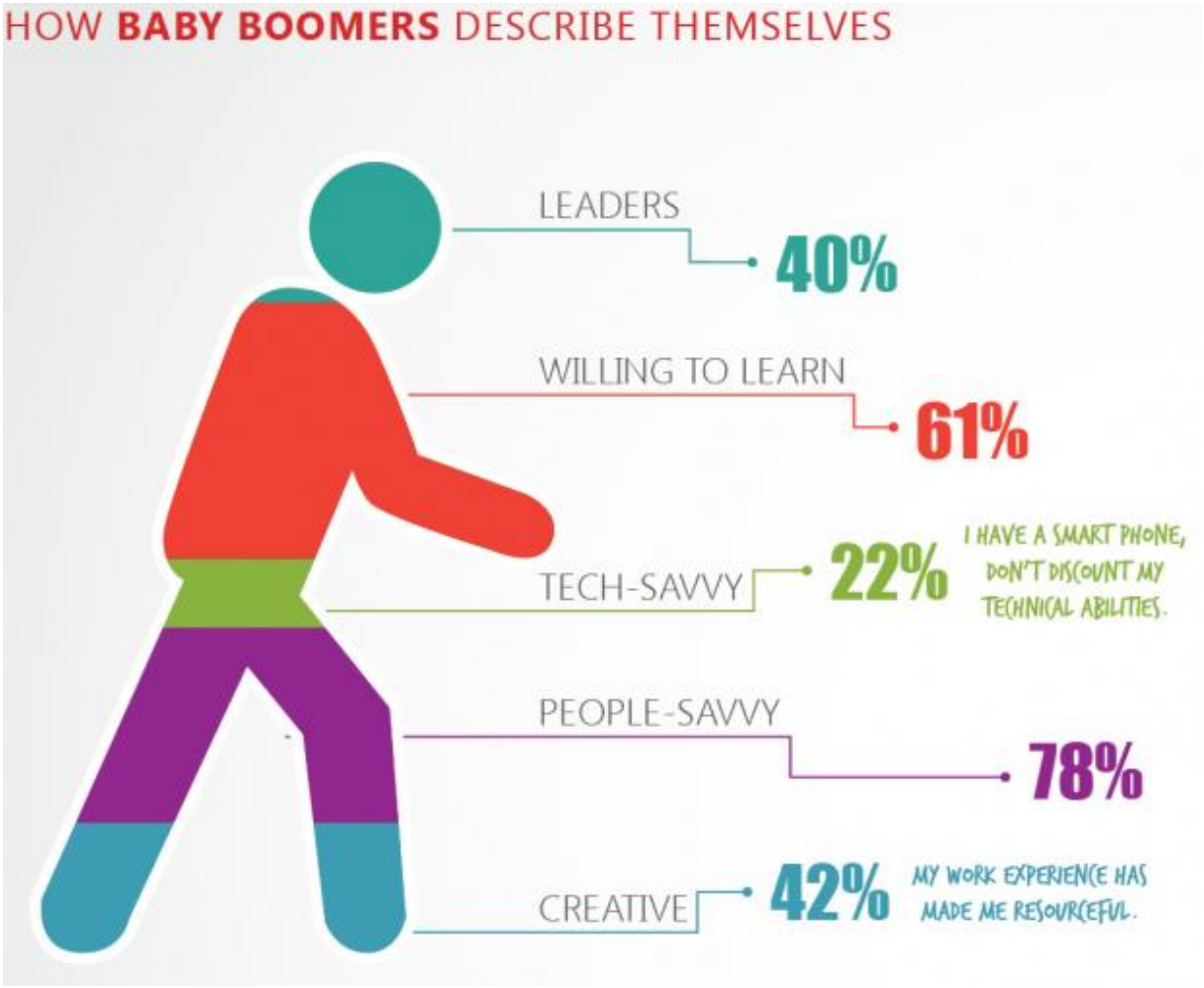
1)

Bottom up processing of visual information is about the light particles being processed as a photographic representation of the things that are being seen. Imagine a baby, unaware of structures and patterns in what comes into her eyes. Her sight must be the same as an older person that sees the world from te same physical perspective. However, the older person sees objects or people. The processing of visual stimuli as a bundle of photons is bottom up and differs from the top down way of processing visual information. Its purest form is when the older person is looking for apprehended symbolic code, such as letters. When reading, she is directly looking for symbols and trying t odecrypt their meaning. Humans can do this so automatically that we don't really pay attention tot he form of the letters, influenced by, for instance, the font. The baby would see a blur of different ink marks on a white background.

The top down processing is apprehended and the person in question is, actively or passively decoding symbolic features in the visual stimuli. That creates an expectation from her side. This expectation influences the visual perception. Earlier in a working class we discussed a visualisation in which democrats and republicans appeared. The former were coded as red, the latter as blue. These are the colours of their parties. If they would have been switched, the visualisation would have, most likely, been interpreted wrongly.



This is another nice example of how to down and bottom up processing can get in each other's way. The site that showed this visualization is http://blog.visual.ly/learning-from-mistakes-in-visualization/. It shows bad practices in visualizations. The aspect that they didn't like about this

visualization is that the percentages add up to more than hundred percent. When looking a bit longer this is not surprising. People can prescribe themselves multiple qualities. However, what is really misleading is that they fill a icon of a person with the data. There is a head and a bottom of this firson so height seems to mean something. The higher data stands, the more value is has, could be an option. But his is not the case. The data is randomly put down. Moreover you read from top to bottom, making “leader” the most salient quality. However people savvy is far more decribes as fitting quality.

2)

It uses size in the bar charts and position in the part of the scatterplot. The queries are nominal when is is about the state and the product. It can use these differences to filter the data.

3)

The goal of many eyes is to expand the function of visualisations (which is the discovery of patterns in data) by creating a platform in which discussion about the patterns and the data is being spurred by a wider public. It does so quite well. However the adience they reach is a selection of all the internet users. Therefore the outcome of the process of spurring discussion about data visualisation is influenced most by people that already were quite knowledgeble in the subject.