

The big picture vs. the details

Some more guidance, though, in terms of choosing graphic forms. In general. In general. This is just a general rule. There are many exceptions to all these principles and rules. But in general, whenever you want people to get accurate or to make accurate judgments based on your graphics, it is usually appropriate or useful to use encoding such as length, height, or position measure over a common axis. Right?

So whenever you want people to compare things accurately, or to see change over time very accurately, or see the association between two variables very accurately, and so on and so forth, try to use position, height, or length, measure over common axes to encode your data.

Now, this doesn't mean that other encodings are not useful. Encoding such as, for example, area, or angle, or color, and so on and so forth. They are not that great if the purpose of your visualization is accurate estimates, but they can be incredibly helpful when the goal of your visualization is to provide sort of the big picture of the data, an overview of the data.

Area, color, angle, etc. and other encodings that we saw in a previous portion of these videos, they may be useful in cases such as this one, for example. The purpose of these maps, these are graphics that were designed by the New York Times to show the results of a presidential election. As you can see, all these maps use area, color, shade, hue, etc. to represent the data. So they are not that great for comparisons, for example, to get accurate estimates or make accurate judgments based on the data. But that is not the purpose of these visualizations.

The purpose of these visualizations is to give you the big picture of the data. How the country voted in general, whether, you know, certain regions voted more Democratic or more Republican. What matters here is not to be able to compare, you know, Florida with Illinois and Illinois to California or one city to another city or one county to another county. That doesn't really matter in this particular case. They care more about showing you the overall picture. The bird's eye view picture of the general overview of the data.

If we wanted, for example, to rank or to compare counties to each other, then we should not use a map. We should use some sort of bar graph or something like that, which is much more appropriate to visualize rankings or to visualize comparisons. But in this particular case, it's just an overview of the data. Therefore, area, color shapes, color hues are actually quite good to give you an overall impression of the data.

Now what happens though, when the purpose of the visualization is multiple? Or when you want both to sort of give an overview of the data, and also you want people to get an accurate judgment of the data? When you want to sort of, for example in a case like this, first show the entirety of the United States, more Democratic vote, more Republican vote. But then you want people to be able to rank and compare counties to each other.

A single visualization will not do the trick. You will need more than one visualization. You will need one visualization to provide the big picture and then secondary visualizations to compare things. Right? You could begin with a map. You could begin with a series of maps such as these ones. And then you can give me several bar graphs, for example, and

line charts to show their variation over time of Democratic vote and Republican vote. Those secondary graphics will give me a much more accurate picture of the data. You begin with a general and then you go to the specifics.