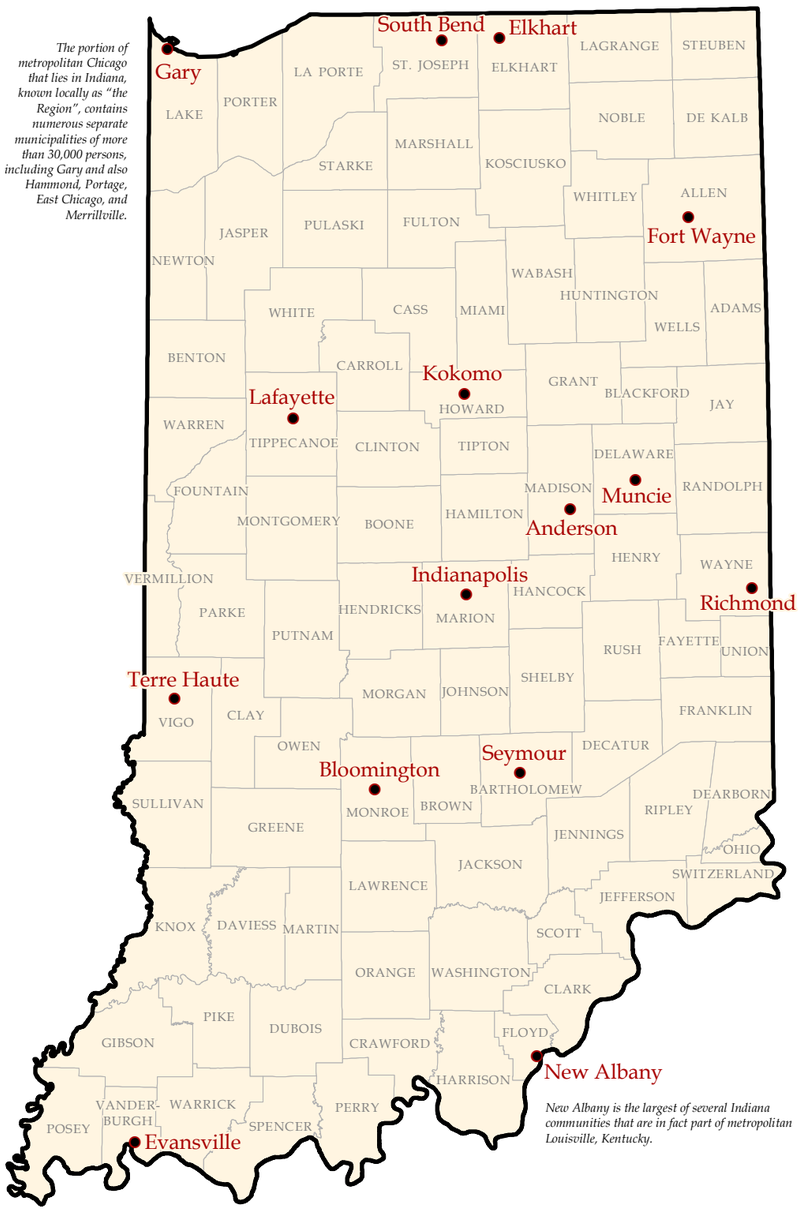
Population in Indiana

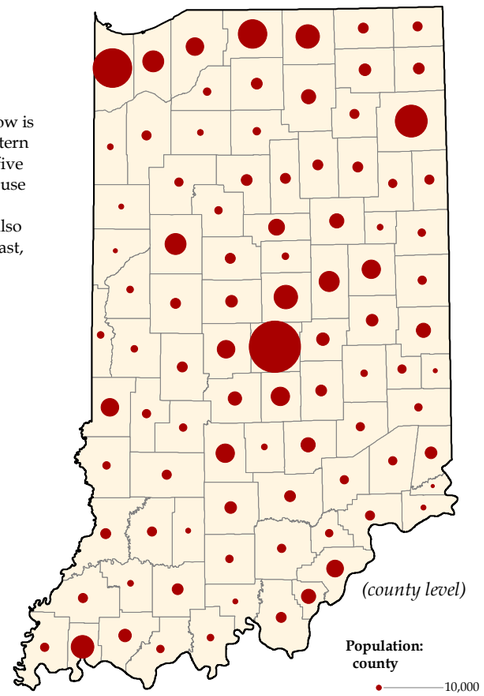
— A study in presentation

As in most places, the population in Indiana is unevenly distributed, tending to cluster in cities and towns; below is a reference map on which the centers of much of Indiana's population are identified. Capturing the spatial pattern of the state's population depends greatly on our choices of enumeration unit and symbology. To the right are five maps. The three maps in the top row use data aggregated at the county level; the two maps in the bottom row use data aggregated at the census block group level. While the county-level maps depict the coarse pattern, with population primarily clustered in the center and the north, the image is bound by the typical county size, and also by the fact that county boundaries have nothing to do with settlement patterns. Census block groups, by contrast, are population based, and much smaller, and allow the distribution to emerge clearly.



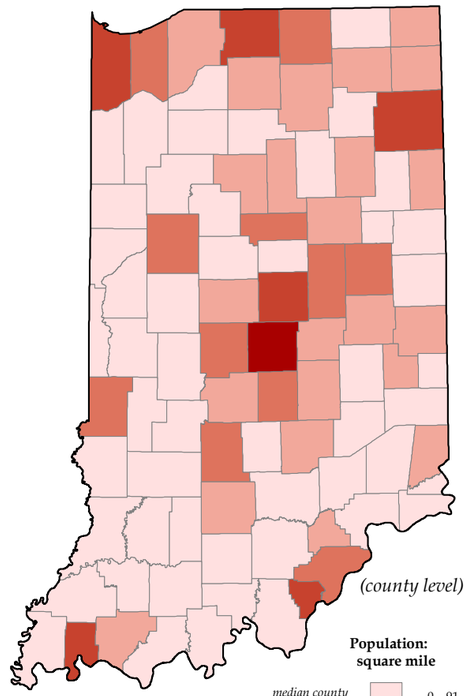
The portion of metropolitan Chicago that lies in Indiana, known locally as "the Region", contains numerous separate municipalities of more than 30,000 persons, including Gary and also Hammond, Portage, East Chicago, and Merrillville.

New Albany is the largest of several Indiana communities that are in fact part of metropolitan Louisville, Kentucky.



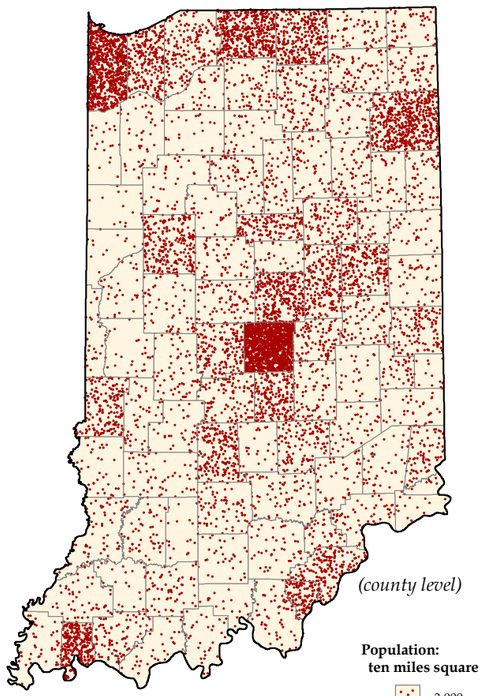
Proportional symbol

The population of each unit (here, each county) is represented by a single circle whose area is proportional to the population.



Choropleth

Each unit is placed into one of five classes based on population density, with matching classes above and below.



Dot density

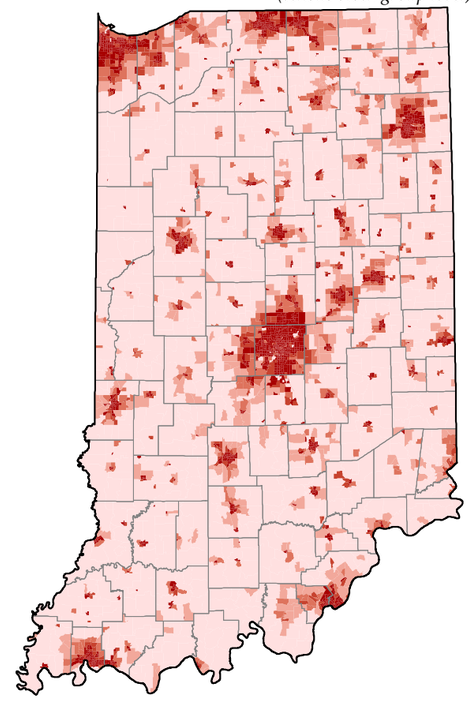
Dots are distributed randomly within each unit, the total number of dots equalling the total population of the unit.

Using data at the census block group level, right, we see a more-precise distribution of population in counties adjoining Indianapolis and Chicago. Rather than the continuous and uniform distribution implied by the county-level choropleth and dot density maps, or even discrete populations at county centers implied by the proportional symbol map, the maps at the block group level produce a much more accurate picture of population.

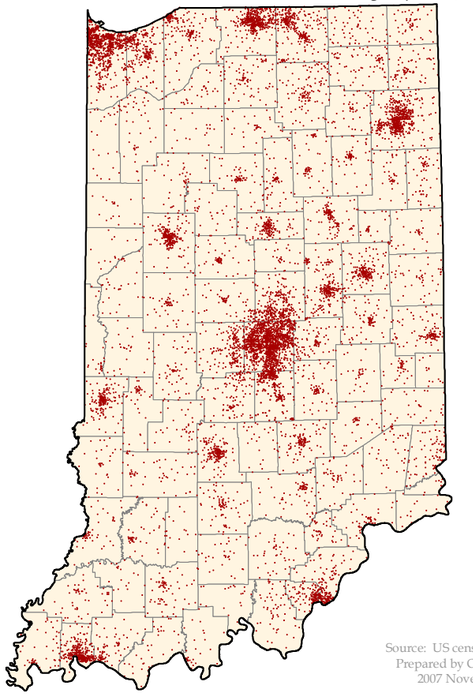
It is customary, when using a choropleth map, to divide data into classes, and assign each class its own color, here suggesting a progression from low to high. Because the size of enumeration units varies, the classes are chosen based not on raw population totals, which might suggest greater population for larger areas, but on population density. Both choropleth maps here are standardized in that way, and classed identically. The classification system used is the Fishers-Jenks method, applied to county totals, such that counties are divided according to natural breaks in the data range. The median for the county totals, 84 persons per square mile, falls at the high end of the lowest class.

The proportional symbol and dot density maps, on the other hand, are unclassed — each enumeration unit, whether county or census block group, uses a symbol determined by the exact population. Dot density maps, here using one dot for each six hundred persons, suggest a precise and discrete distribution, but in most practical cases are a kind of choropleth map, as can be seen in the county-level dot density map. Dots are assigned randomly throughout the enumeration unit based on that unit's total population, making the dots merely a variety of shading.

(census block group level)



(census block group level)



Source: US census, 2000
Prepared by O.T. Ford
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