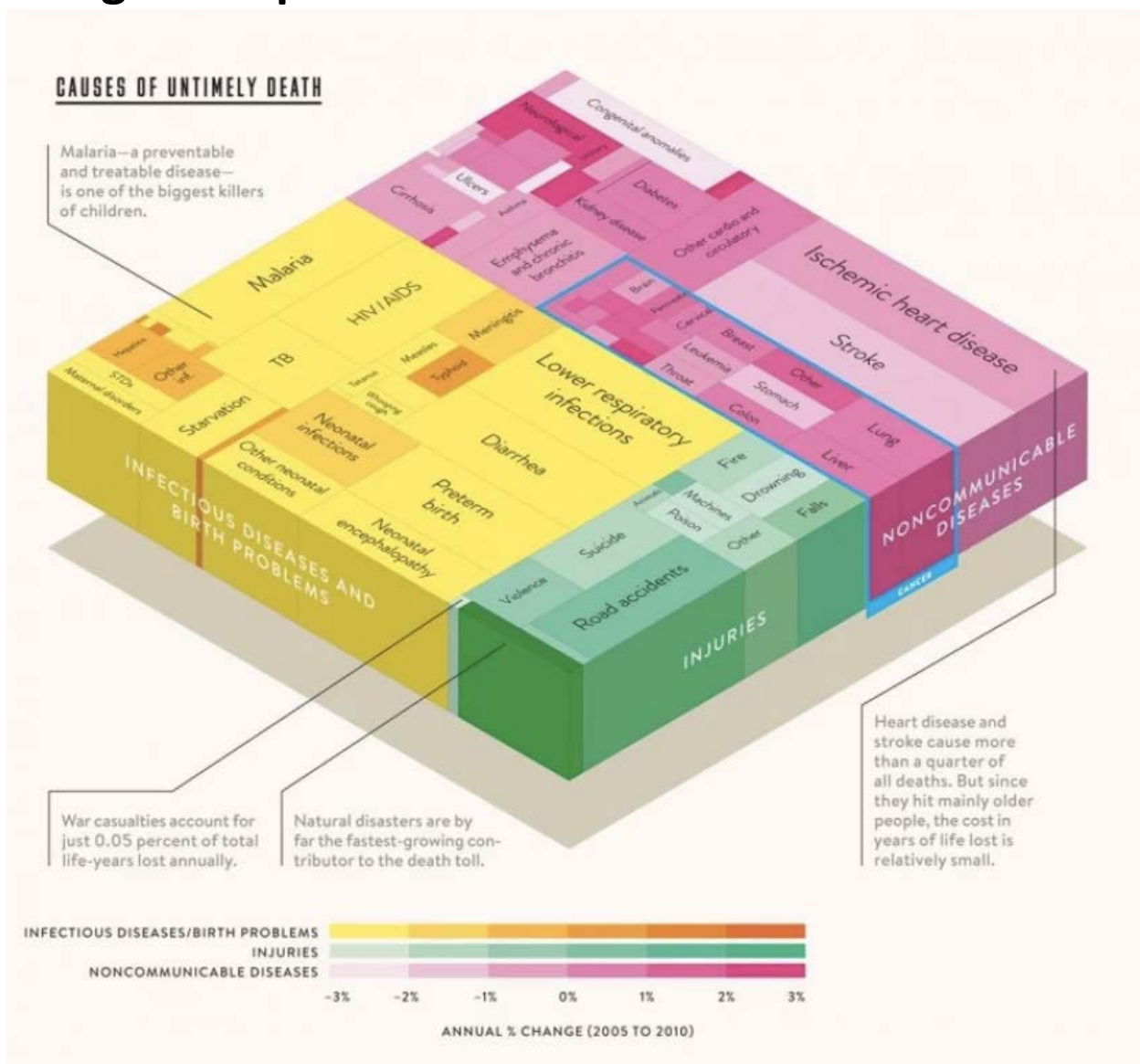


Design Critique



1. Who is the audience?

The audience is the educated public that is able to understand complex relationships while not being subject experts. In general the reader can be assumed to be well read and able to understand more complex graphs.

2. What questions does this visualization answer? Name at least three.

The graph looks at the causes of untimely deaths or more precisely, it displays worldwide years of life lost by cause. It shows this through the visualization of death type by frequency adjusted by the area of the rectangles in the surface. It also shows the different rates of increase/decrease over the years by color.

- It shows what are the biggest causes of an untimely death

- It shows what areas experienced the biggest change during the observed 5 years
- It groups causes together and thereby shows, that counterintuitively, injuries are only for a fraction of untimely deaths responsible. The biggest contributors are caused by diseases.

3. What data is represented in the visualization? Be specific and comprehensive.

The visualization uses data from the University of Washington's Institute for Health Metrics and Evaluation database during the years 2005 to 2010. It shows the rate of change during five observed years. Furthermore, it shows the percentage that injuries, infectious diseases/birth problems and noncommunicable diseases (e.g., cancer) have in the overall number of untimely deaths.

4. For each data type, describe how it is encoded in the visualization using Bertin's marks and channels. e.g., color saturation (channel) encodes annual percentage of change between 2005 and 2010.

Annual percentage change → Color saturation

Injuries → Green color

Infectious diseases/birth problems → Yellow color

Noncommunicable diseases → Red color

Share of the overall number of untimely deaths → 3D Area

5. How are the perceptual channels contrast and color used in the visualization? Name at least two potential problems.

They are used to show changes over the years. The problem with the choice of color is, that colorblind people might not be able to see the same difference than others can see. Having green and red in the graph makes it difficult for certain people to see the differences. Furthermore, certain colors are darker than others, this makes it difficult to compare dark/light colors on the same scale.

6. How are Tufte's design principles used or violated in this chart?

The graph is very information dense i.e., the data / ink ratio is okay. Every color, shape and form contains a high amount of information. Furthermore, the graph shows all the data. On the other hand, the 3D part of the graph is rather bad. It introduces a third axis that is not necessary. This makes it difficult to compare the different sizes of the rectangles. Also difficult is the fact that certain small rectangles don't have a reference/names.