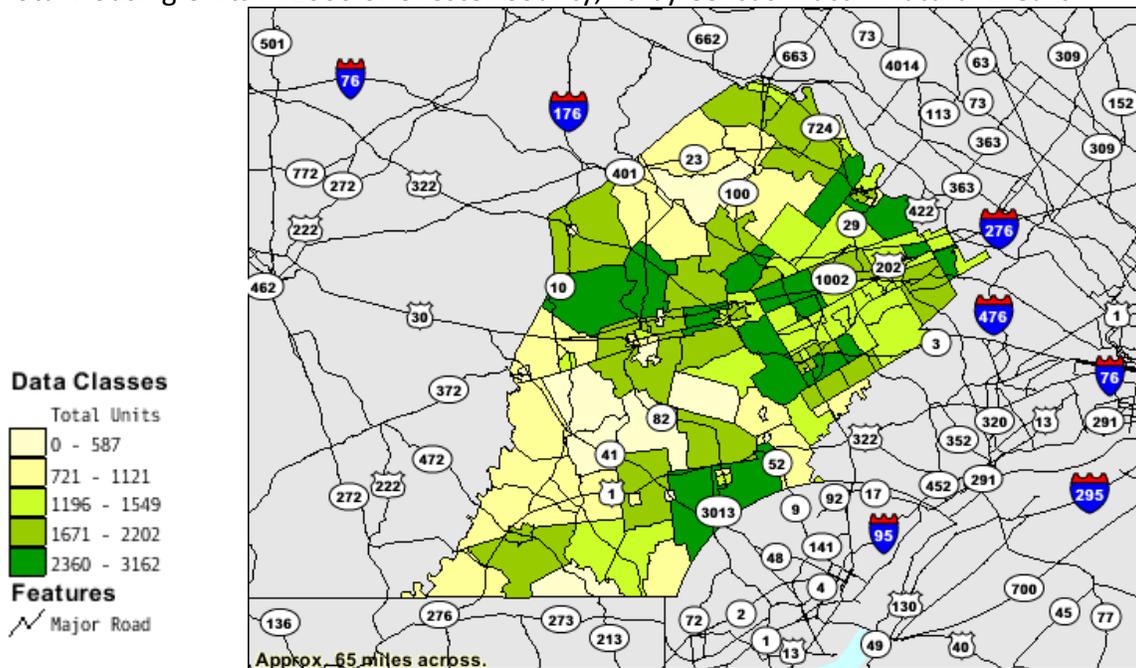


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Section 05

GEOG 160 Lab 1: Census Thematic Mapping

Thematic Map 1

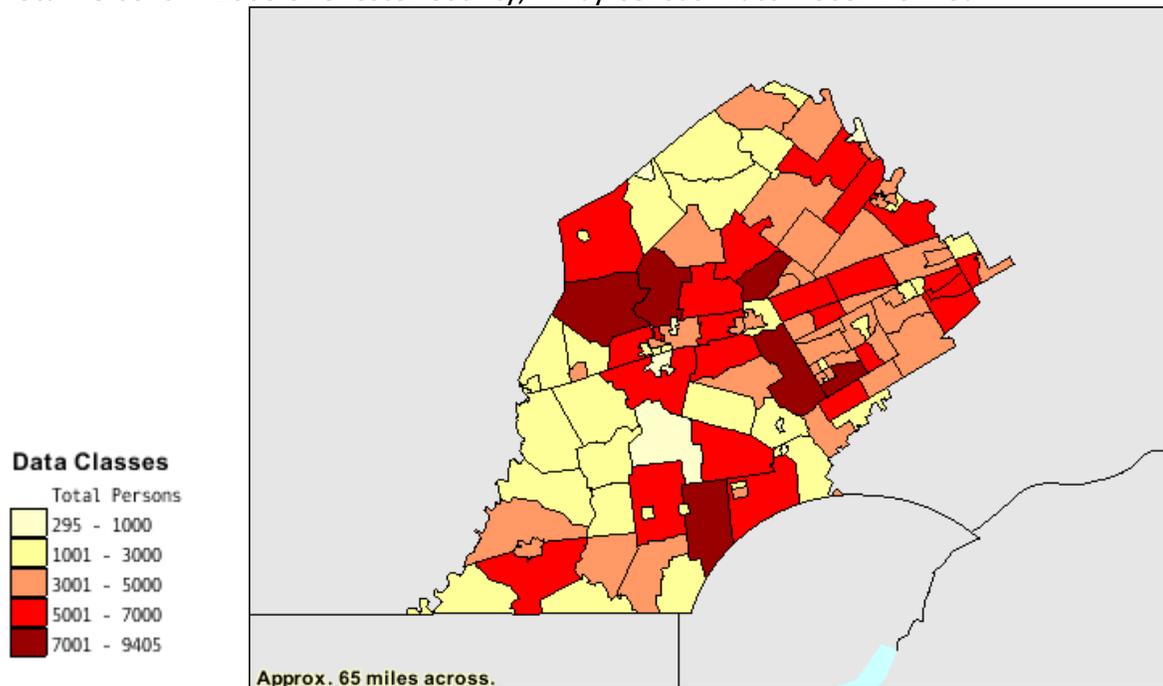
Total Housing Units in 2000 of Chester County, Pa by Census Tract – Natural Breaks



Map 1 shown above is a representation of the total number of housing units per census tract in Chester County, PA. The spatial data here would be of the individual tracts represented through a vector data model while the attribute data would be from records of how many housing units are in each tract. There should be a single count per tract, which falls into one of the natural break data class shown to the left. We are not interested in the actual number here but more so the ratio with thematic maps. Natural break data classification was chosen to best keep similar tract values grouped together on the map while maintaining a significant gap in classes. Equal interval may have also worked for this as well as careful user defined classes, while quantile may have over represented the higher and lower values and distorted the distribution of the housing units. This map has a horizontal extent of 65 miles. From this map you can see a main cluster along what appears to be along the major roads running across the county which are probably more suburban, having more houses in one tract than others. Vice versa the tracts located further away from major roads have a lower number of housing units and are probably more rural and contain more farms.

Thematic Map 2

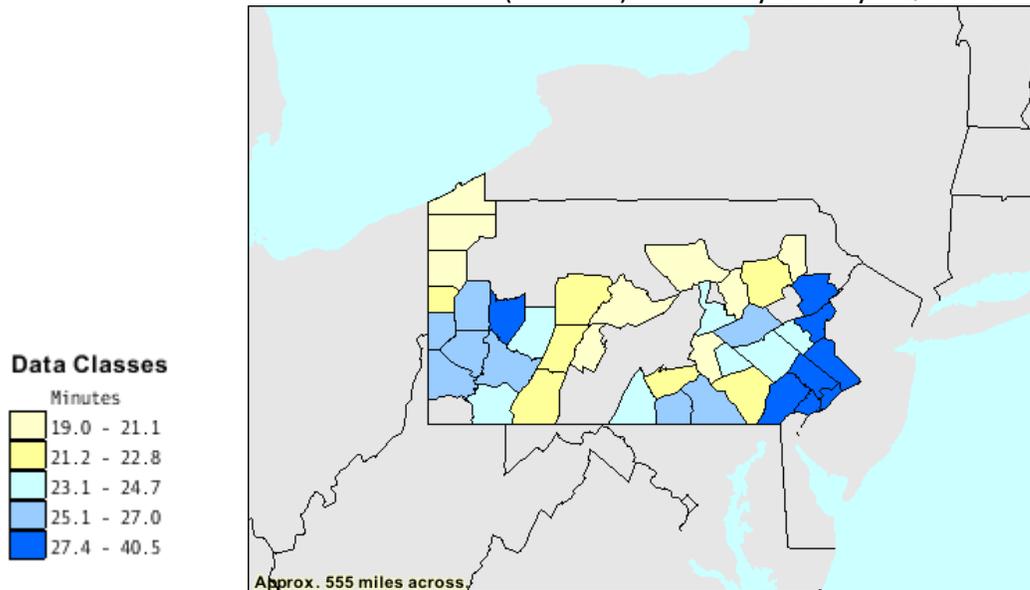
Total Persons in 2000 of Chester County, PA by Census Tract – User Defined



This second map shows the total number of people in each tract. The spatial data here would be again of the individual tracts represented through a vector data model while the attribute data would be from records of how many people live in each tract. This thematic map uses a user defined data class which could be closely based on equal interval, but I've chosen to use clean number breaks. I felt that a user defined data class or an even interval data class would be best for population to show more of the location more so a ratio from one tract to another. Equal interval would have very similar results but would have more tracts fall under the lower class (approx 0-2000) which would almost combine the first two classes on this map. Quantile would also group more tracts into the 2 extremes, low and high. Natural Breaks could have worked here as well to show the location of most people but was used in map1. This map also has a horizontal extent of 65 miles. Observations from this map would include the location of the population of Chester County to be more concentrated in some tracts than others.

Thematic Map 3

Mean Travel Time to Work of Workers (Minutes) in 2008 by County - Quantile



The final map here represents the mean travel time, to work of workers 16 years and over who did not work at home. The attribute data here would be time in minutes over the spatial data of counties represented a vector data model. Only having 2 options left of data classification, quantile was the better choice over Equal Interval since most of the counties would have fallen under the first 2 intervals (19-23 and 23-27). Natural Breaks could have worked here as well to show similar data as the range of data was much smaller than population for example. This map has a horizontal extent of approximately 555 miles. From looking at this map you can see that the counties surrounding major cities such as Pittsburgh and Philadelphia or even New York have the higher mean travel time, chances are the majority of people surrounding the city travel to the city for work. This also works for those with the shortest drives with local jobs in the evenly spread out country and farm areas.

Final Step - Comparison:

The similarities between the first two maps from chest county are almost identical. This makes sense because the more people you have in an area the more houses there will most likely be. One could easily see the correlation of data in the 2 maps, while observing different data attributes over the same spatial data. And as mentioned below map 1 the location of the densities are close to major roads. These roads are often built up with employers that use these roads for shipping or can be used by the population to travel to the city where their job may be.

Sources

U.S. Bureau of the Census (2003). *American FactFinder*. Retrieved December 15, 2007, from <http://factfinder.census.gov>