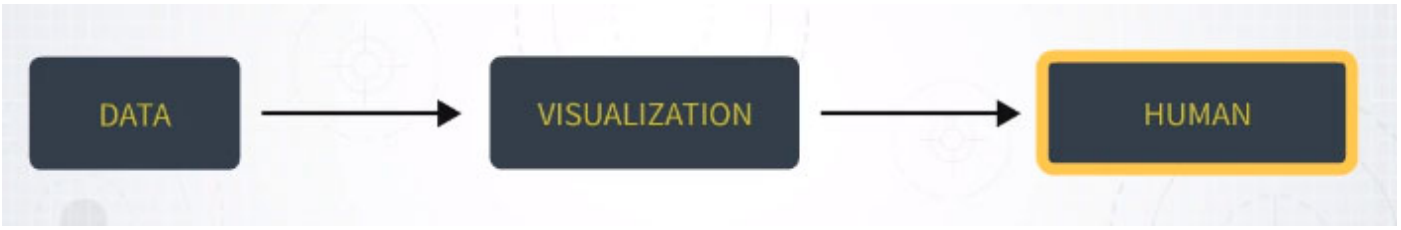
What is *applied perception*?

Sunday, November 4, 2018 22:23

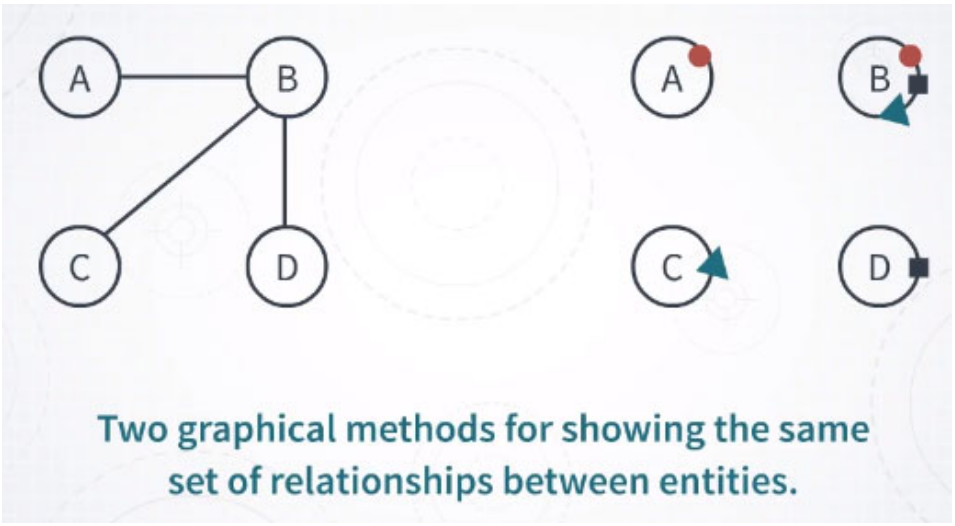
Information visualization is about transforming data into a visual representation so a **human** can extract useful information out of it.



Then, the important question becomes how humans perceive this information…

The more we know about human perception, the more equipped we are to design effective visualizations.

The effectiveness of a visual representation IS NOT ARBITRARY!
It depends on how the brain works! *It is not a matter of subjective taste.*



The work of a visualization designer is:

- Ideate visual representation appropriate for the problem
- Evaluate your own representation

Usually, the space of solution is very large, so it would be good to

1. Start from good enough
2. Improve on initial solution

Task
In order to talk about effectiveness, we have to talk about the idea of task:

- Effectiveness cannot exist if we don't tie a vis design to the concept of a specific task that somebody needs to carry out.
- You can only talk that vis A is better than vis B, when you talk about a specific task or goal that somebody needs to accomplish.
- When someone asks: "*Which visualization is better?*" We have to ask: "*To accomplish what?*"

For a given set of tasks, your work as a visualization designer is to:
1. Predict what works and what doesn't
2. Explain why something does or doesn't work

THIS IS LARGELY DEPENDENT ON VISUAL PERCEPTION

If you know more about how the brain and the visual system works, you'll be much better at explaining why something works or not.

So, to study *applied perception for visualization* is studying human perceptual/cognitive processing to make **informed decisions** about visualization design.

What are *informed decisions*?
For instance, if you need to represent a certain number of color categories on a map, you might know how many colors can a human easily distinguish.