The Visual Display of Quantitative Information by Edward R. Tufte

Tufte, in his introduction, brings to light that “Graphics are instruments for reasoning about quantitative information. Often the most effective way to describe, explore, and summarize a set of numbers – even a very large set – is to look at pictures of those numbers. Furthermore, of all methods for analyzing and communicating statistical information, well-designed data graphic are usually the simplest and at the same time the most powerful.”

I am in agreement with this premise of graphical representation of statistical data, as I believe one of the ways of forming beliefs, having opinions and preferences come from experiments, events or information that can be demonstrated or observed. As the adage goes, seeing is believing.

One of the graphical representations that I liked is the Time-series graphs. Relatively easy to make and comprehend (as it involves mostly 2-dimensions) by most, it is not-surprising to learn that this kind of graphical representation is the most commonly printed and published representation of data. Plotting the ascent or decline of any variable against time on a 2-dimensional platform is visually perceivable. The clear rises and sharp dips, or even the irregularities, plateaus and trends, can really lock meaning into the data that is being studied, provided they can be correlated and studied over time. Another advantage of studying data against time as one of the factors is that almost anything can be studied over time, which also makes it the most commonly used representation form. However, there are some drawbacks to time-series graphs. Firstly, being that it can only show the change between “then and now” but not explain why. Another disadvantage could be studying variables over time alone is inadequate if conclusions have to be reached and decisions have to be made. Another thing that can pose as a problem is the modus operandi of plotting data over time. It is impractical and inflexible as only a couple of things can be studied over time. To study more than, say two, variables over time, more graphs would be required thus making it a cumbersome process.

The author illustrates many examples of time-series graphs. The one that I like is, indeed, Napolean’s march by Charles Joseph Minard. On first glance it is visually powerful and compelling in story-telling of the destruction and losses faced by Napolean’s army. On a second, closer look, one tends to see that this is actually an excellence and clever usage of a space-time graph to depict data. What makes it the work of a true artist is that it graphically
represents the event that took place, without the help of “graphic pictures” of the war. While taking in the story behind it, the information that is presented can be easily processed cognitively.

Another chapter I found interesting is Chartjunk: Vibrations, Grids, and Ducks. The author seems to have a clear distaste for non-data-ink or graphical decoration what he calls Chartjunk. Although least meant for visually pleasing the observer, chartjunk is commonly used and widespread in most representations of bar-graphs. The author casts chartjunk as misused and is mere waste of ink that adds no quality to the information represented. Rightly so, and I have observed and experienced myself that chartjunk comes as a common user-friendly feature in computer applications and the unaware layperson is tempted to use it under the belief of making boring charts and graphs seem “interesting” and ‘dynamic” by the use of moiré effects. Starting with the right idea of using moiré effects to attract and keep the attention of the observer and enable them to understand the data, overuse or insensible use of these effects can turning off the observer or distracting them or pulling their attention to irrelevant data. Especially if the observer happens to be an important client! Chartjunk, or effects when used sensibly while prioritizing the data first can help in putting out the information without seeming too loud or too reckless or too pleading for attention. The author provides good examples of clever use of chartjunk as he critiques some graphs and corrects them. Two such examples that were most striking were The Grid of the age-sex pyramid of the population of France and the Marey train schedules. Therefore, one can see that, given some thought and careful and meticulous planning, such nuances of representing graphical data can have long-term effects of portraying the most important information in the most effective way.

**Envisioning Information by Edward R. Tufte**

Rich with examples of some of the brilliant and not-so-brilliant representations this book beautifully brings together information and designs, science and art. I found the chapter on *Color and Information* most useful and enlightening. The author elaborates how coloring can enhance as well as present information that can be clearly understood as well as pleasing to see. I agreed with the author’s premise of using colors for labeling and also using color’s multidimensionality to present multidimensional information. However, I notice that the author’s exploration of color was limited. He does not delve into the effect of color on moods and how
color can be used to express different moods. I was disappointed in the author’s example of color applied to display screens where he asserts that:

“Color’s multidimensionality can also enliven and inform what users face at computer terminal, although some color applied to display screen has made what should be a straight-forward tool into something that looks like a grim parody of a video-game.”

Although graphic design has come a long way since the book was written, the author, with that example, fails to see larger scope of what color can do to express human emotions.