Data Visualization 5 Matthew Kurnia

1. (Source code)
2. (Source code)
3. (Source code)

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| 1 | FALSE | Hue may also convey categories. |
| 2 | FALSE | Though unlikely, there may be clashes in the keys (two people having the same first and last name). |
| 3 | FALSE | We can (for example) show that the heights of people are distributed normally just by looking at the height attribute. |
| 4 | FALSE | We can show a spectrum of fully saturated colors, or not have the gray point in the middle, or not have fully saturated colors at all. |
| 5 | TRUE | No reason for it to be otherwise. |
| 6 | FALSE | Spatial data is perhaps more appropriate, but if the tabular data has shapes encoded in them then there "comparing shapes" may be ok. |
| 7 | TRUE | The addition of a correlation line may aid the visualization but seeing the flow of points is sufficient. |
| 8 | FALSE | Position on common scale is the most accurate. |
| 9 | FALSE | One may be able to use 6-8 buckets? |
| 10 | FALSE | Size and colour are also fully separable. |
| 11 | FALSE | The human perceptual system is good at delivering absolute judgements for the hue channel and relative judgements for the saturation and luminance channels. |
| 12 | TRUE | We can easily tell from the gradient whether something is going up or down relative to an axis. |
| 13 | TRUE | Reordering may help with clustering. |
| 14 | TRUE | Radial layouts can visually join the start and end of cyclic data, hence more correctly representing it than other forms of layouts. |
| 15 | FALSE | Color and size channels are separable. |
| 16 | FALSE | It is good because the human perceptual system is good at absolute judgement of the hue channel. Also may not work for colorblind users. |
| 17 | FALSE | It is quite difficult to judge quantitative values from a rainbow colormap. |
| 18 | TRUE | Colorblindness effect people's ability to perceive hue. So when we encode attribute x with hue and attribute y with luminance, a colorblind person may not be able to distinguish the values of x. |
| 19 | TRUE | Blue-orange colormaps are generally good for colorblind accessibility, and having extra redundancy in luminance is a plus. |