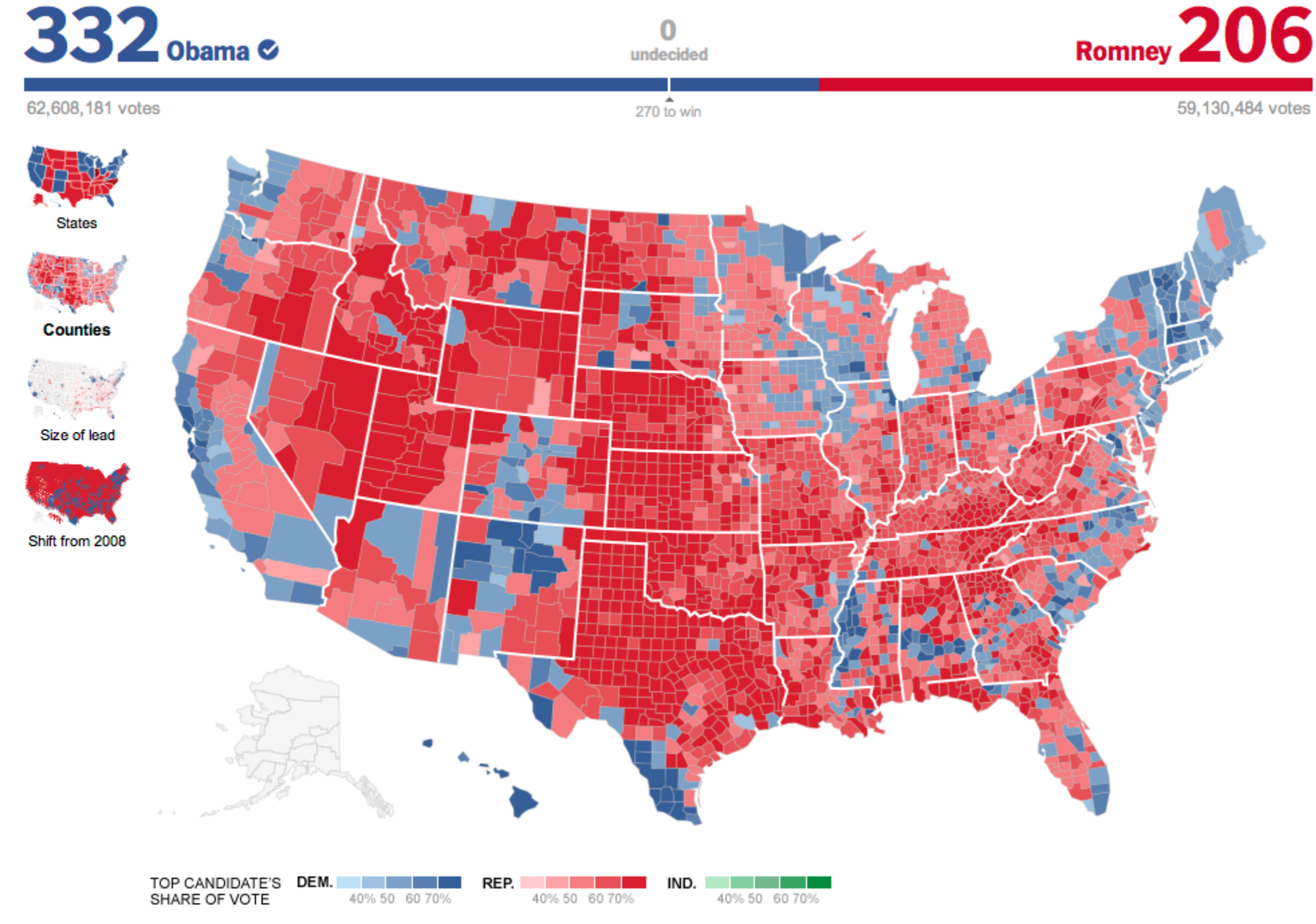
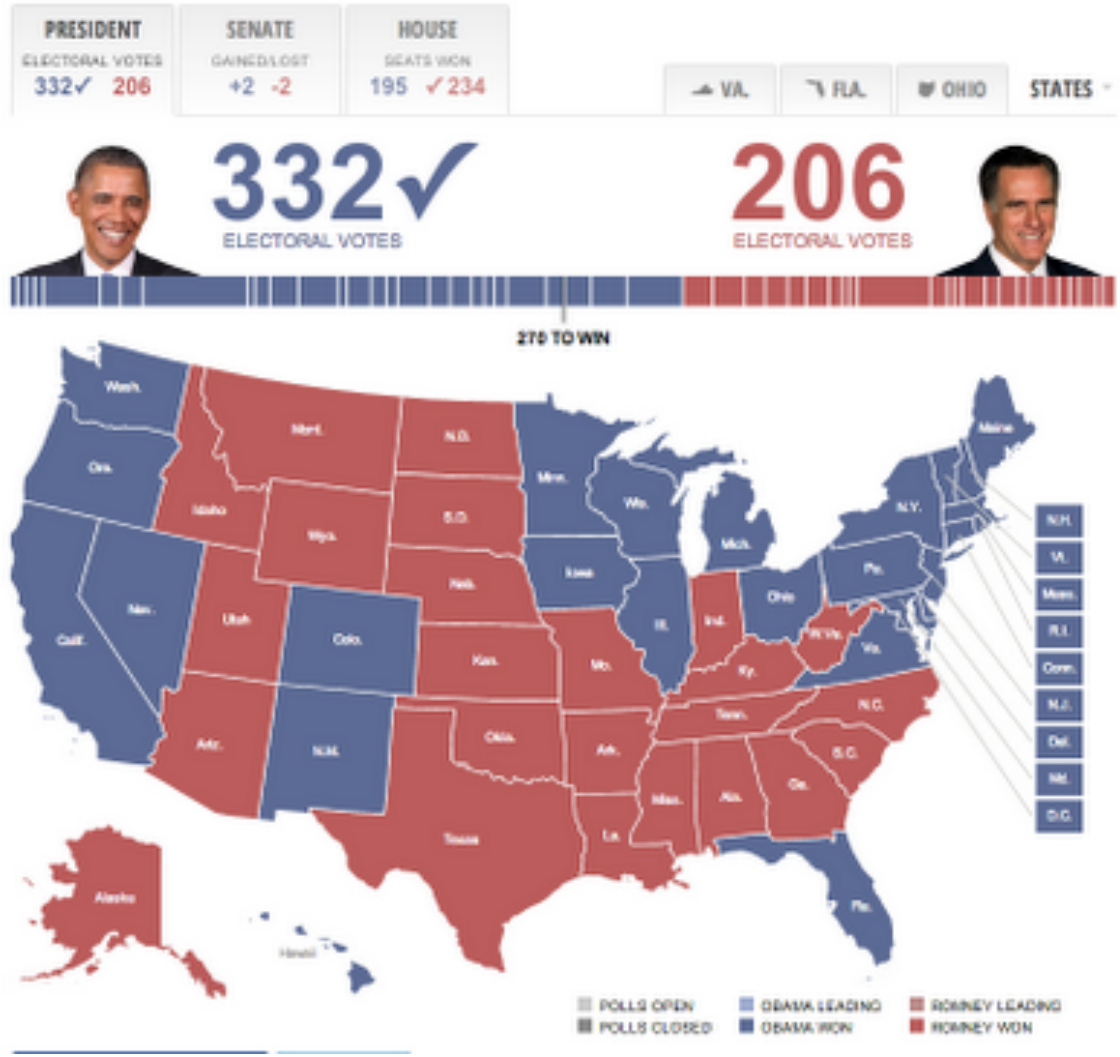
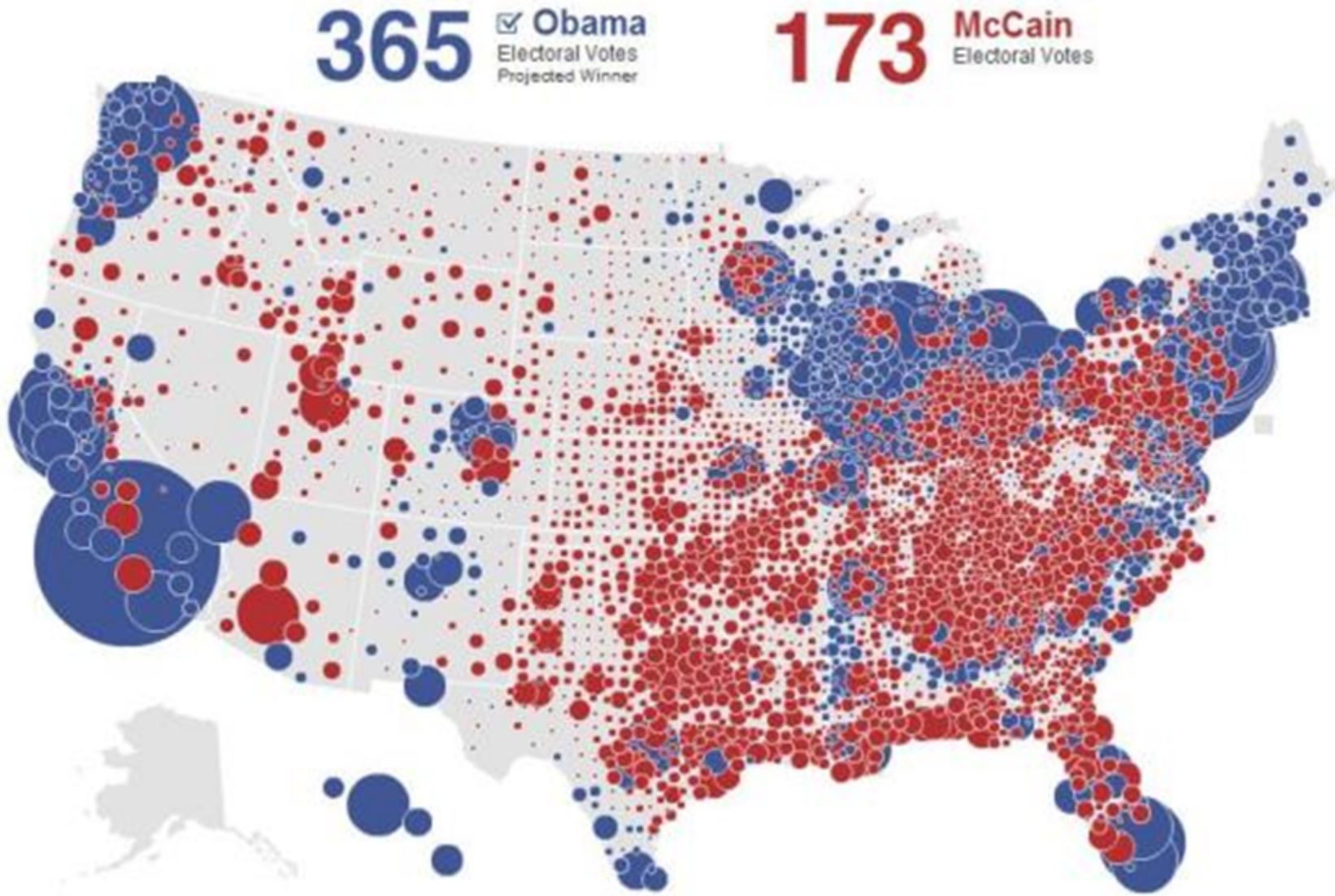
visual narrative

Your data tells a story

Which of these maps tells the story better?


332 Obama
0 undecided
Romney 206
62,608,181 votes
270 to win
59,130,484 votes
States
Counties
Size of lead
Shift from 2008
TOP CANDIDATE'S SHARE OF VOTE
DEM. 40% 50 60 70%
REP. 40% 50 60 70%
IND. 40% 50 60 70%

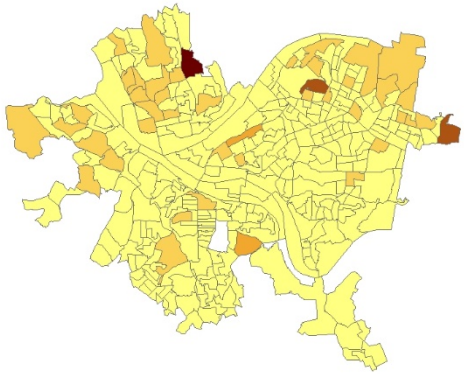

PRESIDENT
ELECTORAL VOTES
332✓ 206
SENATE
GAINED/LOST
+2 -2
HOUSE
SEATS WON
195 ✓234
VA.
FLA.
OHIO
STATES
332✓
ELECTORAL VOTES
206
ELECTORAL VOTES
270 TO WIN
Wash.
Ore.
Calif.
Nev.
Idaho
Mont.
Wyo.
Utah
Colo.
Ariz.
N.M.
N.D.
S.D.
Neb.
Kan.
Okla.
Texas
Minn.
Iowa
Mo.
Ark.
La.
Wis.
Ill.
Mich.
Ind.
Ohio
Ky.
W.Va.
Tenn.
Miss.
Ala.
Ga.
S.C.
N.C.
Va.
Pa.
N.Y.
Maine
Fla.
Alaska
Hawaii
N.H.
Vt.
Mass.
R.I.
Conn.
N.J.
Del.
Md.
D.C.
POLLS OPEN
POLLS CLOSED
OBAMA LEADING
OBAMA WON
ROMNEY LEADING
ROMNEY WON


365
Obama
Electoral Votes
Projected Winner
173
McCain
Electoral Votes

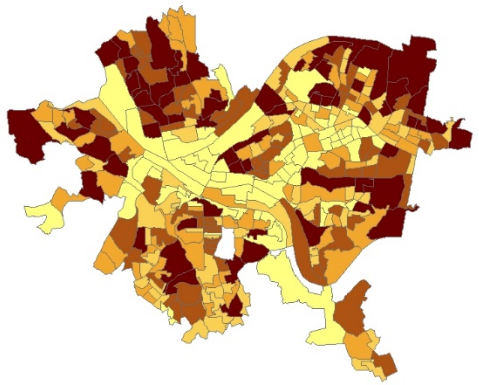
By emphasizing integrity of the wrong element (geography versus population density here), you may mislead your audience.

WHAT PATTERN DO YOU SEE?

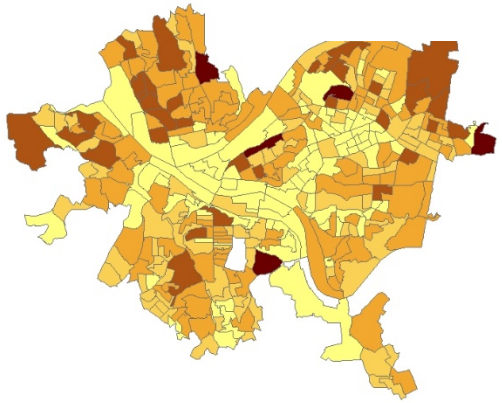
Equal Intervals



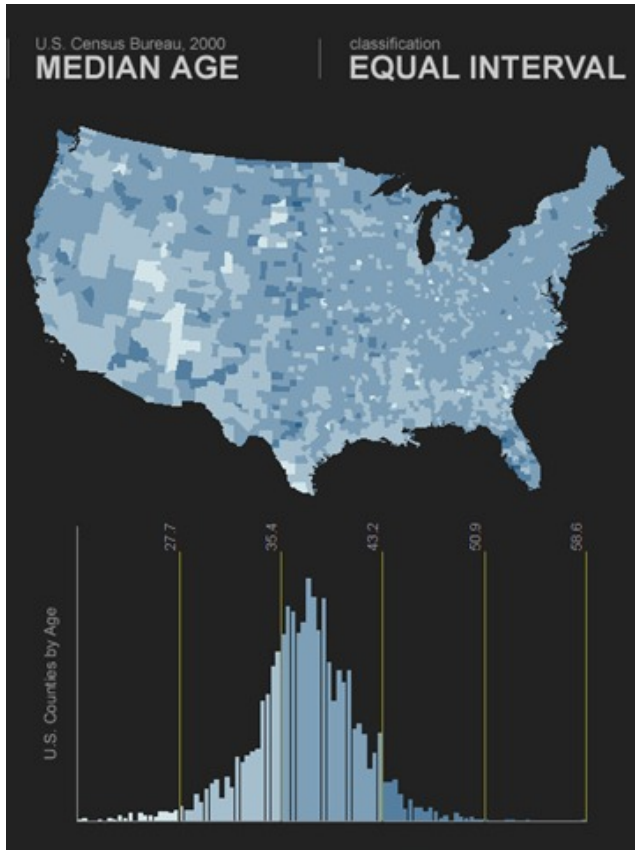
Quantiles

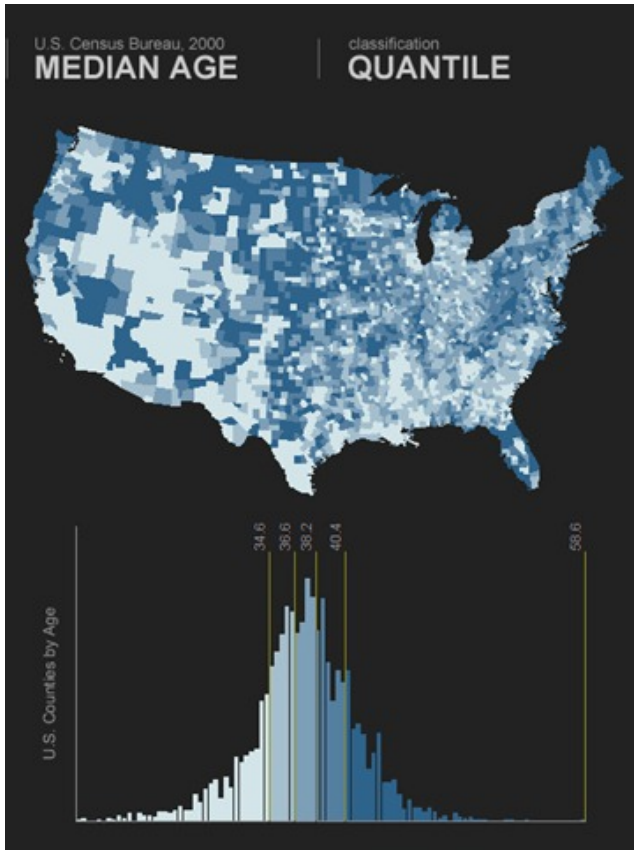


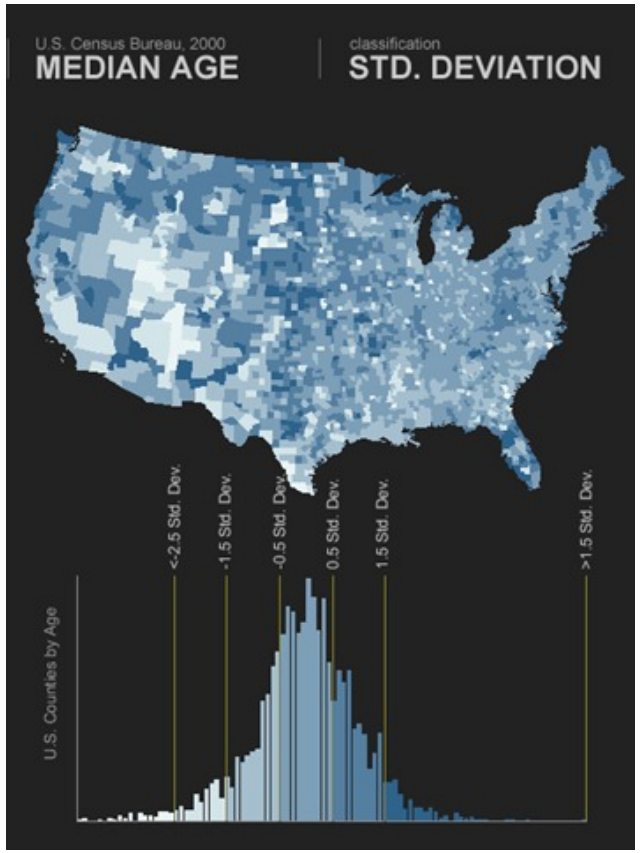
These maps are all made with the same data using different intervals for the break points.



Geometric

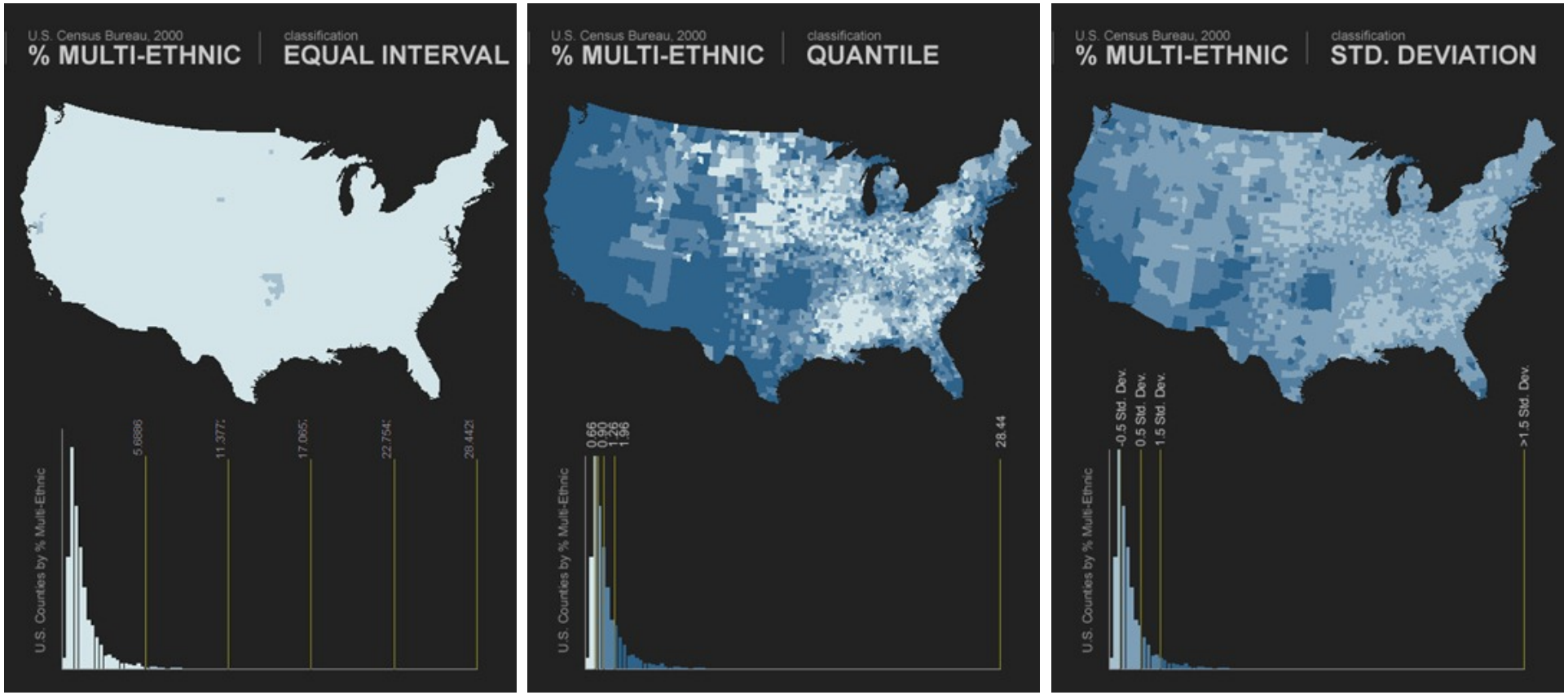






http://uxblog.idvsolutions.com/2010/03/crazy-world-of-range-breaks.html

BREAK POINTS FOR SKEWED DISTRIBUTIONS



RULES OF THUMB:

1. **First Rule:** use common sense! What do your groups represent, and are they meaningful? Are you misleading your audience with unreasonable breaks?

2. Binning by quantiles is typically a safe way to create breaks to show low, medium, and high values.

3. If a lot of your data is bunched together (for example, half of your values are close to zero), quantiles will not be meaningful because it will imply differences that do not exist.

4. If your distribution is skewed, consider increasing-interval or exponential scales.

   For example, define the first group as 0-2, second as 2-6, third as 6-14, next as 14-30 (your interval size doubles each break).

Recall from Lab 2

- Natural breaks on continuous variable