

Who are We Building For?

Analysis of demographic shifts and infill in Denver, Colorado

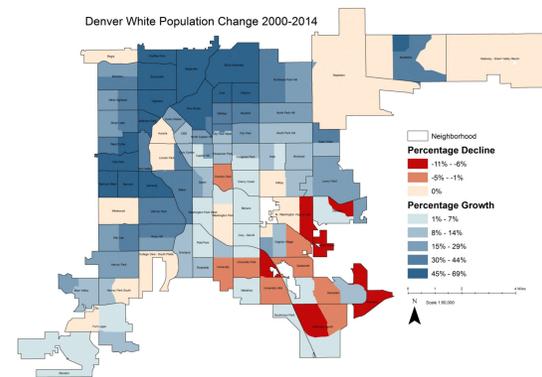
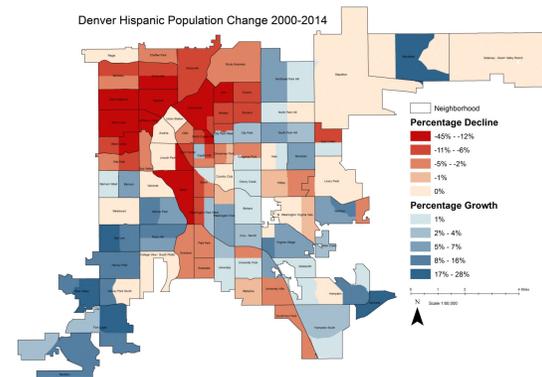
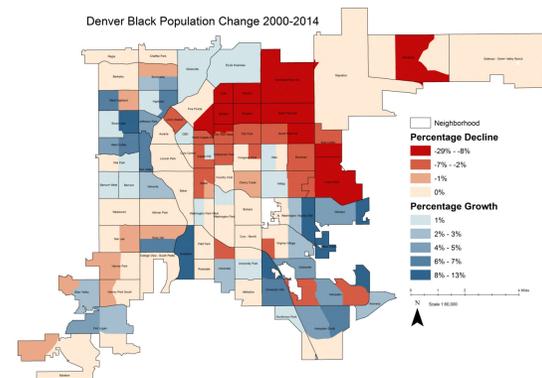
Introduction

The U.S. Census Bureau identified the average annual growth rate for cities between 2000 and 2010 as 0.49%¹. In that same time span the City of Denver averaged an annual growth rate of 1.3%. Additionally, between 2010 and 2014 Denver's population grew by 11.04%, representing an average annual growth rate of 2.76% over five years². This means over a five-year span Denver maintained a population growth rate five times the expected national average for cities. Of that five-year population growth, 65% comes from migration as opposed to natural growth³. This project attempted to look at demographic shifts concerning different races (Black, Hispanic, White), and the potential displacement of racial groups between 2000 and 2014. Racial displacement reflects potential processes of gentrification. Finally, this project asked the question: Is there a correlation between infill projects and demographic shifts between 2000-2014?

Methods

Data on racial composition of census tracts was gathered from the United States Census Bureau for the decennial census of 2000 and the American Community Survey (ACS) of 2014. This data provided information about the percentage of people of a self-identified race within each census tract. By subtracting the 2014 percentage of each racial group by the 2000 percentage of each racial group, I was able to see the percentage difference within each census tract, representing demographic shifts by census tract. Ken Schroepel, an assistance professor of Urban and Regional Planning at the University of Colorado, Denver, has collected data on the location of every infill project in the City of Denver since 2000 on his site, DenverInfill.com. Using his data, I geocoded each infill project location by putting the address or building name into Google My Maps, exporting those locations as a KML file, and then converting the KML to a layer in ArcMap.

The final step was measuring a correlation between infill and racial displacement. First I selected those census tracts showing the highest quantile of Hispanic population decline, joined them with the location of infill projects, and running a correlation in Excel. A second correlation was done by selecting those census tracts within both the highest quantile of Hispanic population decline and the highest quantile of White population growth, joining those census tracts to the location of infill projects, and then using Excel to measure the correlation between infill and those demographic shifts.



Results

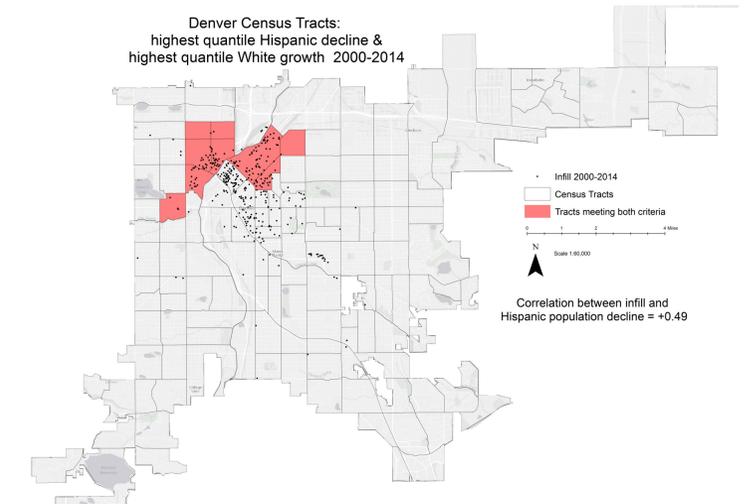
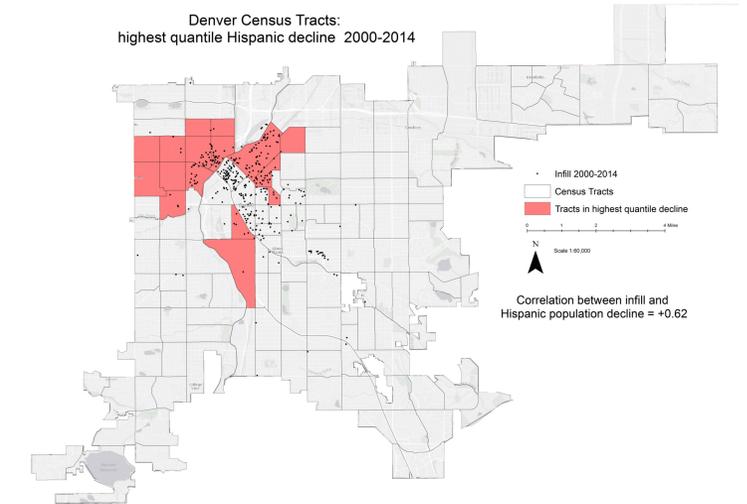
This process found declining populations of Black and Hispanic residents in 90 and 78 census tracts respectively. Particular census tracts show Hispanic population decline of up to 45% and Black population decline of up to 29%. Alternately, the White population increased in 104 census tracts, including growth between 45% and 69% in twenty census tracts. In many cases the census tracts with high Black and Hispanic decline were those with high White growth.

The visuals showing percentage decline and the location of infill projects showed few areas of overlap concerning the displacement of the Black population. On the other hand, there appeared to be overlap between infill and Hispanic displacement.

Therefore, after isolating those census tracts that were part of the highest quantiles of Hispanic population decline, the correlation between Hispanic population decline and infill was +0.62, a moderate to strong relationship. The correlation between infill in those census tracts that were the highest quantile of Hispanic decline and White growth was +0.49, a moderate relationship.

Conclusions

With the City of Denver's strong population growth, it appears the only population thriving in the city is White residents. While the White population is showing huge increases in population, the percentage of Hispanic and Black residents is shrinking sharply. Additionally, the positive correlations between infill projects and Hispanic population decline suggest that new construction is dominated by the White population. The City of Denver should therefore be asking "Who are we building for?", and "Why is the growth of the city only reflected in one dominant racial demographic?"



Limitations

This project does not consider the effect of infill close to, but outside the highest quantile census tracts. The rezoning of former industrial spaces such as the Union Station neighborhood have created extensive infill projects, but any numbers reflecting population change are highly skewed because of the historic lack of population. Similarly, these maps all exclude the Denver International Airport space because it historically had zero population but since its construction in 1995, the population has increased by over 1000%, a value that would have skewed the quantiles of every demographic.

References

²Colorado Population estimates, July 1, 2014, (V2015). Retrieved October 15, 2016, from <http://www.census.gov/quickfacts/table/PST045215/08031>

³Data Access and Dissemination Systems (DADS). American FactFinder - Results. Retrieved October 15, 2016, from http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=PEP_2015_PEPTCOMP

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¹Frey, W. H. *Will This Be the Decade of Big City Growth?* Retrieved October 15, 2016, from <https://www.brookings.edu/opinions/will-this-be-the-decade-of-big-city-growth/>

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