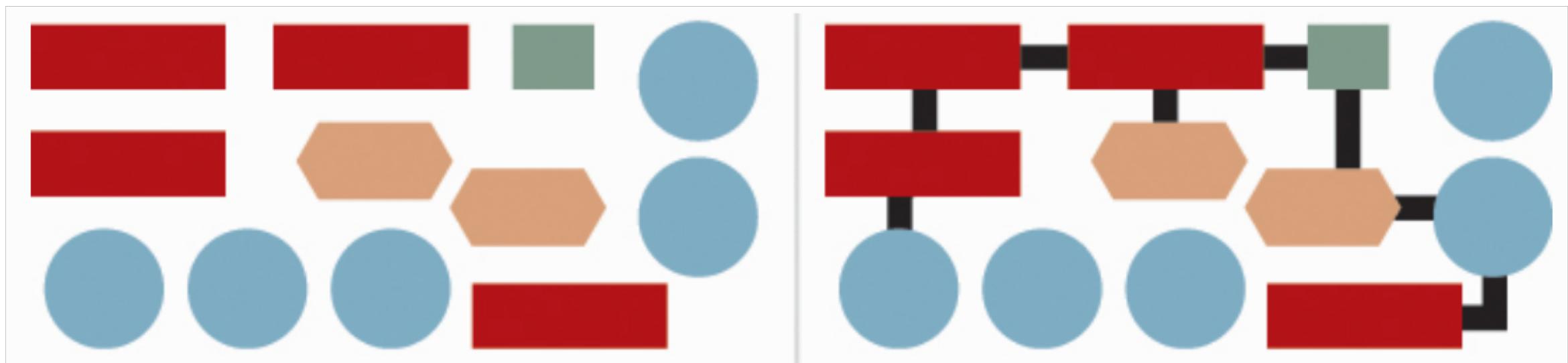


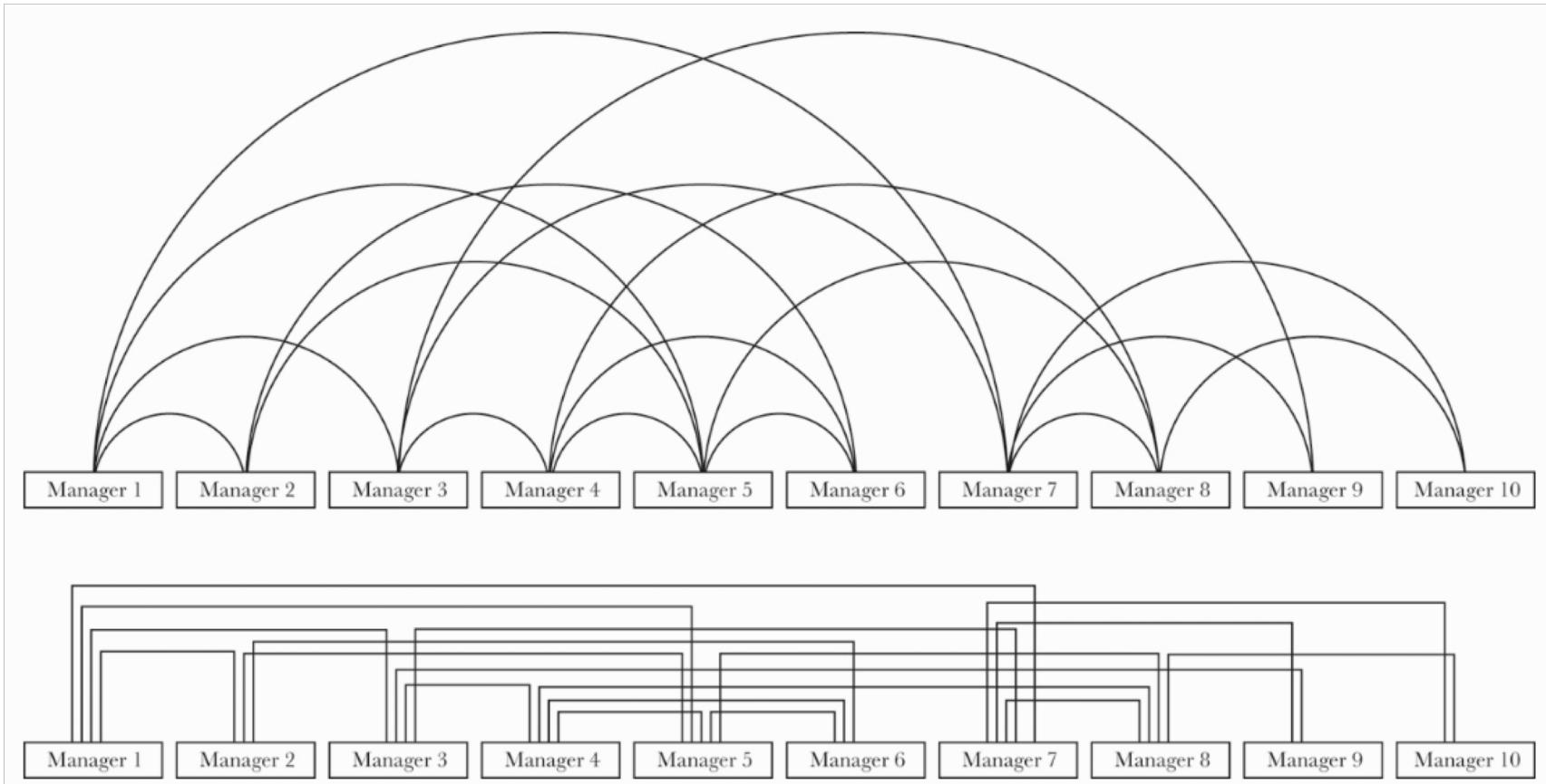
Other pre-attentive features

Connectedness



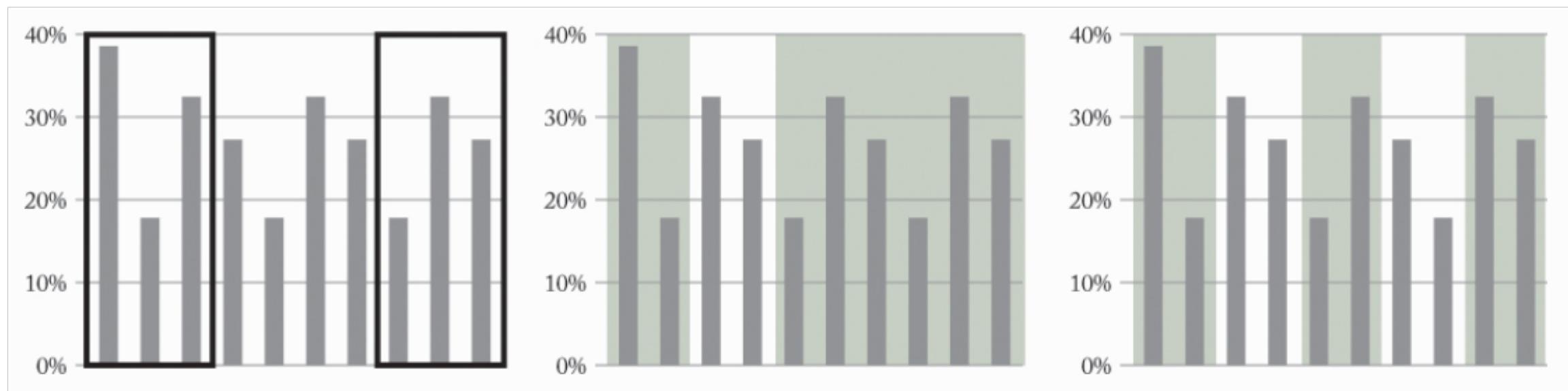
Other pre-attentive features

Continuity



Other pre-attentive features

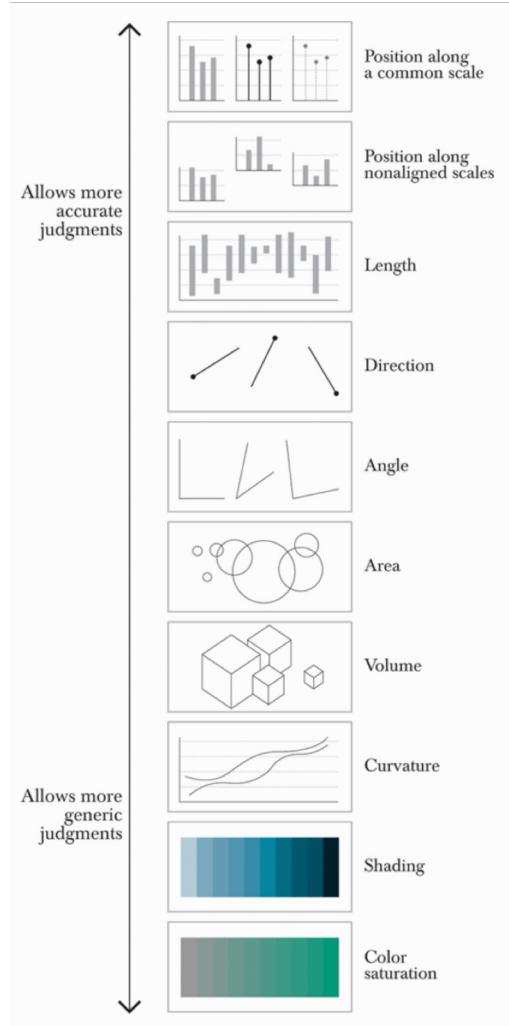
Closure



Preattentive features

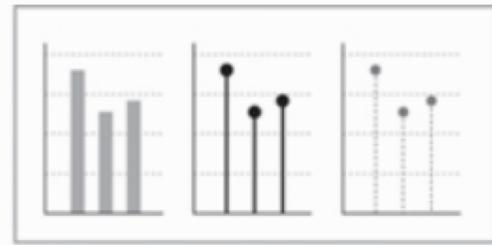
- Size
- Orientation
- Color/Shade
- Proximity
- Similarity
- Connectedness
- Continuity
- Closure

Cleveland and McGill 1984 [paper](#) on elementary perceptual tasks

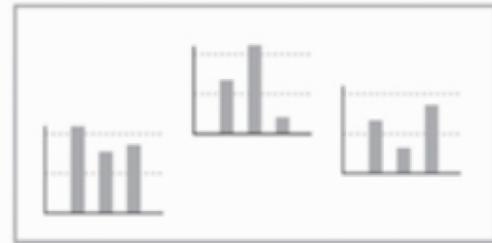


“A graphical form that involves elementary perceptual tasks that lead to more accurate judgments than another graphical form (with the same quantitative information) will result in a better organization and increase the chances of a correct perception of patterns and behavior.”

Allows more accurate judgments

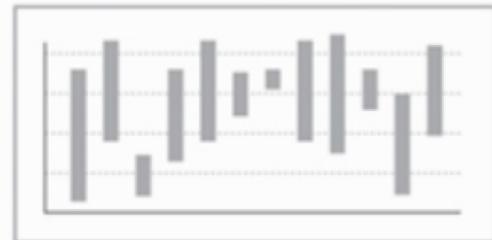


Position along a common scale



Position along nonaligned scales

Length



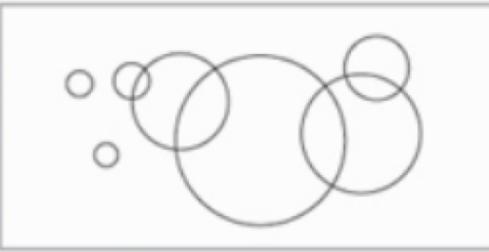
Direction



Angle



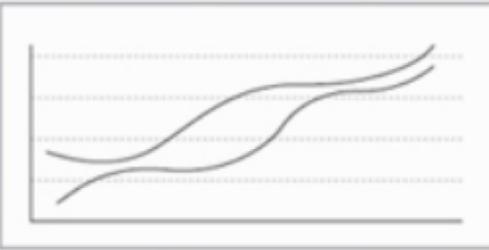
Allows more generic judgments



Area



Volume



Curvature



Shading



Color saturation

Example

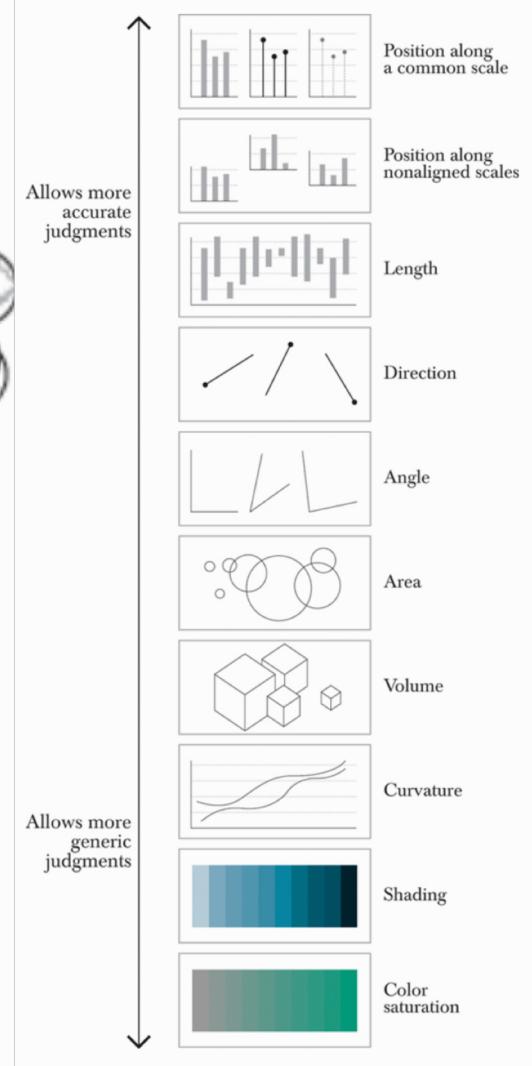
The screenshot shows a Microsoft Excel spreadsheet titled "OBESITY_EDUCATION.xlsx". The ribbon menu is visible at the top, with the "Home" tab selected. The data is presented in a table with the following columns:

| | A | B | C | D | E | F |
|----|----------------|-------------|---|-------------|------------------|---------------|
| 1 | STATE | OBESITY (%) | | STATE | BA or higher (%) | R Correlation |
| 2 | Alabama | 32.2 | | Colorado: | 35.50% | -0.6734764 |
| 3 | Alaska | 24.5 | | Iowa: | 24.30% | |
| 4 | Arizona | 24.3 | | Tennessee: | 24.30% | |
| 5 | Arkansas | 30.1 | | Utah: | 30.80% | |
| 6 | California | 24 | | Maine: | 24.20% | |
| 7 | Colorado | 21 | | West Virgin | 15.30% | |
| 8 | Connecticut | 22.5 | | Indiana: | 21.10% | |
| 9 | Delaware | 28 | | Rhode Islan | 27.20% | |
| 10 | District of Co | 22.2 | | Arkansas: | 18.80% | |
| 11 | Florida | 26.6 | | South Dako | 25.50% | |
| 12 | Georgia | 29.6 | | New York: | 30.60% | |
| 13 | Hawaii | 22.7 | | Alabama: | 22.30% | |
| 14 | Idaho | 26.5 | | Pennsylvani | 25.30% | |
| 15 | Illinois | 28.2 | | Illinois: | 27.40% | |
| 16 | Indiana | 29.6 | | Kansas: | 30% | |
| 17 | Iowa | 28.4 | | Georgia: | 27.60% | |
| 18 | Kansas | 29.4 | | Washington | 29.90% | |
| 19 | Kentucky | 31.3 | | Maryland: | 35.20% | |
| 20 | Louisiana | 31 | | New Jersey: | 34.60% | |
| 21 | Maine | 26.8 | | Alaska: | 25.50% | |
| 22 | Maryland | 27.1 | | Oregon: | 25.90% | |
| 23 | Massachuset | 23 | | Wyoming: | 22.50% | |
| 24 | Michigan | 20.9 | | Vermont: | 24.30% | |

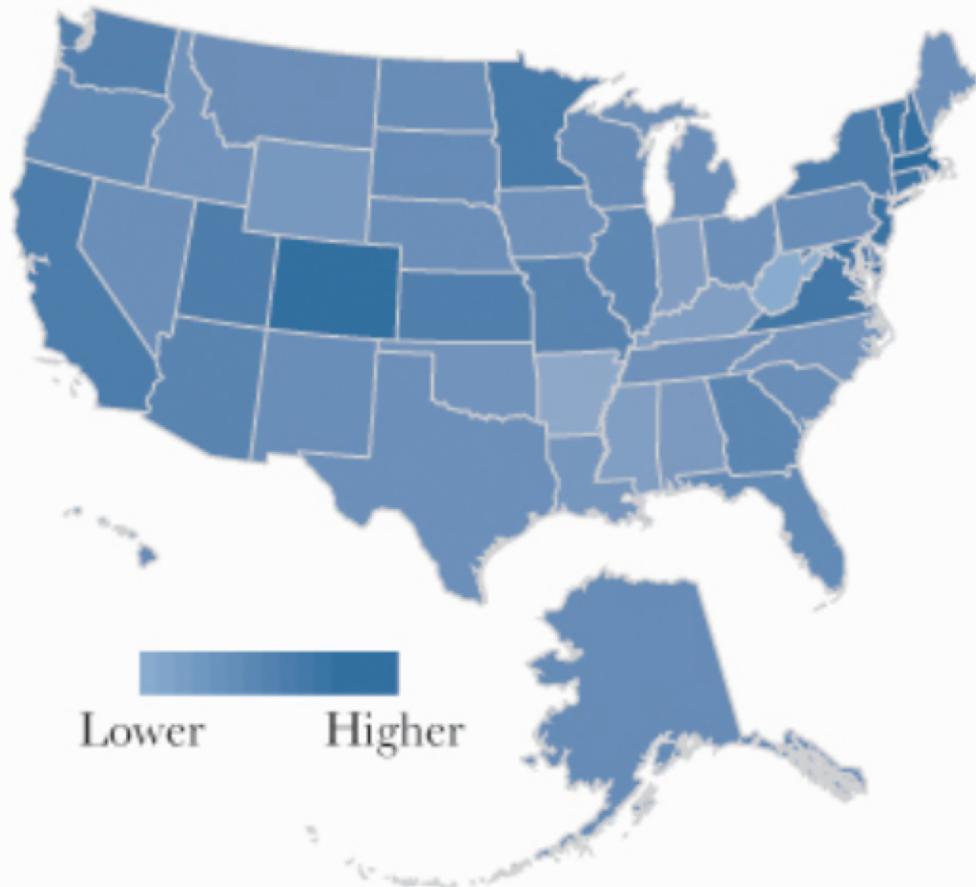
Percentage of people with a BA degree or higher



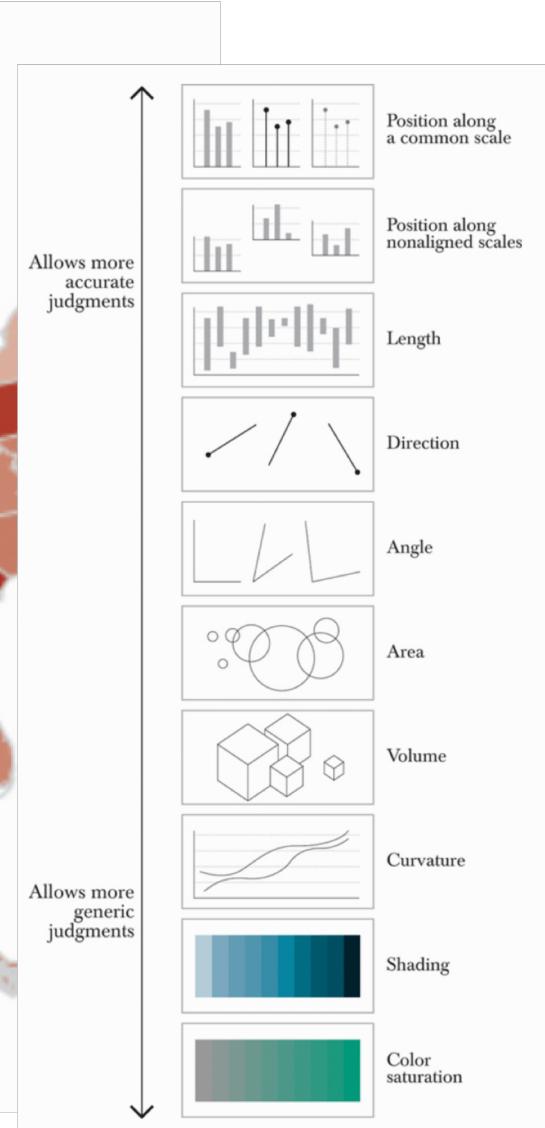
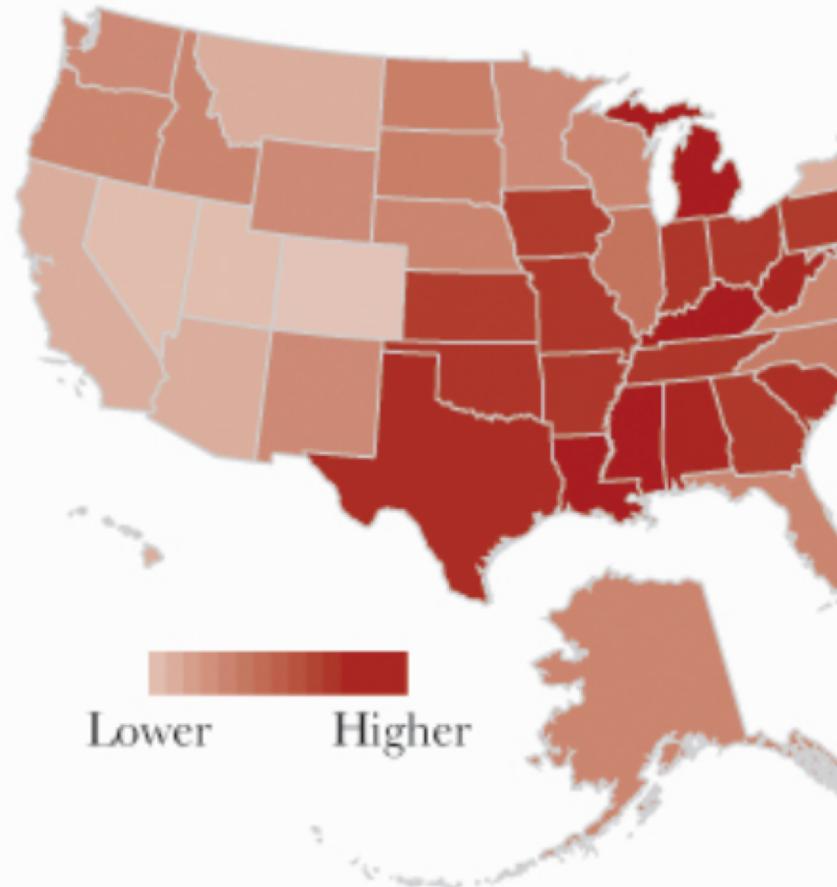
Percentage of obese people



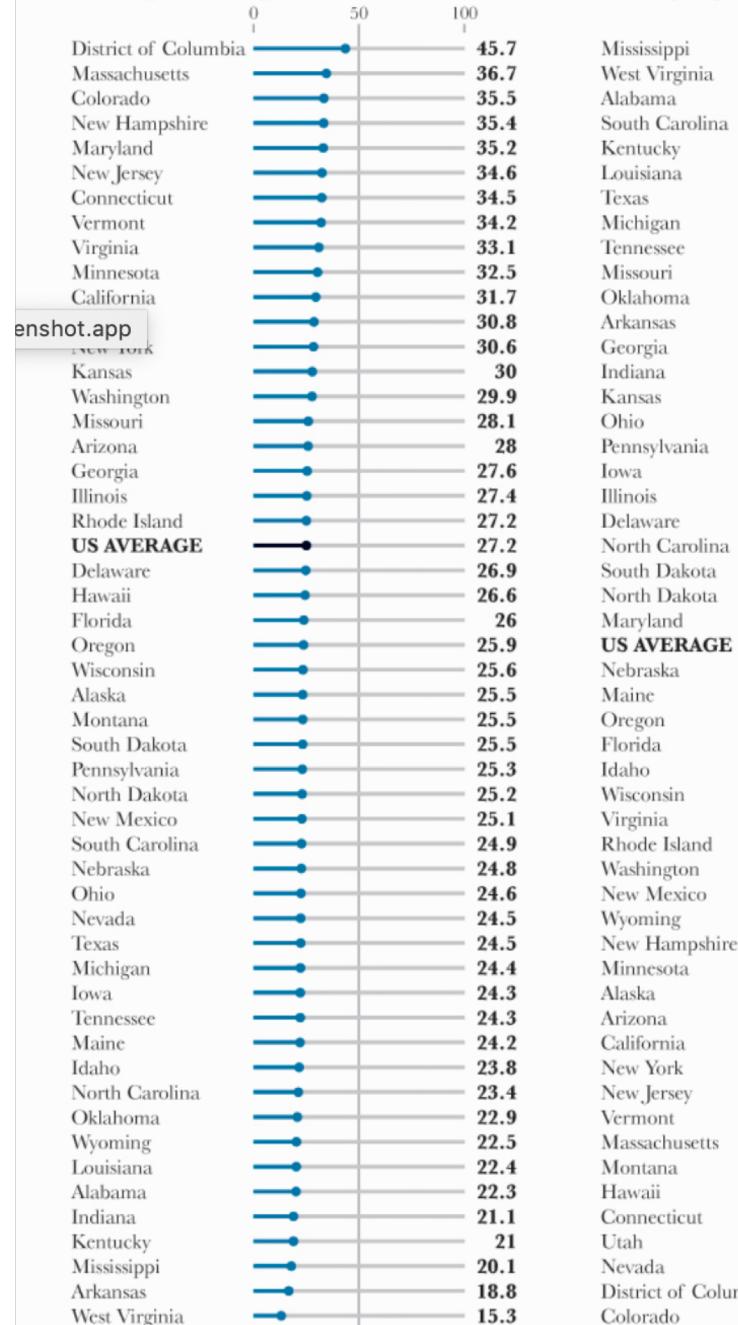
Percentage of people with a BA degree or higher



Percentage of obese people



Percentage with a
BA degree or higher



Percentage of
obese people

