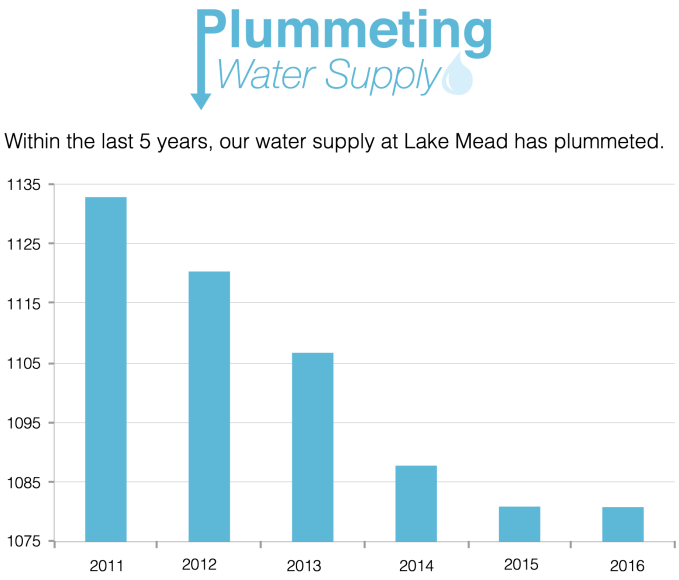


Chart D:

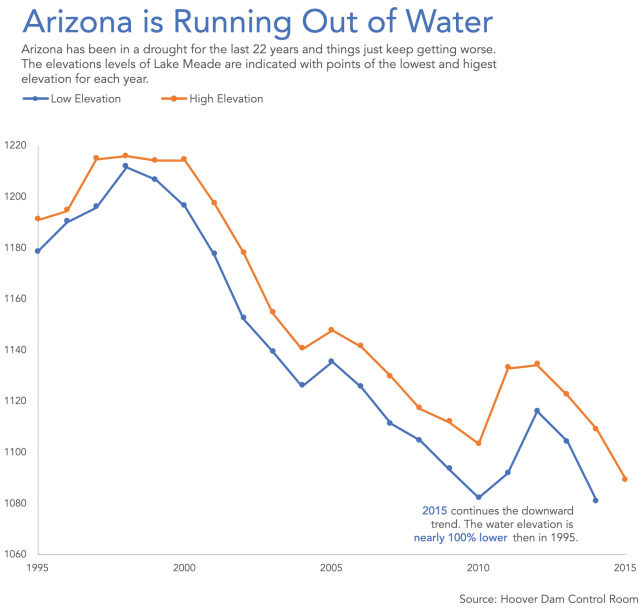


Chart E: