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# DATA STORIES

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Google's Cole Nussbaumer offers a primer on creative data visualization, the merger of brains and beauty that has taken the marketing world by storm.

WORDS BY *Cole Nussbaumer*

ILLUSTRATIONS BY *Robert Samuel Hanson*

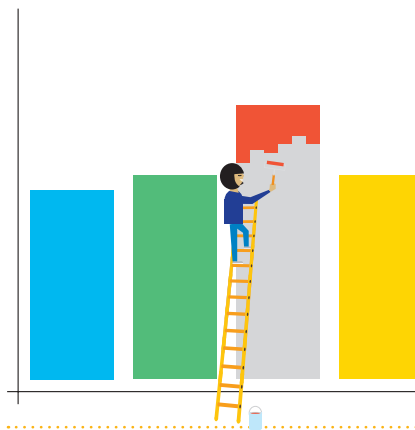
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I have a goal in life: To rid the world of bad PowerPoint slides. We've all sat through meetings, struggling to stay awake during presentations filled with cheesy stock images, confusing bar graphs, and pie chart after pie chart. This needn't be so. Even the driest content can come to life – *if* it's presented creatively.

At Google, I teach everyone from marketers to engineers some basic principles of data visualization that help them turn numbers into compelling visual stories.

Presenting data creatively can make numbers seem more human and turn statistics into stories. By 'humanizing' data we can make those numbers – and hence the people and companies behind them – more transparent.

Here are a few of the most resonant lessons that I teach in 'Data Visualization 101' at Google. Consider this your cheat sheet to becoming a more creative data storyteller.

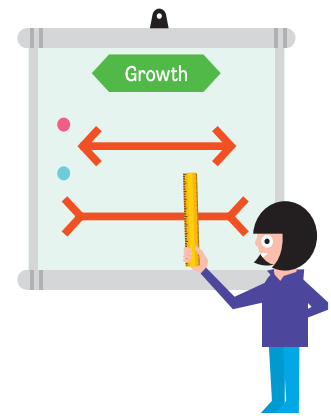


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## USE COLOR STRATEGICALLY

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Color helps audiences understand where they should focus their attention, so don't let your graphing application make color choices for you. Use it sparingly and strategically to highlight the important parts of the data visualization and story. Keep in mind that around 10 percent of people are color-blind, which typically means difficulty in distinguishing between shades of red and green.

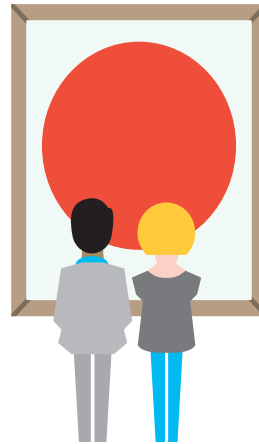
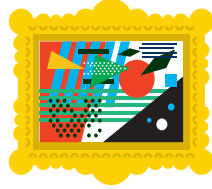


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## DON'T BE MISLEADING

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Context will have an impact on how people interpret the information you're providing. Don't graph a sample of data that's too small to permit real, concrete conclusions. Make sure that the color and style you're using aren't introducing any optical illusions. Provide an appropriate frame of reference. And if you're using a bar chart, the baseline should be zero; anything else and the story your data is telling will be a deceptive one. ➡



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## HIGHLIGHT WHAT'S IMPORTANT

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Use visual cues to let your audience know where to devote their attention and what you want to emphasize. Size and color, which are known as ‘preattentive attributes’ (because the viewer grabs hold of them before focusing attention) are your biggest levers for drawing your audience’s eye and brain. Use them to highlight the most important pieces of your message.

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## SIMPLE BEATS SEXY

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A complicated visual can turn off an audience if it takes too much effort to understand the information that’s being provided. Strip out anything that doesn’t have informative value and what remains will stand out more. You can eliminate necessary but less important elements by making them small, grey, and positioned in ‘lower-attention’ areas like the bottom or right side of your graphic. A good visual is straightforward and tells a clear story. Simple is the new sexy ©



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## DON'T BE A DATA FASHION VICTIM

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Just because your software has plenty of bells and whistles doesn’t mean they all have to be used. Did you know, for example, that pie charts are extremely difficult for audiences to interpret? Or that 3D graphs not only introduce a lot of visual noise, but also skew the presentation of data so that it’s almost impossible to

read accurately? Gridlines, borders, shadowing – these are the data viz equivalents of going off on a tangent. Just like writing or speaking, in data design you want to keep things succinct and to the point. This allows the important message to shine through. A good visual encompasses both brains and creativity.