2008 Presidential Election Maps

Red States & Blue States

The states are colored red or blue to indicate whether a majority of their voters voted for the Republican candidate, John McCain, or the Democratic candidate, Barack Obama, respectively. Scanning the map it becomes apparent that the Republicans won the election fairly, since there is rather more red than blue. In fact, however, the outcome is true but the electoral map is biased by a substantial margin. The explanation for this apparent paradox is an equal voting rule, if not for the millions of voters accounted for in the populations of the states. The line be seen in the way the states are sized, the total number of voters, which is what matters in an election.

We can correct for this by making use of a cartogram, a map in which the sizes of states are rescaled according to their population. That is, states are drawn with size proportional to their area but to the number of their inhabitants, states with more people appearing larger than states with fewer, regardless of their actual area on the ground. On such a map, for example, the state of Rhode Island, with its 1.1 million inhabitants, would appear about twice the size of Wyoming, which has half a million, even though Wyoming has 20 times the acres of Rhode Island.

Here are the 2008 presidential election results on population cartograms like this one. In this case, the states have been rescaled and rescaled, some of them substantially, to give them the appropriate size. Though it does take a bit of getting used to, the colors give a good impression of the shape of the map, so far as is possible. On this map there is now clearly more blue than red.

State Population Cartogram

Electoral Votes Cartogram

We can represent the effects of the electoral college by scaling the sizes of states to be proportional to their number of electoral votes. This looks similar to the earlier population cartogram, but it’s not identical. Wyoming, for instance, has approximately double the size, presumably because it is close in size to small states. The same red and blue on the cartograms are now proportional to the actual numbers of electoral votes won by each candidate. Thus this map, shown at a glance, both which state went to which candidate and which candidate won most electoral college votes — something that you could not tell easily from the electoral college red and blue map.

Shaded County Cartogram

Here is the corresponding cartogram. As the map makes clear, large portions of the country are dominated by a small number of the states. This is how we see the differences between grid. In this way we see whether a particular county went strongly for one candidate or the other, or whether it was relatively evenly split. One way to remember the map is to use red and blue, and shades of purple in between to indicate percentages of votes.

Results by State

Red Counties & Blue Counties

We can do the same thing with the county-level election results and the images are even more striking. Here is a map of US counties, again colored red and blue to indicate Republican and Democratic majorities respectively.

County Population Cartogram

Red, Blue & Purple Counties

Again, we can make a more helpful representation by using a cartogram, that is, what the cartogram looks like for the county-level election results. Here the effect of the size level are more pronounced. The red areas appear more prominently in the majority, or appear again at size with the actual results of the election.

Democrats...