Reading 6

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10 oktober 2015

Opgave 1. *According to Bostock et. al., what are the primary advantages of D3? Based on your reading of the article, please provide an example of a type of visualization that would be easier and better implemented in D3 as opposed to HTML5, JSON, and Javascript. Please list the pros and cons of choosing D3 over pure HTML5, JSON and Javascript.*

*Oplossing.* According to Bostock the primary advantages are:

- Rather than hide the underlying scenegraph within a toolkit-specific abstraction, D3 enables direct inspection and manipulation of a native representation.

- Immediate evaluation of operators further simplifies debugging and allows iterative development.

This visualisation would be horrible to implement in another language. With d3 is is simple to position the circles, with Javascript it would take ages. □

Opgave 2. *Of the visualization figures presented in Heer et. al., which do you find the most difficult to comprehend? Does the complexity of the figure interfere with the goal of visualization as described in the article? Include a screenshot of the figure you have chosen in your response and use principles that you have learned so far (i.e., from design, perception, and cognition) to justify your choice.*

Oplossing.

Statistical Distributions: Figure 2d. Parallel coordinates of automobile data.
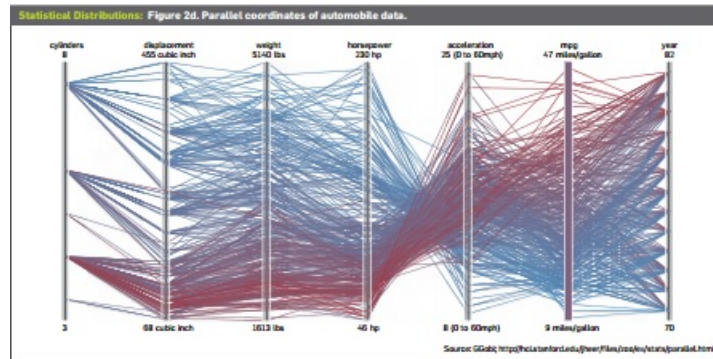
I had a lot of trouble comprehending this visualisation. They visualize a lot of data which results into a big blur of lines. Parallel coordinates are used to find patterns and to show many variables simultaneously. The pattterns are hard to find here because all of the lines are the same color. But everything is shown in one small visualisation which is nice. □

Opgave 3. *Play around with the interactive graphs included in the Heer article. You need to open this page in a browser that runs Java. Focus on Figure 1A. To what extent do interactivity and transitions, elements that D3 optimizes, add to the clarity and message of the visualization? With the element of interactivity in mind, redesign and sketch the contents of figure 1A with one of the other visualization types described in the Heer article. Include a picture of a sketch of your idea, and describe how it supports comprehension and data exploration.*

Oplossing. I could not get the interactive graphs to work, unfortunately. □