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Designing Visualizations: The Don'ts

Now that you've learned some things you should do when you're designing your visualization, here are some things you shouldn't do.

Don't clutter a graph with ink that doesn't provide information. Customizations are good if they add useful information and context. However, fancy fonts and clip art don't provide useful information. They only make the graph more difficult to interpret and detract from your message.

Don't use pie charts if you can help it. Even though pie charts have some popularity in business environments, they are not an effective visualization. It is much easier to interpret the length of bars in a bar chart than it is to interpret the area of slices in a pie chart.

Don't use 3-D charts to plot data that have only one dimension. For example, the only useful information in a bar chart is the height (or the length) of the bars. The height of each bar shows the frequency of occurrence. If you plot frequencies in three dimensions (for example, as blocks, tubes, or cylinders), you are adding complexity. This makes the graph more difficult to interpret, without adding any additional information.

Don't use a secondary Y axis to plot two variables with different value ranges on the same graph unless you provide annotations explaining the axes. When you have two different axes, it is difficult to understand which axis goes with which variable. If you want to plot two different variables on the same graph frame, one of the variables is usually of primary interest. For the secondary variable, you can label the values of interest on the graph. Or you can plot these data on a separate graph, above your primary graph.

Don't try to say everything in one graph. You might want to use different graphs if you have different messages that you want to communicate.

You've learned a lot of things that you should consider doing to improve your visualizations, and several things you shouldn't do. Remember that the best graph is the one that is the easiest for your audience to understand. This should drive which visualization you select, and any design choices you make.

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