This critique is about the rise and fall of unemployment in the US. It shows the data in multiple facets, using several visualizations. Each one is shows the variety in unemployment over time. In the visualizations, then, difference is shown between multiple demographical categories and per sector of production in the US labour market. This critique is meant to give the reader an insight in the different aspects that come to play in the making of a visualization, by analyzing this web page thoroughly. The way in which this analysis is structured and performed, gives an insight in what I have learned this course about the theoretical aspects of data visualization.

As the figures used on the web page are connected by, for instance colour coding, or even linked through the sharing of data, the analysis gives better insight when I show the pluriform theoretical aspects of data visualization and demonstrate in what manner they are applied to the example we see in front of us. Authors of theoretical studies, showing best and worst practices, function as framework through which the visualization is analyzed. They present us with clear, distinctive features, that can be either positive, or negative. I will focus on how the data is represented and whether that is in an honest way. But also on the story that the data is trying to tell us and whether that becomes clear and visible. Finally I shall elaborate on the more personal aspects of the analysis and eport my own opinion on aesthetic aspects, as well as language, subject and style.

The main goal of the figures is to show how the rise and fall of unemployment is distributed over different demographic and economic categories. He starts showing the economic aspects by visualizing the unemployment per sector. At first glance you just see a whole lot of dots in different colours on the screen. As I have come to experience in the working groups of the data processing course, when seeing a visualization, people tend to look at the visual stuff first. When they don’t understand things or understood the basics of the graph and would like to know what more it beholds, they search for extra explanation in text and legendas. Knowing that, it is very important to make the visualization intuitive. The first graph is not that intuitive, although the text and legendas explain the goal and way to interpret it, perfectly. When exploring the options the first graph has, by hovering over it, you’re all the more surprised seeing a lot of grey dots appear on the screen. They turn out to be connected data points. Every dot in the first graph is the growth (either positive or negative) per sector of the US’ economy in a certain month. When pointing with your cursor at a dot, the growth of that sector for the other months appear by marking the coloured dots. Thus, you can distinguish a path in the rise and fall of unemployment per sector. This is a task the visualization can perform. I will list the tasks it performs below. This way we can fully understand the visualization, before critiquing it further.

First visualization

1. Showing a path per sector, on how the sector gains or loses jobs.
2. Showing for the entire economy in which times jobs were created or lost.

Second visualization (linked to first)

1. Show absolute information on growth, sector size and consecutivity of growth.

Third visualization

1. Show the overall unemployment rate in the US over time.
2. Mark months in which there was a recession (decrease of production)
3. Show the unemployment rate for different demographic classifications. There can be selected on gender, age, ethnicity and education. When a category in a classification has been selected, the other categories are shown as well, but less distinctive.
4. Explore the impact of a recession on the unemployment of the demographic groups.

The fourth visualization has the same tasks as the third, as all their datapoints are shared. It shows the same data, but in a different way.

Now that the tasks and goals of the visualization have been stated, we can come to a deeper analysis. Tufte (1983) Uses six thumb rules to measure the integrity of a visualization. The main purpose is to make sure it represents the data as it is, without distorting it in any way. When that is done perfectly, the lie factor, as he calls it, is equal to 1. A higher lie factor means that the value of the data and the point it is trying to make, are overstated. In this case, the lie factor is higher than 1.

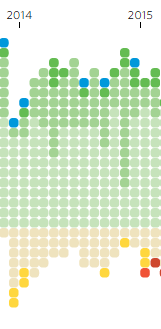
Figure 1 shows a selection of the first visualization. Intuitively, the height of the graph shows the growth in that period of time. But in this case, it only shows how many sectors are above zero. It’s the colour value that shows the scale of the growth. It’s not possible to compare the overall growth in jobs per unit of time. In that sense, it can seem that the job demand is very high in a certain period, but every sector is barely above zero.

Figure , Selection of first visualization

Tufte would, however, be proud on the data ink ratio in the entirety of the page. Everything you see is represented data. There are no extra features that can draw your attention from the data; every dot or coloured rectangle represents a datapoint.

Tufte, E. R., & Graves-Morris, P. R. (1983). *The visual display of quantitative information* (Vol. 2, No. 9). Cheshire, CT: Graphics press.