When I was an economics major in college, it was suggested to me that I take a class with this new charismatic professor was an expert in political control of the economy, and the class was called political control of the economy, and he wrote the textbook which was called political control of the economy, but it became increasingly clear in that class that he wasn’t interested in any of those things, he was just interested in graphs.

And so he would bring in all these graphs and he always had these sort of odd, beautiful, almost mystical things to say about them – it was always like “visual display from a Buddhist perspective”. I was kind of haunted by this class until after I graduated when he came out with this book, the visual display of quantitative information by Edward Tufte, which sort of launched him as a graphing guru.

Display design in our has already been influenced by hefty, but a number of people have created packages to implement his ideas more specifically, and that’s what I want to show you here.

This is in our markdown document, this is what your homework could look like from now on if you wanted to, not all of you will, but I put together some of these packages and some of the basic principles hefty employees, although in my own words based on my reading and experience.

The first principle here is style expresses substance. You see here in classic FD coloring and font. Style isn’t an add-on or an extra, as tuft he says, “graphical elegance is often found in simplicity of design and complexity of data. The most visually attractive graphics are about the useful and important, about life and death, about the universe. Beautiful graphics do not traffic with the trivial.”

Second, for tuft D form does not follow function – form and function are aspects of the same thing. For example, if it’s a side note, put it on the side. In fact, hefty does away with the page footer altogether, repositioning the footnotes as side notes so they can comment exactly where they belong.

Similarly, in Buddhism we say form is emptiness, emptiness is form. In architecture, this was reinterpreted as “less is more” and tuft D embraces that fully. Tufte wants to maximize the data/Inc. ratio, which means erasing whatever graphic elements don’t contribute to meaning. This usually means eliminating boxes – boxes within the grid, the grid itself, even the box of the box plot.

Principle four – once freed up from the box, graphs no longer express language, they are themselves elements of language. These are spark lines, which tuft he invented and are now available everywhere, even in Excel. Hefty thought of them as the equivalent of words.

And finally, get off the grid. The vast majority of our visualizations it in a box with an X and Y axis. Consider this hefty slope graph below. It’s like a line graph, but instead of a y-axis the airline names are placed on either end of the line and the numbers fall within the lines. It’s a subtle change but very effective.