Information Visualization

Renaud Blanch

time allowed: **2h**
no document allowed except a sheet of paper with hand-written notes.

instructions:
Please answer all the questions. If there is any ambiguity in the questions, explain your hypotheses.

Question 1 (3pts)
Give one concrete exemple, **different than that given in the lectures,** of data attribute for each of the following data types : **nominal**, **ordered**, and the two quantitative types (**interval** & **ratio**).

Question 2 (2pts)
For each of those data types, explain how two values can be compared, and how several values can be aggregated.

Question 3 (5pts)
Image 1 (below) from Zan Armstrong, published in the Scientific American, shows the average number of babies born every minute of a day in the US.
a) Give the visual mapping for this chart using Card et al. taxonomy.
b) Explain why this encoding is good/bad according to Bertin's criterions.

Question 4 (4pts)
Image 2 (below) is a screenshot of the Film Finder pioneer visualisation software.
a) List the parts of the interface that relate to each item of Ben Shneiderman's information-seeking mantra.
b) List the parts of the interface that relate to each step of the Information Visualisation Pipeline.

Question 5 (6pts)
A group of 10 friends ($f_1 \ldots f_{10}$) try to choose a restaurant among a list of 5 possibilities (A, B, …E) for the dinner. To do so, each of them order the five restaurant with a unique rank (1^{st}, 2^{nd}, …5^{th}).
How would you represent this preference information in order to help them make a choice ?
Justify your design.

Image 1

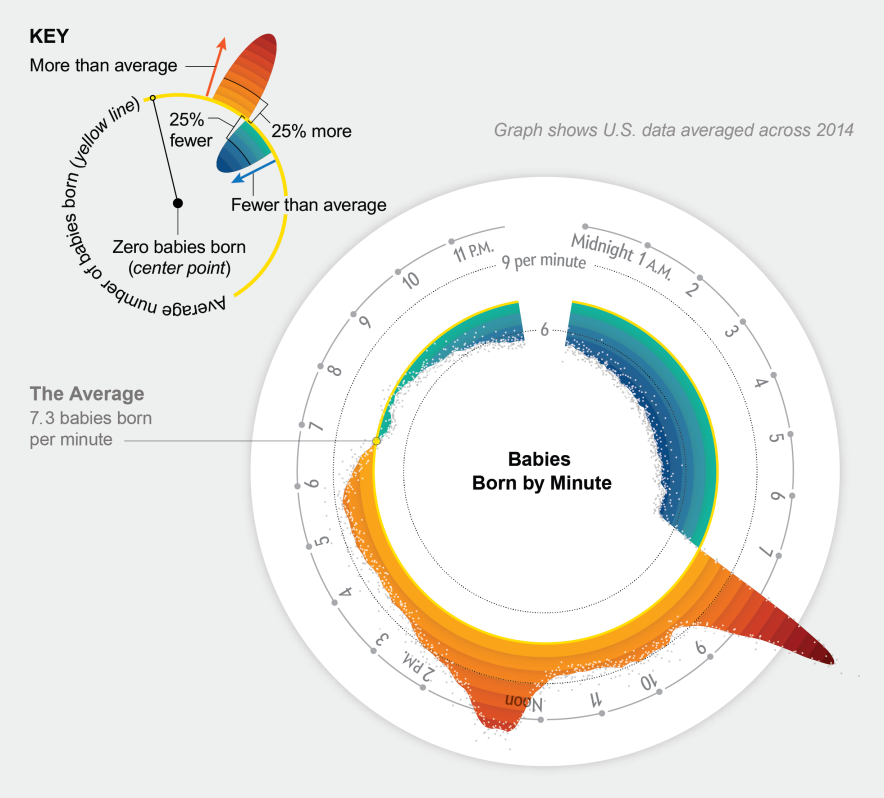

Image 2