

Inner City Revitalization: Mapping and Predicting Gentrification in the City of Chicago

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Introduction to GIS
Date: December 16, 2009
Data Sources: United States Census 2000, Chicago Metropolitan Agency for Planning, ESRI, City of Chicago GIS database
Projected Coordinate System: NAD 1983 State Plane Illinois East FIPS 1201 (Feet)



What is Gentrification?

At its core, gentrification is a spatial issue. However, there is a certain level of ambiguity associated with the causes and effects of gentrification due to the varying definitions of gentrification that exist within urban social science literature. For the purposes of this project:

Gentrification is defined as high levels of renovation in low-income neighborhoods that leads to in-migration of the middle class.

Project Overview

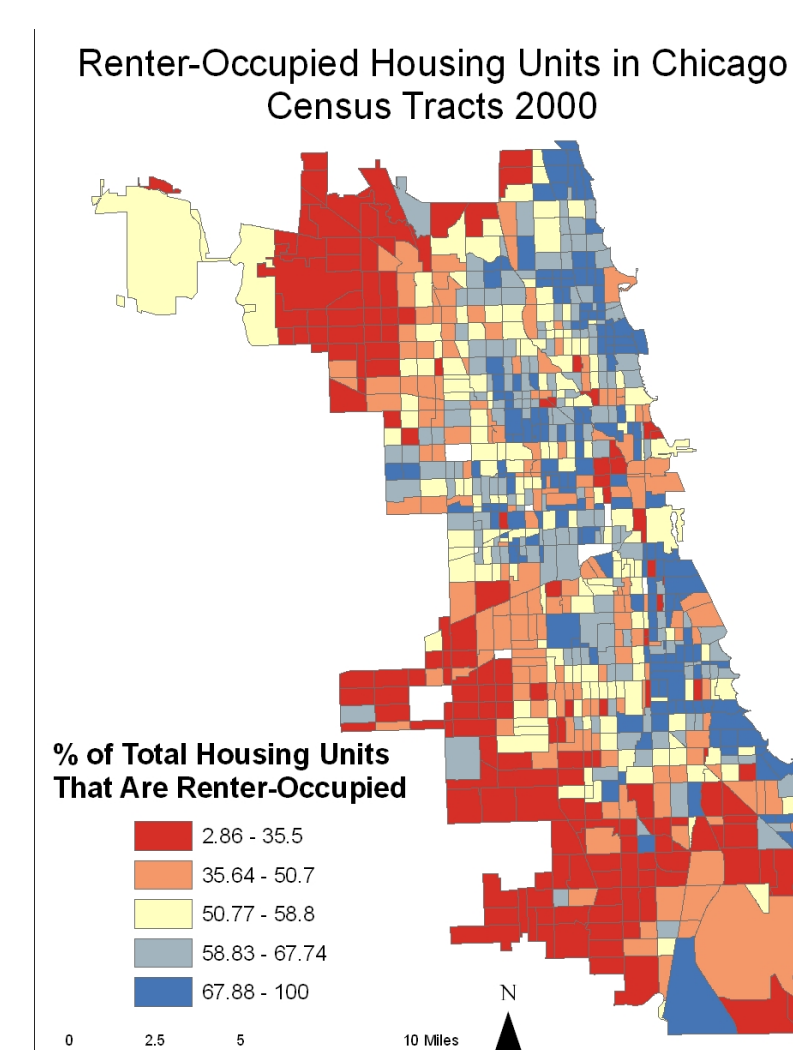
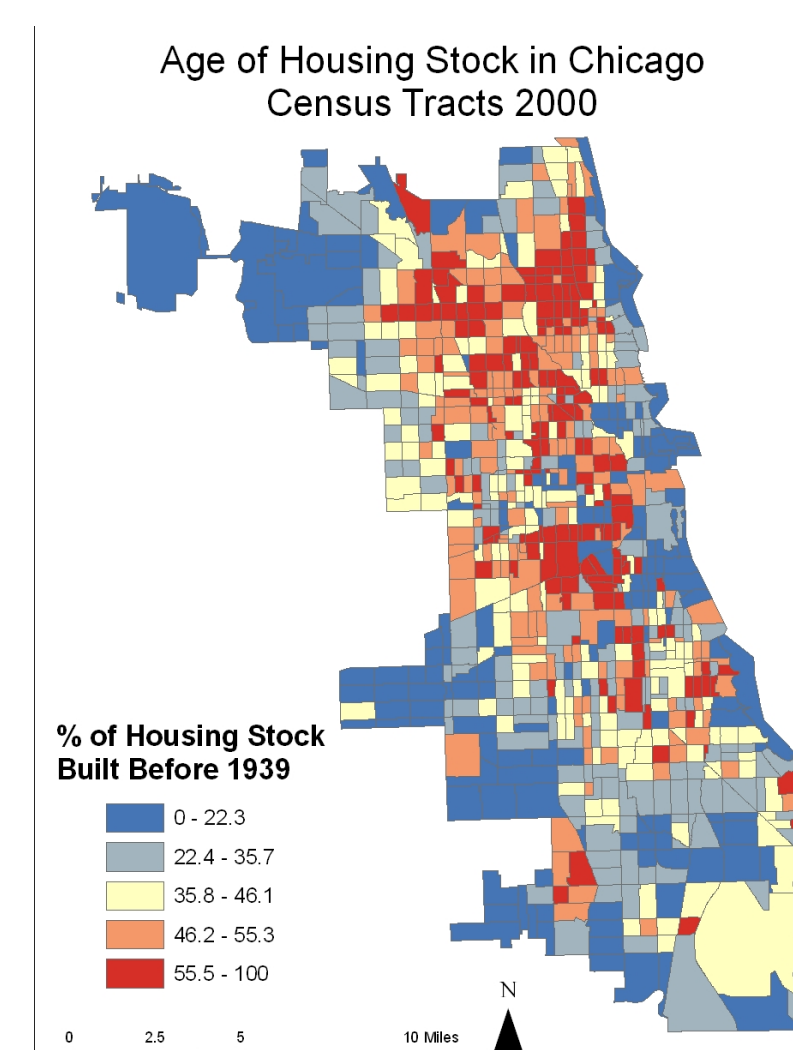
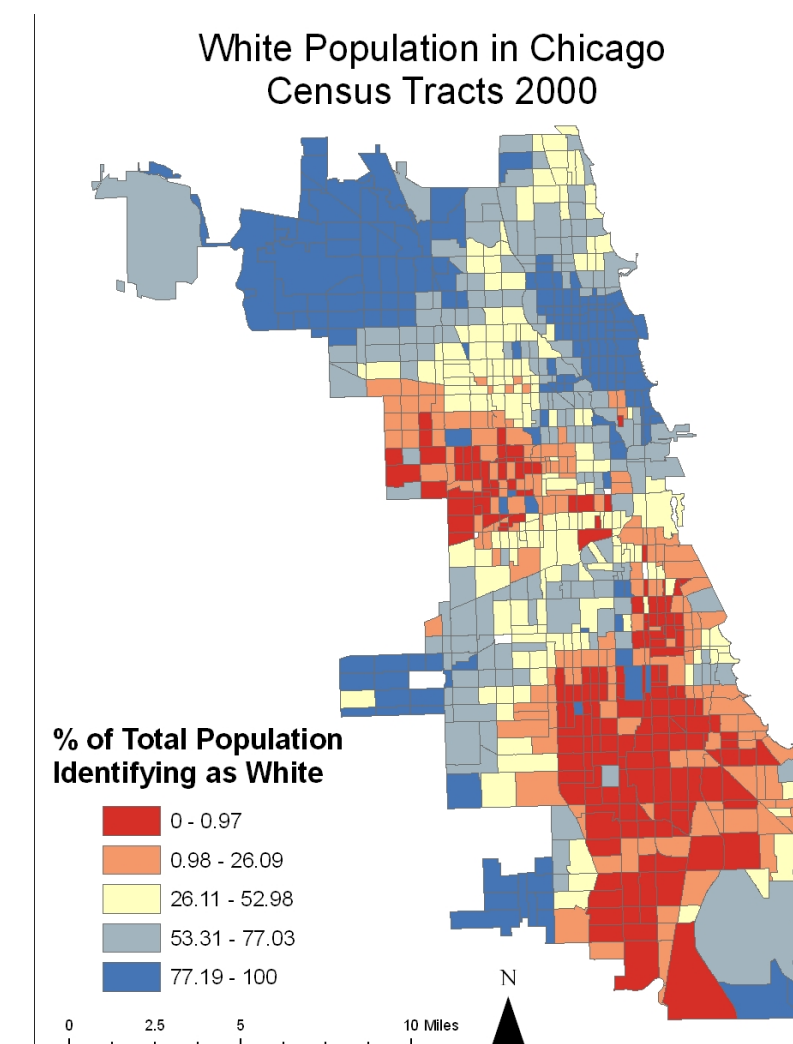
According to the academic literature, a wide range of variables characterize gentrification. Some variables are related to the changing demographics of the population while others are related to the physical attributes of the area and the housing stock. The characteristics often associated with gentrifiers (shown in the maps to the right) include educational attainment, tenure, race, and median age while those associated with physical changes to a neighborhood (shown below) focus on vacancy rates, size of housing units, age of housing stock, and total population of the neighborhood.

Because the definition used in this analysis states that gentrification only occurs in low-income neighborhoods, each of the variables are mapped across all Census tracts in the city of Chicago for the year 2000; yet, the final assessment of gentrification risk is limited to the identified low-income Census tracts.

Gentrification risk is calculated by allocating a score to each of the variables according to its effect on gentrification and aggregating the scores across all of the variables in each Census tract in order to obtain a gentrification risk score. The predicted risk of gentrification is then compared to the actual renovation that took place in each of these low-income tracts in the year 2000, as displayed by the value of building permits per household in each Census tract, in order to determine the predictive power of the identified indicators of gentrification.

Results

Although low-income neighborhoods within the city of Chicago are concentrated in the middle of the city, the risk of gentrification is not concentrated in any particular area within these low-income tracts. However, there does appear to be some predictive power to the identified indicators of gentrification as displayed by the correlation between the map of overall risk of gentrification and the two maps of building permit data, showing the total renovation of low-income neighborhoods based on number of building permits per square mile and building permit values per household in these low-income areas.



Overall Risk of Gentrification in Chicago Census Tracts 2000

