The Three Quarter Rule

It is recommended that one make the height of the highest point on the ordinate about 3/4 of the length of the abscissa. Below is a simple sales plot for 5 salespersons following that rule. Take a look at it and get a feel for how much these five differ in sales.

Here are plots of the same data, but on the left I have increased the height relative to the width. Notice that this creates the perception that the salespersons differ from one another more. On the right, I have applied a "Gee-Whiz," leaving out a big chunk of the lower portion of the ordinate, which makes the differences among the salespersons appear yet even greater.

Now here is a plot of the same data, but with the width increased relative to the height. This gives the perception that the salespersons differ less.
Here is my rendition of a graph used by Ronald Reagan on July 27, 1981. It was published in the New York Times, and elsewhere. His graph was better done than mine, but mine captures many of little "tricks" he used. The graph was designed to show that the Republican (true blue) tax plan would save you money compared to the Democratic (in the red) plan, over time. "Your Taxes" makes it personal. Notice that there are no numbers on the ordinate, but a big attention-catching dollar sign is there. The Republican plan is "Our" plan (yours and mine), and the Democratic plan is "Their" plan (the bad guys). It looks like the Democratic plan would cost us a little less for a couple of years, but then a lot more thereafter. But without any numbers on the ordinate, we can't really make a fair comparison between the two plans. Might this graph be a "Gee-Whiz?"

**YOUR TAXES**

ANNUAL FAMILY INCOME = $20,000

Here I have added some numbers to the ordinate. If these were the correct numbers (I do not know what the correct numbers are), then this graph is clearly a "Gee-Whiz", and the difference between the two plans is trivial, only a few dollars.
Here is an ad placed by Quaker Oats. Gee Whiz! The graph makes it look like there is a dramatic drop in cholesterol, but notice that the ordinate starts at 196. The drop across four weeks is from 209 to 199. That is a drop of $\frac{10}{209} = 4.8\%$.

Here is what may be described as a “reverse gee-whiz.”

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