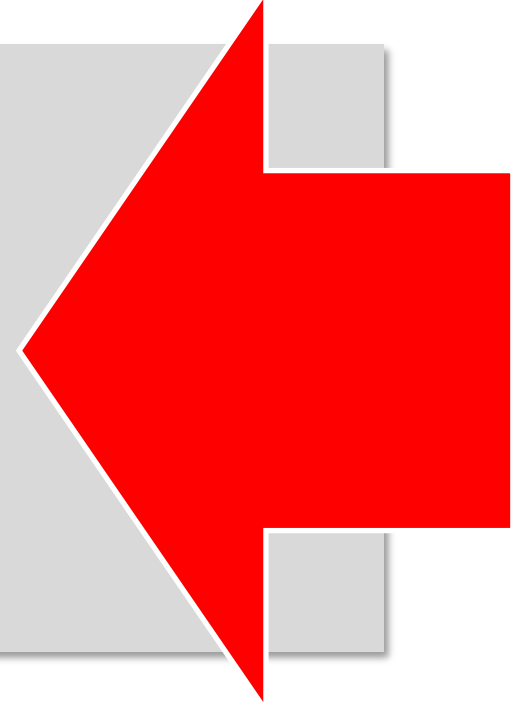


Assignment 2: Thematic Map Interpretation

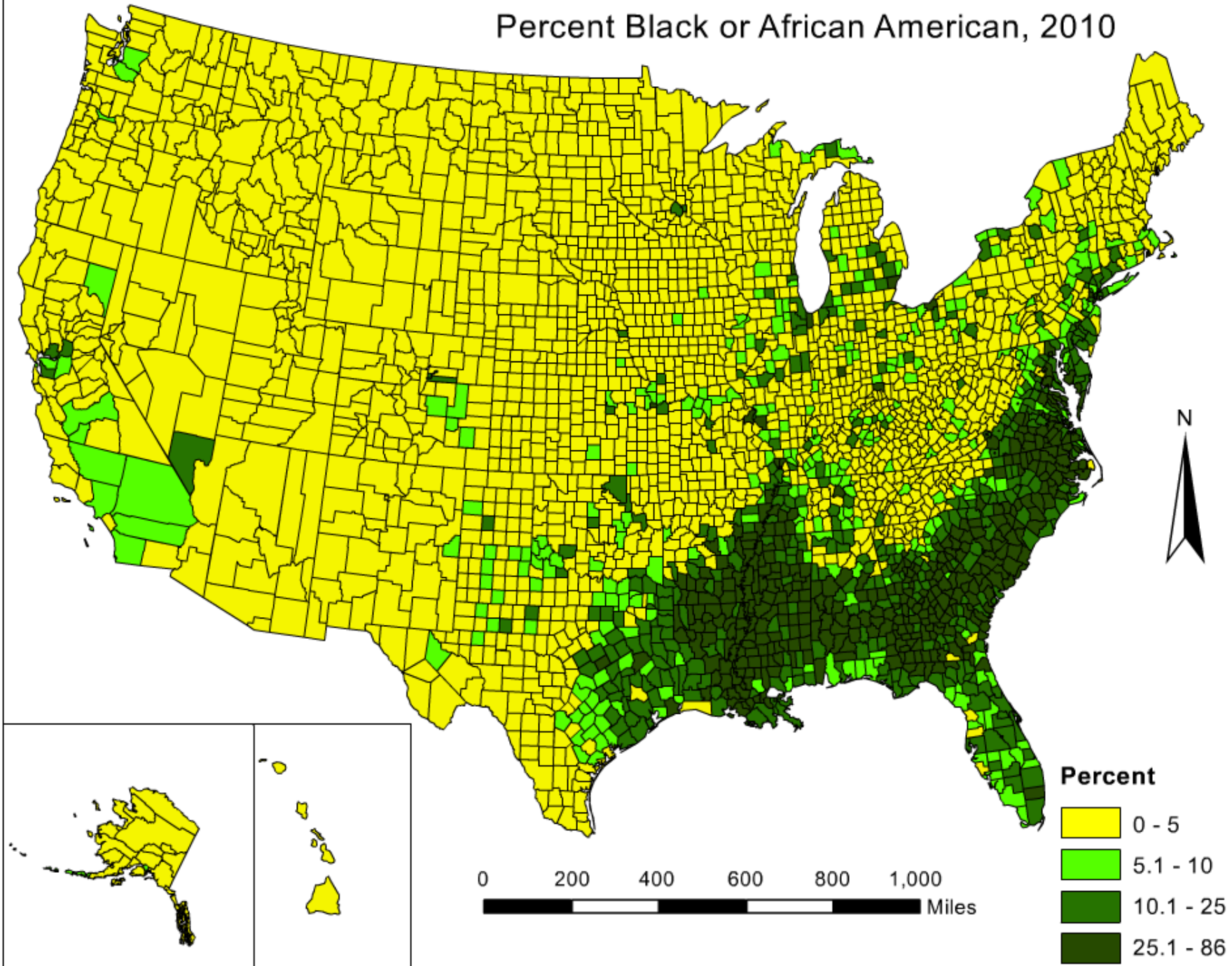
NOTE!

Assignment 2 has 14 questions, but it counts for 10 points in my final grade calculations. You can earn 4 extra credit points on Assignment 2 (if you get them all right!)... You will earn 10 points as long as you submit the assignment on time, and I can see that you put the effort in to answer the questions to the best you could.

You must submit your answers to the questions in Assignment 2 in Blackboard.

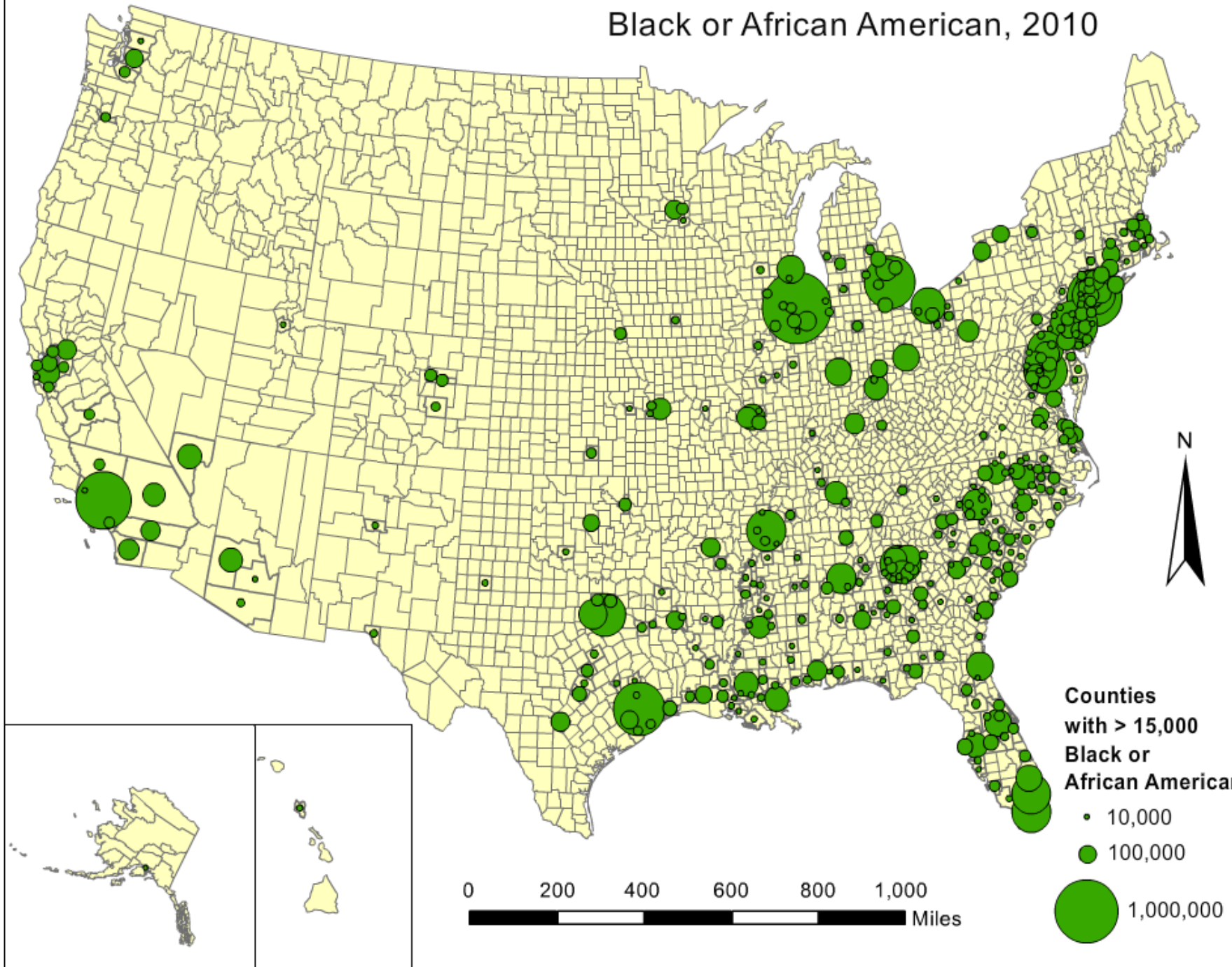


Percent Black or African American, 2010



1. What type of thematic map is this?
2. What type of data does this map describe?
3. Looking at this map, where does it appear that most African Americans live in the US?
4. What large urban areas not in the main area of concentration of African Americans have high percentages of African American population?

Black or African American, 2010

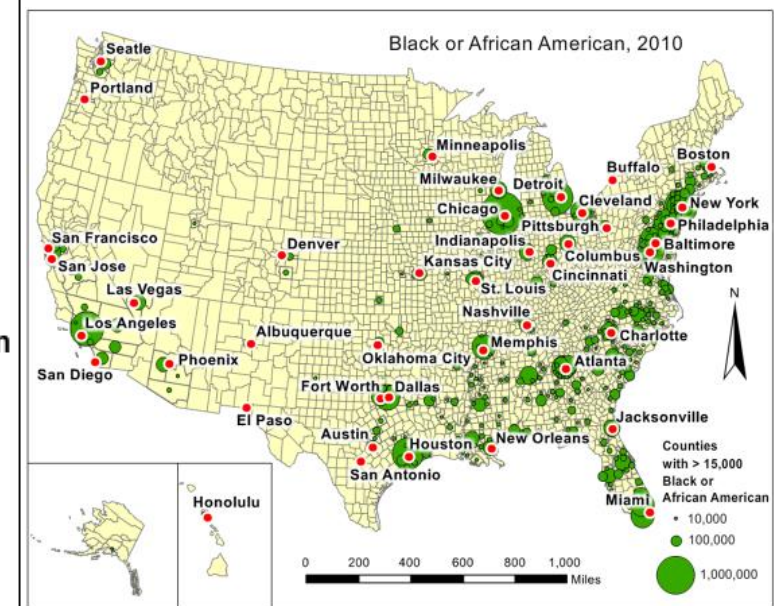


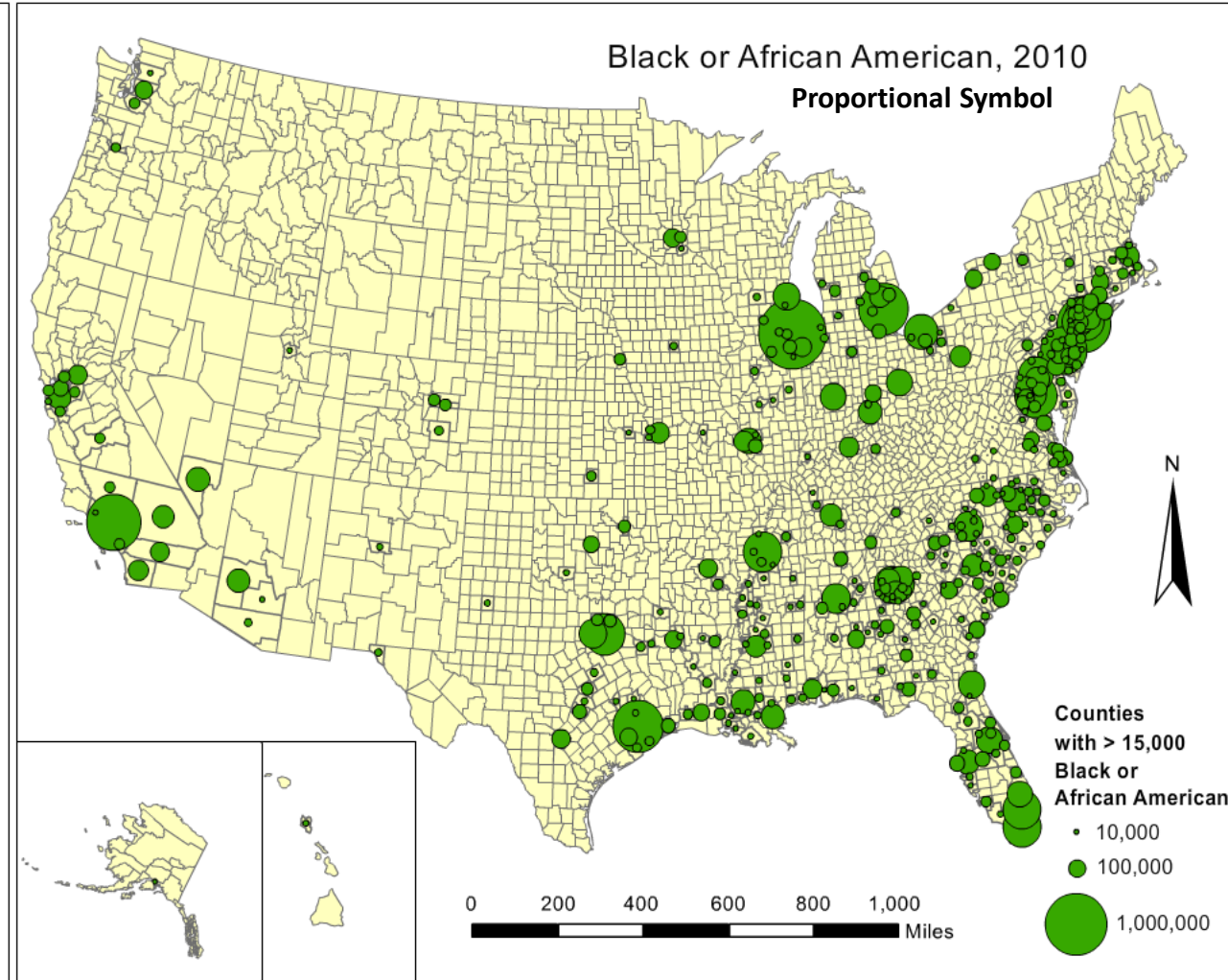
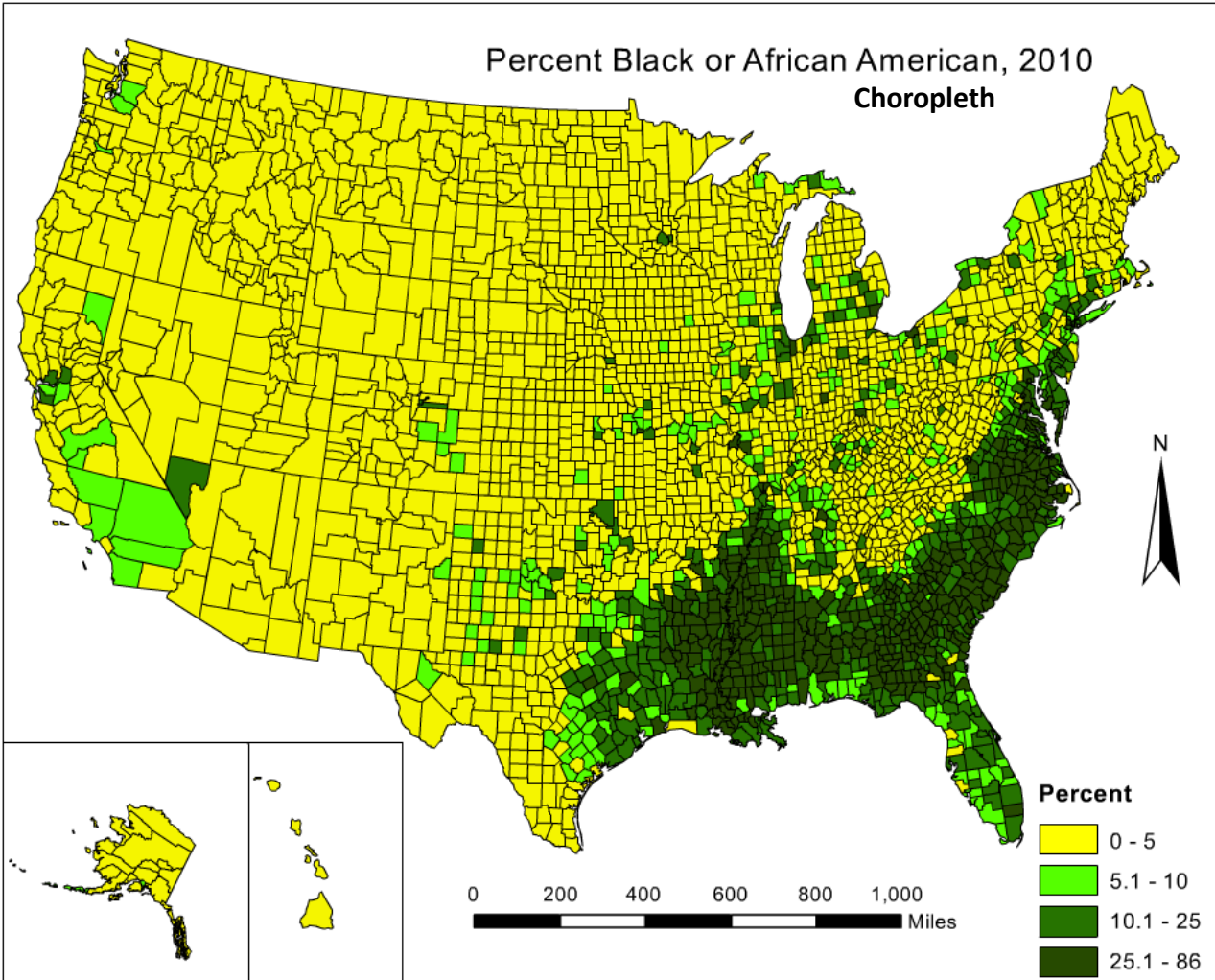
5. What type of thematic map is this?

6. What type of data does this map describe?

7. Looking at this map, where does it appear that most African Americans live in the US?

8. What four cities have the largest African American populations?





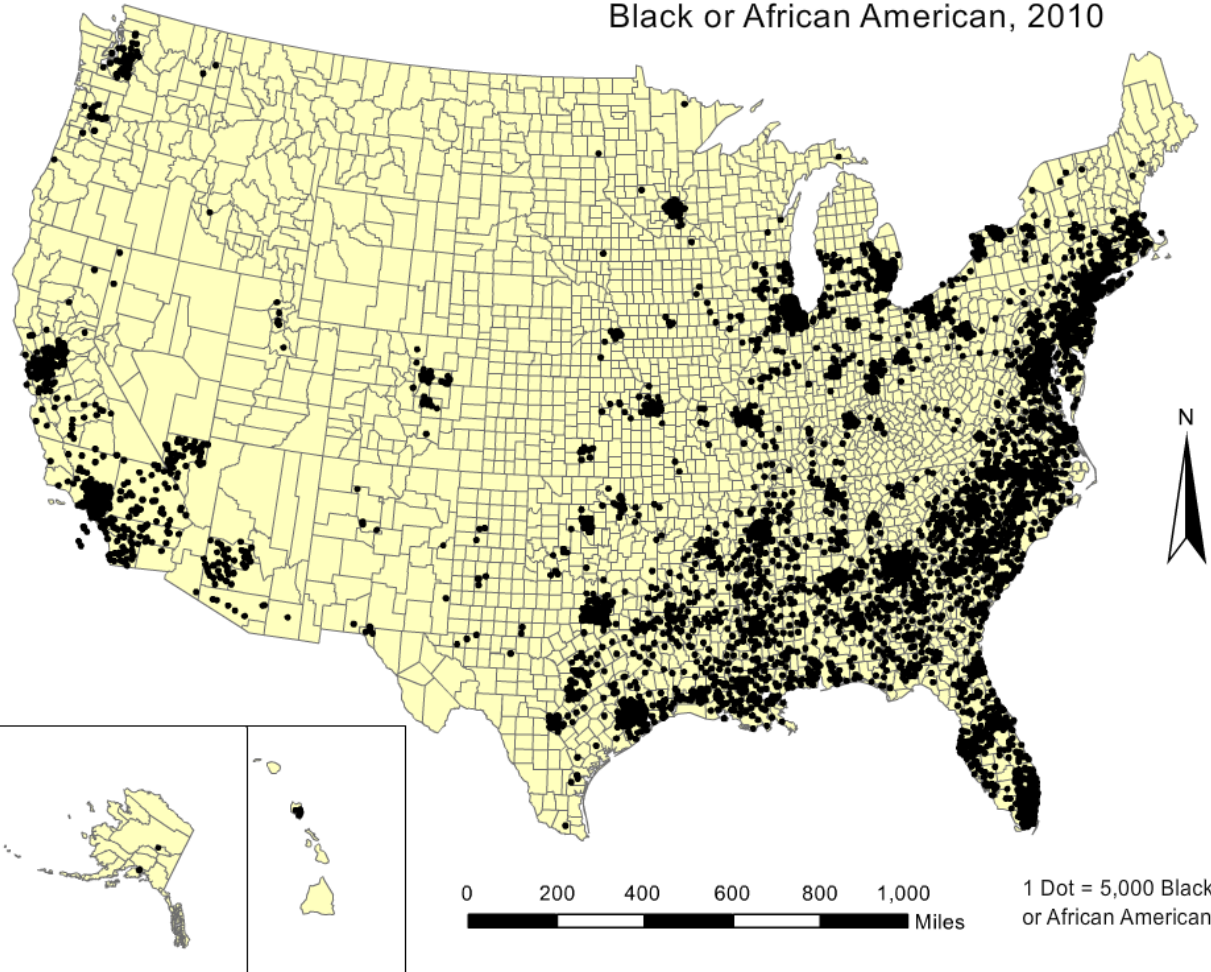
9. How is the same data shown two different ways by these maps?

10. Why do the concentrations of the African American population of the US seem to be very different in these two maps (keeping in mind, again, that the data used to create both is the same!)?

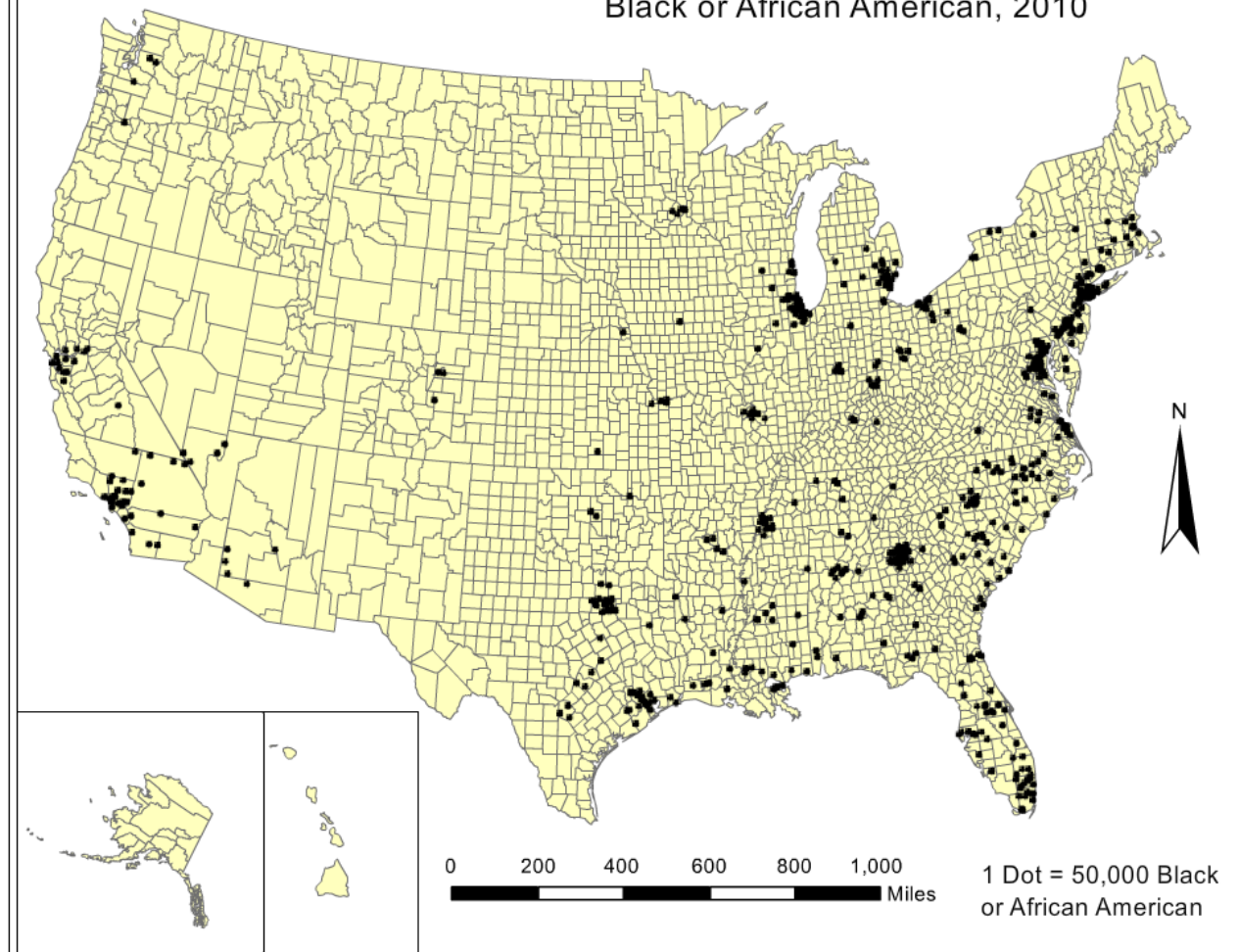
11. What is the main problem with the proportional symbol map?

→ Hint: Remember that both of these maps show the information for each county in the US.

Black or African American, 2010

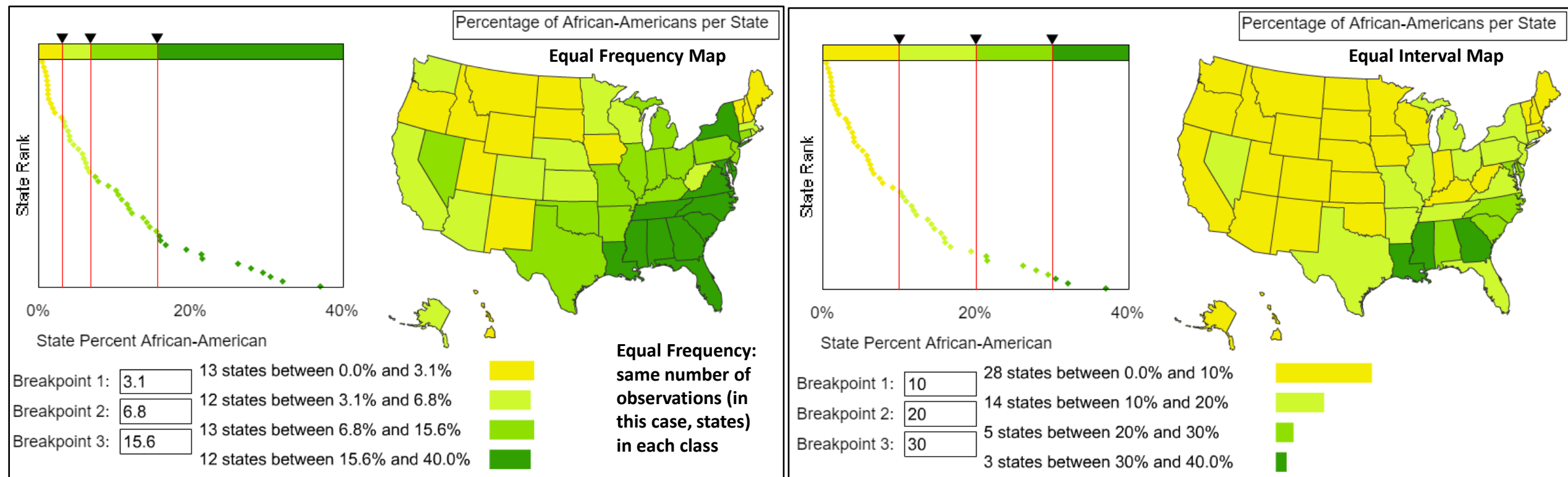


Black or African American, 2010



12. The two maps shown here are what type of thematic map?
13. What is the main difference between these two maps (again, both were created using the same information)?
14. If you were going to use one of these maps to show the concentration of African American populations in large urban areas, which would be better to use?

Submit your answers in Blackboard.



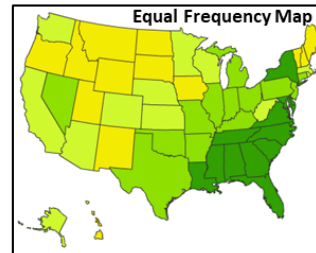
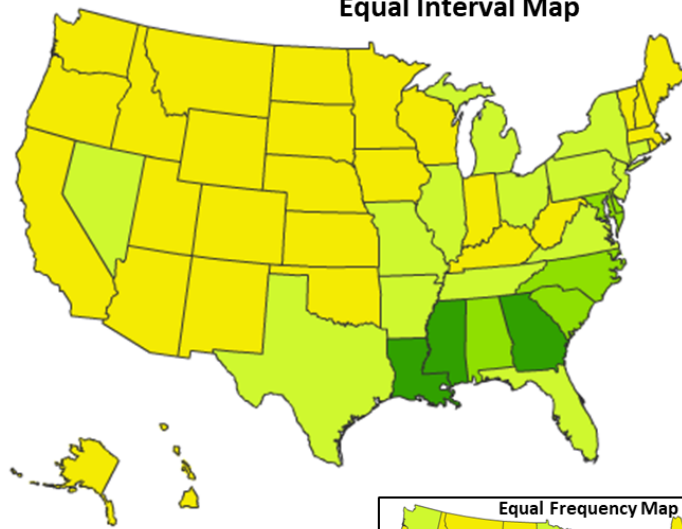
Two maps above use the same data are the County maps, aggregated (all counties summed up) to the state level.

The map on the left is an Equal Frequency Map – there are the same number of observations in each class (well, almost... there are 50 states, so two of the classes here have 12 states, and two have 13). A better way to divide the Equal Frequency Map might be to divide the data into 5 groups, each with 10 states. The map on the right is an Equal Interval Map – each of the classes is the same size. We know the data goes from close to 0% African American (there are several states where the percentage of African Americans in the population is less than 1%) to almost 40% (see the last dot on bottom right on the graph in each map image). For 4 classes, from 0-40%, we can easily divide this: 0-10, 10-20, 20-30, 30-40.

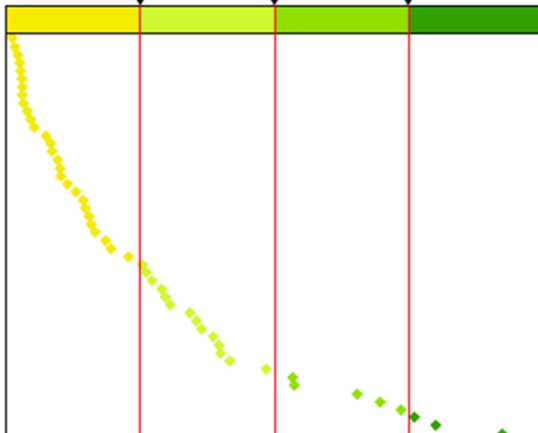
Both of these methods are acceptable ways to show the data, and one might be preferred for certain studies and the other for other studies. The map at left is a “quartile map” – without trying to be confusing, the lowest 13 states are the “first quartile” – 25% of the states – with the lowest percentages of African American population. The fourth quartile (the states with the highest percentage of African American population) really highlights the “Old South” with one exception... New York. New York shows on this map because of the concentration of the African American population in and around New York City, which was a major destination of African Americans leaving the South in the late 1800s and early 1900s to (a) escape continuing discrimination in the South, and (b) to seek better economic opportunities in the North, in the factories being built during the industrialization of the North and MidWest US. The South saw little industrialization investment until after World War II, mainly due to political issues linked back to the Civil War and racial unrest afterwards.

Percentage of African-Americans per State

Equal Interval Map



State Rank



0% 20% 40%

State Percent African-American

Breakpoint 1:	10	28 states between 0.0% and 10%
Breakpoint 2:	20	14 states between 10% and 20%
Breakpoint 3:	30	5 states between 20% and 30%
		3 states between 30% and 40.0%

Thematic Map Interpretation: Comparing Methods

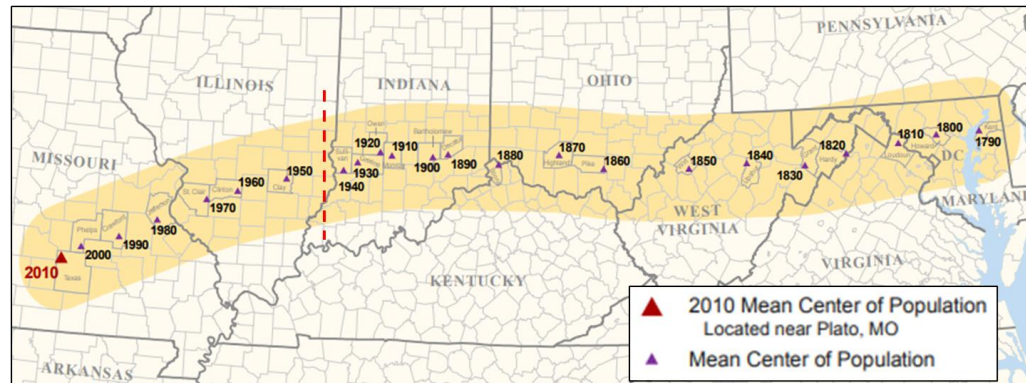
The Equal Interval Map shows us a slightly different picture of the distribution of the African American population – in particular, how the South is changing, what is sometimes called the “New South” in cultural geography.

Notice the difference in how North Carolina, South Carolina, Tennessee, Alabama and Florida are shown in the Equal Interval Map compared to the Equal Frequency Map (inset).

This is only partly due to the migration of African Americans out of the South. The bigger impact is the general population shift in the US since World War II, sometimes referred to as the Snowbelt to Sunbelt migration, and more or less impact (depending on what part of the country you are looking at) of in-migrants from Latin American, Caribbean and Asian origins.

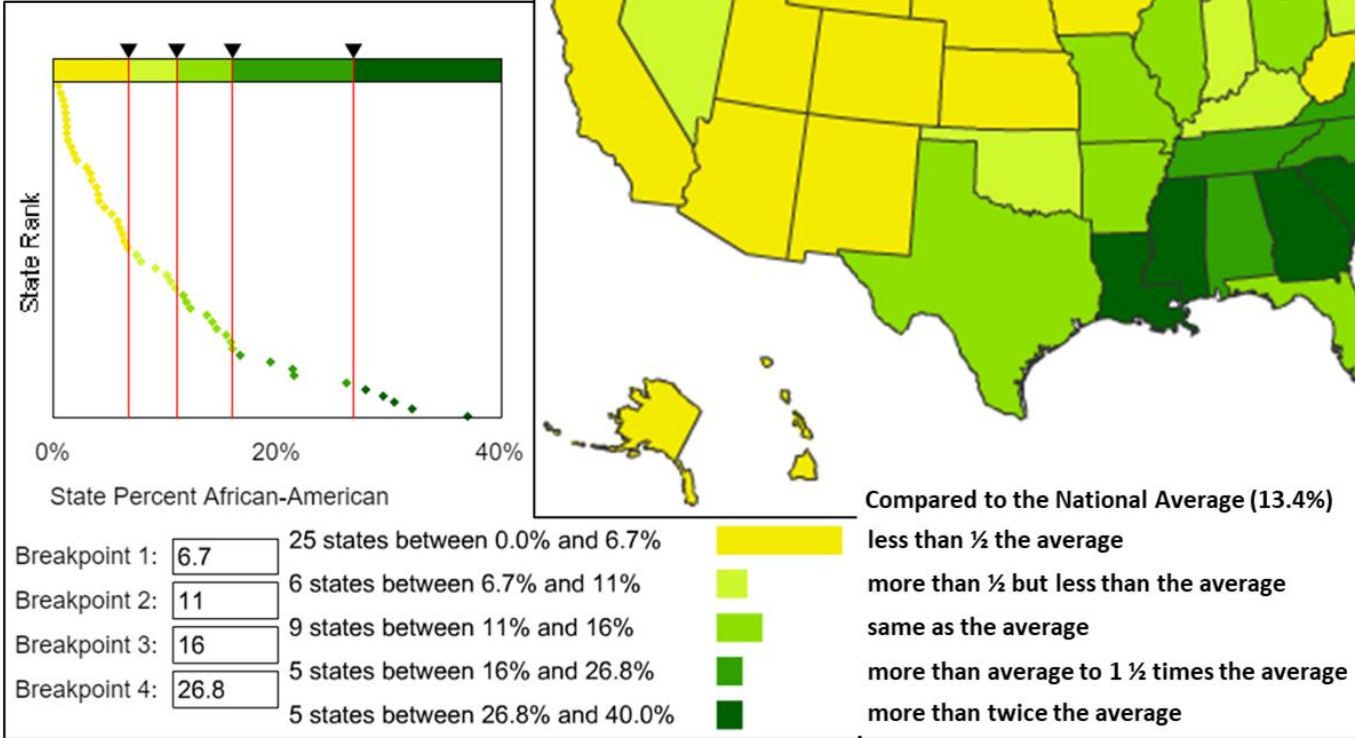
There has been substantial population growth in the South and West since World War II, with many people moving from the Snowbelt (North and Midwest especially) to the Sunbelt (South and West).

This was driven by many factors such as the use of the automobile for personal transport, the creation of the interstate highway system, home air conditioning, right-to-work laws that stifled unionization (and resulted in lower wages in the South and West), and former military personnel who had been stationed at southern and western bases and stayed after their service. Large factories once only located in the North and MidWest were built in North Carolina, South Carolina, Tennessee, Alabama, California and Washington. Retirees and others flocked to Florida and other southern and western states.



The map above shows the affect of this population movement. While difficult to see the individual dates, the “path” moving from east to west shows where the mean population center of the US was located for every census since 1790. Continuing westward expansion is expected, but note too that around 1950 (where the red dotted line bisects the path), the mean center of population in the US trends distinctly more South than any time prior to that.

Location Quotient Method



An alternative to the Equal Frequency or the Equal Interval methods is the Location Quotient Method. The Location Quotient method allows us to look at two characteristics of the population at the same time:

- How the states compare to each other, and,
- How each state compares to the national average.

The African American population in the 2010 census was about 13.4 % of the total US population, so:

1. if a state has ½ or less of the US (by percent), then it would have 6.7% or less,
2. if a state has more than ½ of the US average but less than the same as the US average, I set the class limits at 6.7 to 11%,
3. if a state has about the same as the US average, I set the class limits to fall between 11 and 16%... from just a little less to just a little more,
4. if a state has more than the US average up to 1 ½ times the US average, the class limits are 16 to 26.8%,
5. if the state has more than twice the US average, the class limits go from 26.8 to 40% (the maximum value).

With the Location Quotient method, we can easily compare the states to each other. Note that all states with the highest percentage African American populations are all in the Old South (Maryland, South Carolina, Georgia, Mississippi, Louisiana), and the next highest group are also states in the Old South (Maryland, Alabama, Tennessee, North Carolina, Virginia)... and one exception: Delaware. There are high concentrations of African Americans mostly in and around Wilmington, which was part of the northeastern manufacturing region. The two exceptions with lower percentages in the Old South are Florida and Texas. Both of these states saw rapid growth after World War II – Florida from 2.8 (1950) to 10.2 (1980) to 21.5 million (2020); Texas from 7.8 (1950) to 14.8 (1980) to 29.1 million (2020), and both have been strong attractors of the Snowbelt to Sunbelt migration. There are almost as many people living in the Orlando metro area today (2.6 million) as there were in the entire state in 1950. We can also see the effect of the Great Migration (1880 – 1960) of African Americans into the Manufacturing Belt (from New York west to Illinois), where the percentages of African Americans are close to “the same as the national average” (the range between 11 and 16%, 13.4% is the national average).