Selecting the Right Graph for Your Message

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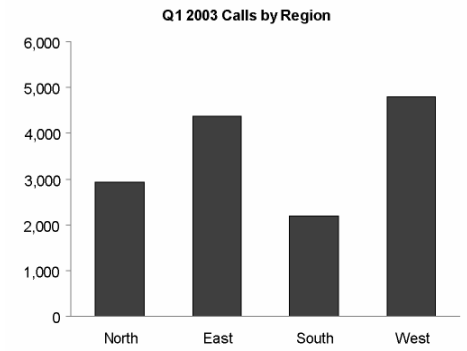
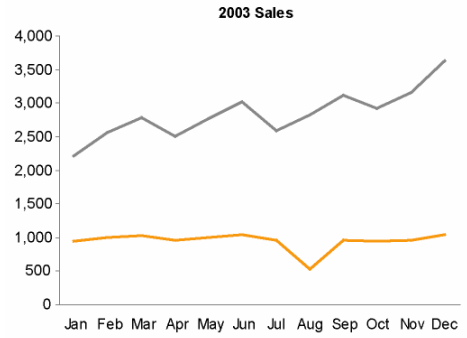
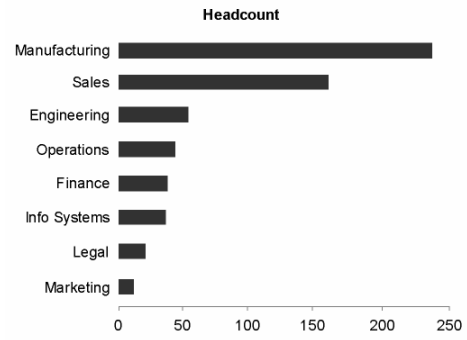
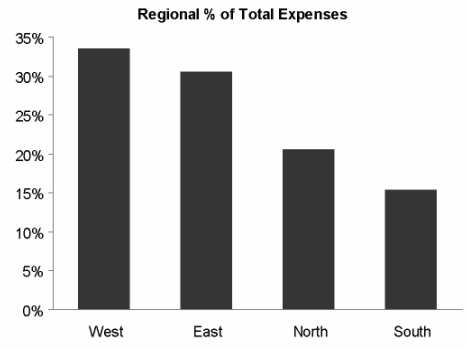
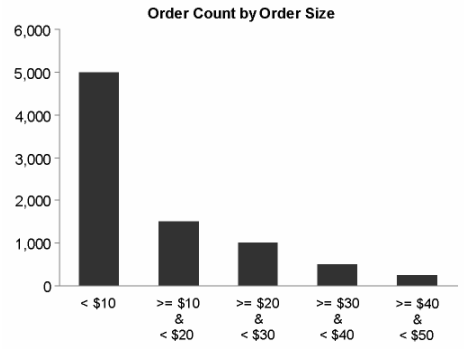
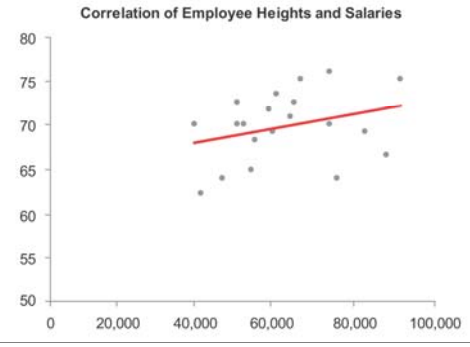
Few, S. (2004, September 8). *Selecting the right graph for your message.* Perceptual Edge. https://www.perceptualedge.com/articles/ie/the_right_graph.pdf

Type/Description	Encoding Methods	Example
Nominal Comparison A simple comparison of the categorical subdivisions of one or more measures in no particular order	• Bars only (horizontal or vertical)	
Time Series Multiple instances of one or more measures taken at equidistant points in time	• Lines to emphasize overall pattern • Points connected by lines to slightly emphasize individual values while still highlighting the overall pattern • Always place time on the horizontal axis	
Ranking Categorical subdivisions of a measure ordered by size (either descending or ascending)	• Bars only (horizontal or vertical) • To highlight high values, sort in descending order • To highlight low values, sort in ascending order	
Part-to-Whole Measures of individual categorical subdivisions as ratios to the whole	• Bars only (horizontal or vertical) • Use stacked bars to display measures of the whole as well as the parts	

Deviation Categorical subdivisions of a measure compared to a reference measure, expressed as the differences between them	• Bars to emphasize individual values, but limit to vertical bars when a time-series relationship is included • Always include a reference line (e.g., a line at zero) to signify the deviation	
Frequency Distribution Counts of something per categorical subdivisions (intervals) of a quantitative range	• Vertical bars to emphasize individual values (called a *histogram*)	
Correlation Comparisons of two paired sets of measures to determine if as one set goes up the other set goes either up or down in a corresponding manner, and if so, how strongly	• Points and a trend line in the form of a scatter plot • (Note: For descriptions of these graphs, see my book *Show Me the Numbers*.)	

same as Peters' "Diverging Bar Chart"

By understanding these seven types of quantitative relationships and the graphical methods that present them most effectively, you've already won half the battle. Knowing the best means to present data is the first big step; knowing how to design the separate components of a graph to communicate your message clearly, powerfully, and without distraction is the other big step, which we'll examine in the next article of this series.

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