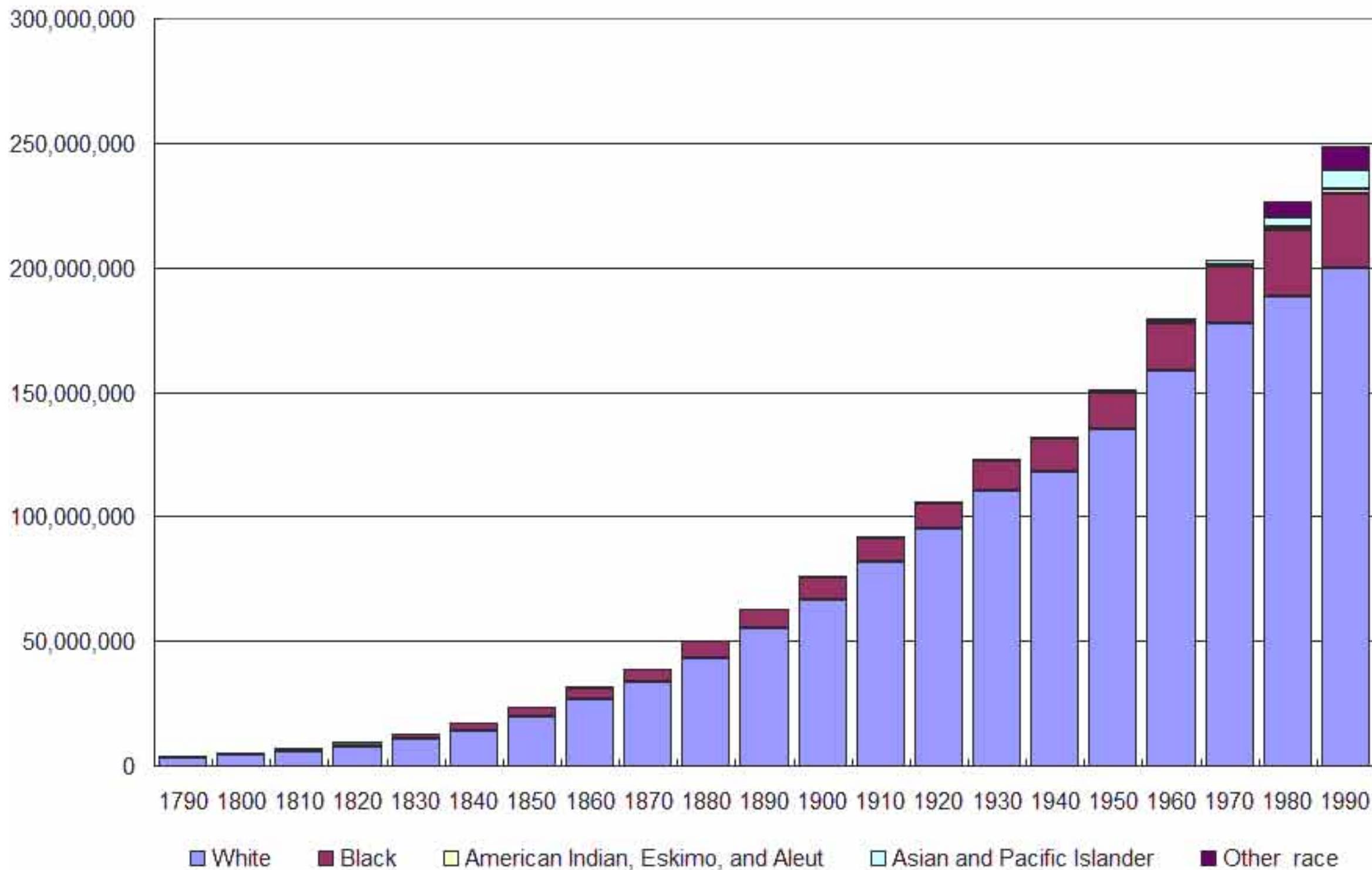


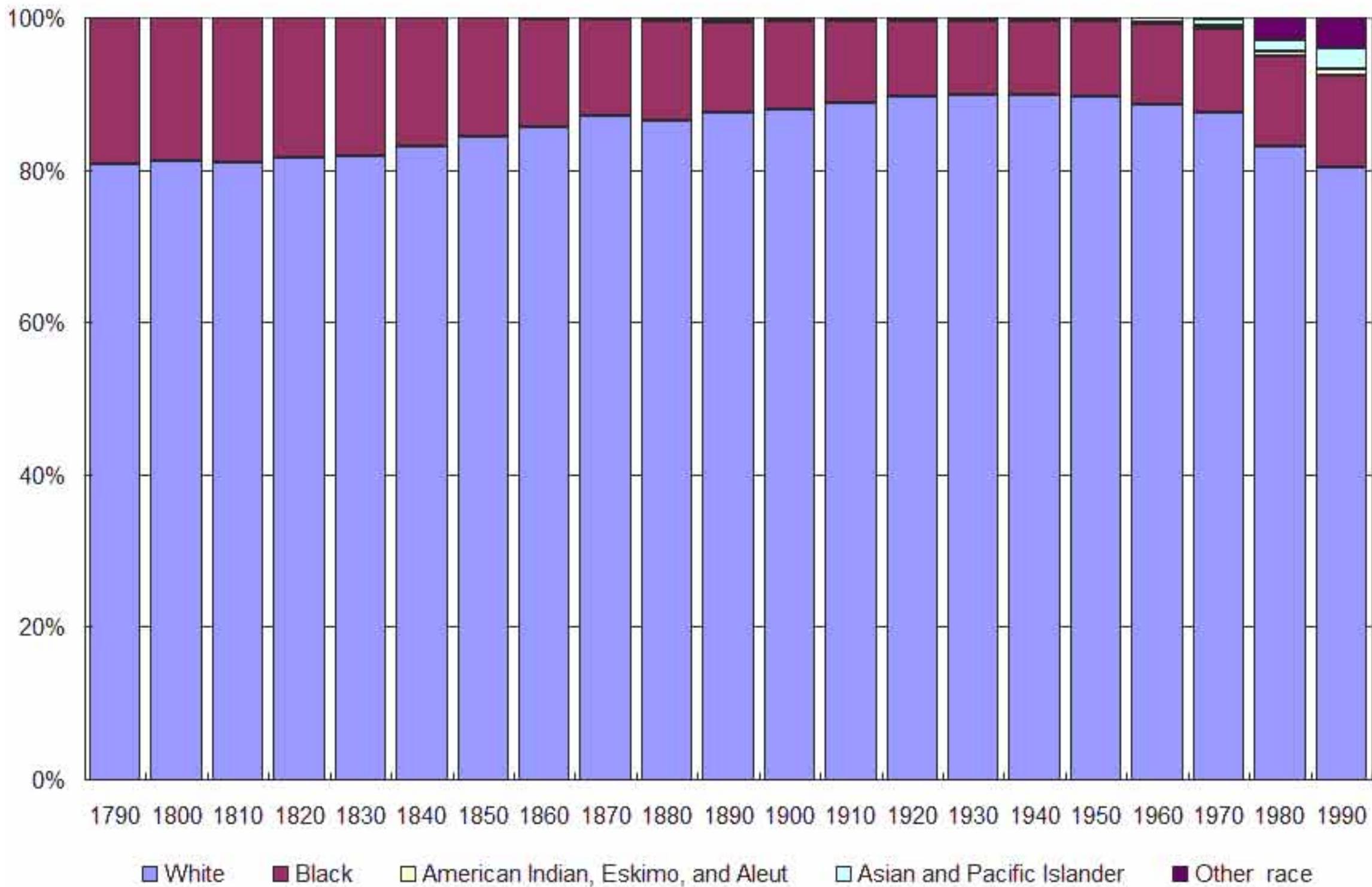
Lecture 4: Change Over Time

- I. Charts and Maps
 - A. Graphing Statistics and Data by Wallgreen et al.
(Sage, Thousand Oaks, 1996: pp. 13-16)
 - i. Bar charts, Horizontal bar charts, Grouped bar charts, Staked bar charts
 - ii. Histograms
 - iii. Population pyramids
 - iv. Pie charts
 - v. Scatterplots
 - vi. Line charts, Area charts, Flow charts
 - vii. Boxplots
 - viii. Density maps
 - ix. Choropleth maps (thematic maps)
 - B. America by the Numbers by Frey et al.
(New Press, New York, 2001)
 - i. Median income by sex and race, 1998
 - ii. White attitudes toward school integration
 - iii. Self-identified race of selected U.S. hispanics, 1990
 - iv. Population structures, 2000
 - v. Urbanization in the United States
 - vi. The face of today's urban growth
 - vii. High-school dropout rate by race, 1998
 - C. Understanding by Richard Saul Wurman
(Ted Conferences, Newport, 1999)
 - i. Immigration
 - ii. Juvenile crime
 - D. Original charts: different presentation of the same data: U.S. Population by Race from 1790 to 1990
 - i. Stacked bar chart
 - ii. Ratio chart
 - iii. Line chart
 - iv. Line chart by index

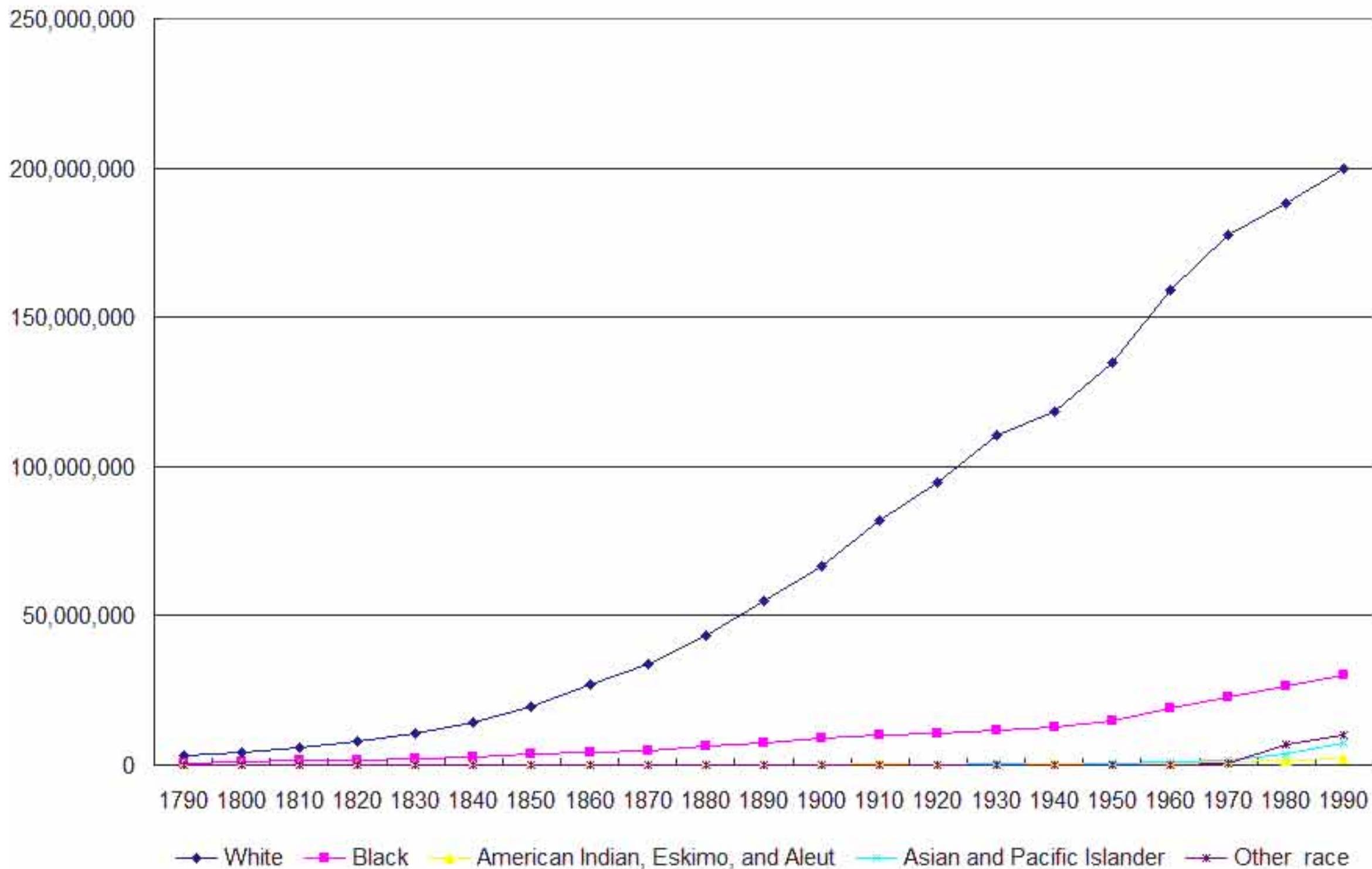
U.S. Population by Race



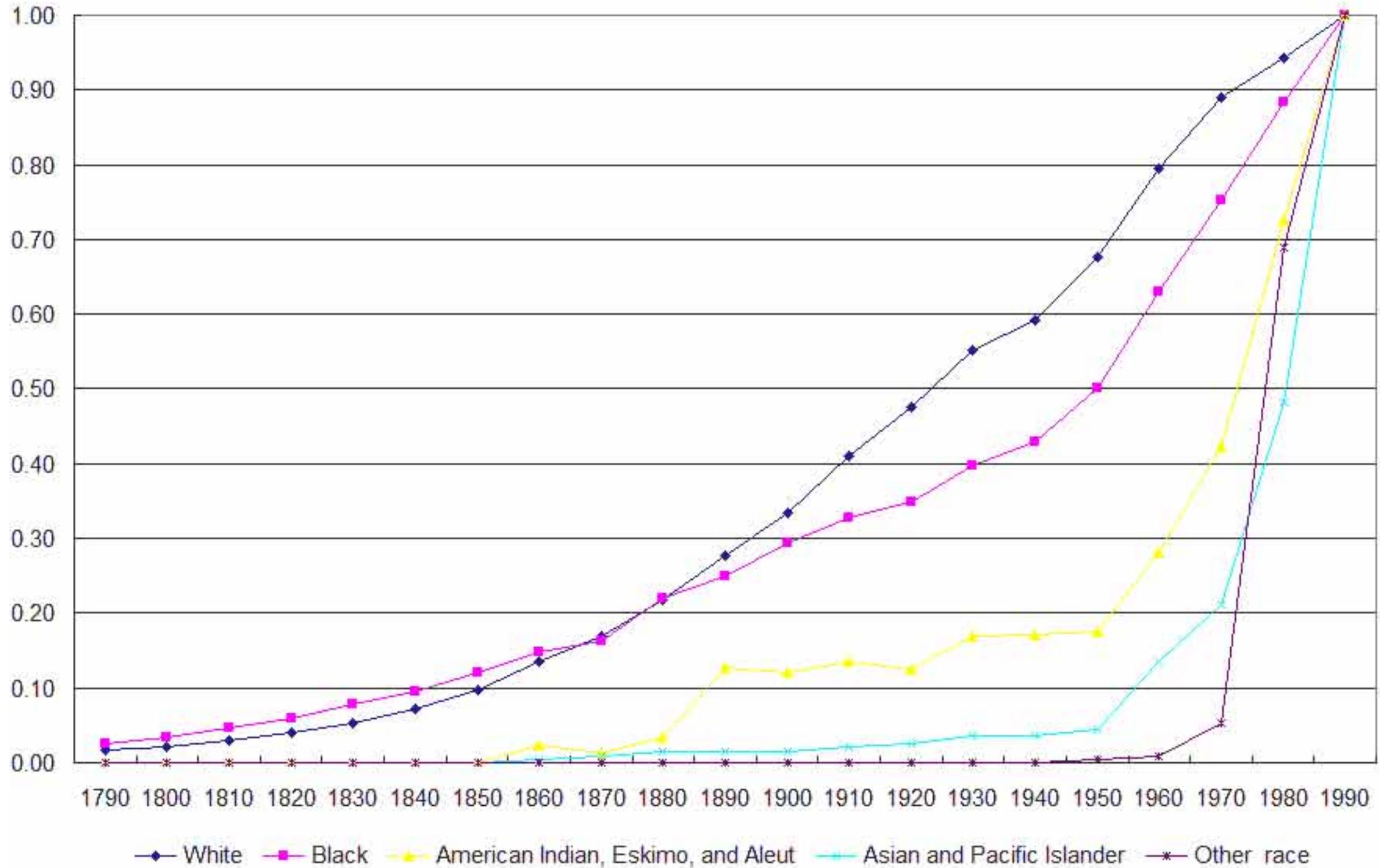
U.S. Population by Race



U.S. Population by Race



U.S. Population by Race (1990=1.00)



- II. Sophisticated Examples
 - A. The Visual Display of Quantitative Information by Edward Tufte (Graphics Press, Cheshire, CT, 2001)
 - i. Dr. John Snow's map of deaths from cholera
 - ii. OPEC Oil Prices (from NY Times)
 - iii. New York State Total Budget Expenditures and Aid to Localities (from NY Times)
 - iv. The Shrinking Family Doctor in California (from LA Times)

- III. Student Examples
 - A. Who is Moving Out by Hiba Bou Akar
 - B. Rent Decontrol and September 11 by Moshahida Sultana
 - C. Gentrification in Central Square by Will Carry
 - D. School Concentration, Wealth Clustering, Ethnic Diversity and Central Square by David Ritchay
 - E. Diversity in Central Square by Susana Williams

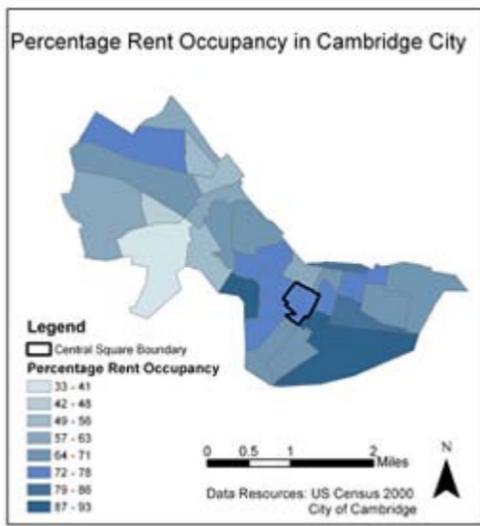


WHO IS MOVING OUT?

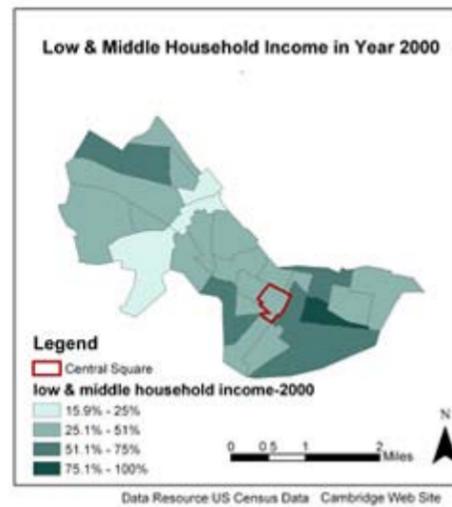
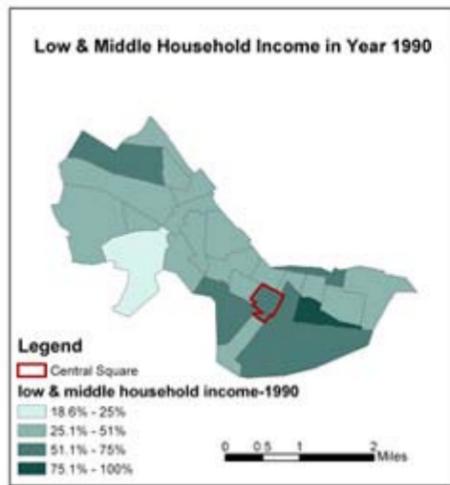


Click on images for larger views

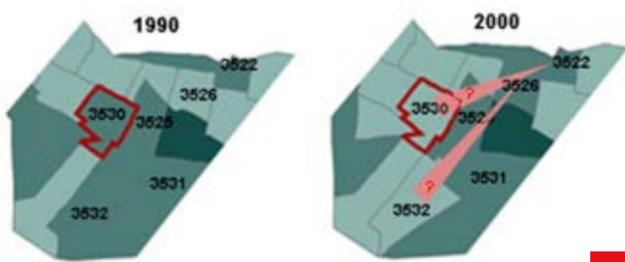
Mapping the percentage of the rented housing units in the city of Cambridge gives us the impression that most residential units in Central Square are rented rather than owned.



Comparing Cambridge's percentage of Low and Middle Income Population for Years 1990 & 2000



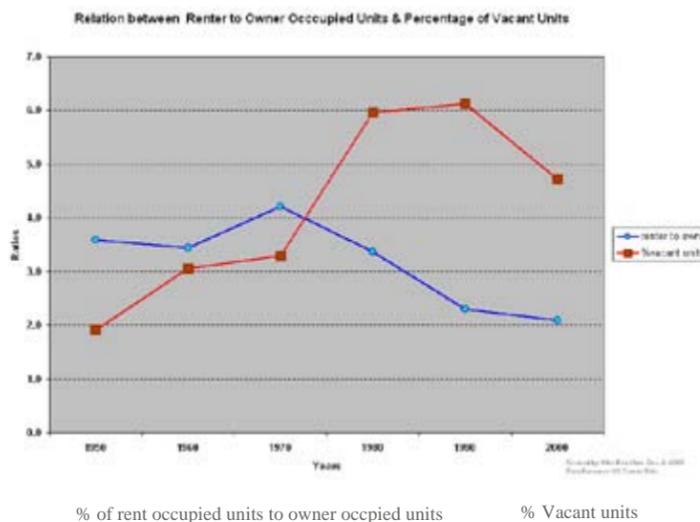
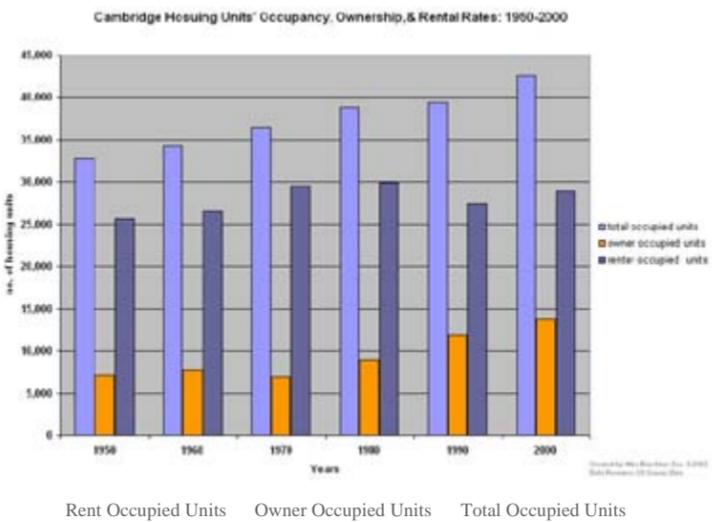
Central Square and its vicinity: Distribution of Income



However, 1990 & 2000 data clearly shows that Central Square is losing its low and middle income population.

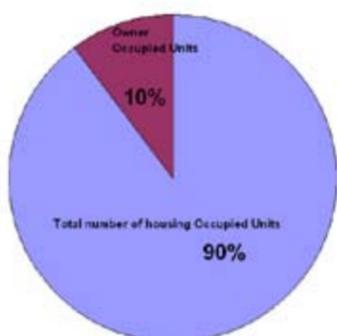
Close look at Central Square and its vicinity.

Meanwhile rents are increasing all over Cambridge;

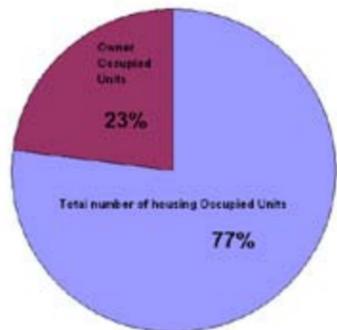


the ratio of rent occupied to owner occupied units is decreasing.

Percentage Owner Occupied Housing Units in Cambridge in year 1990

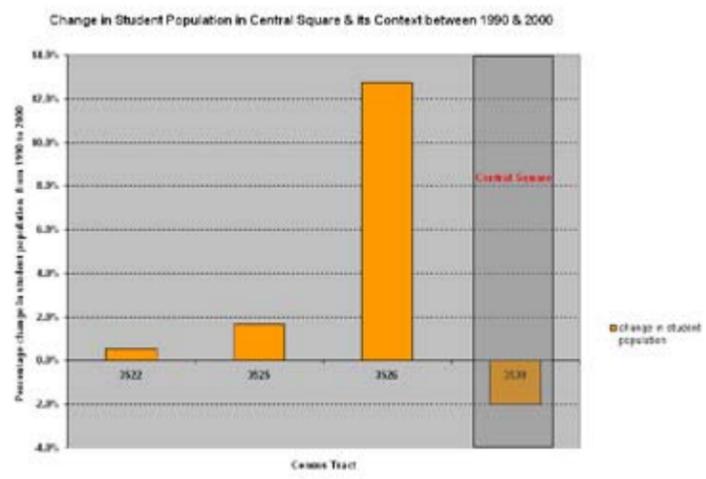
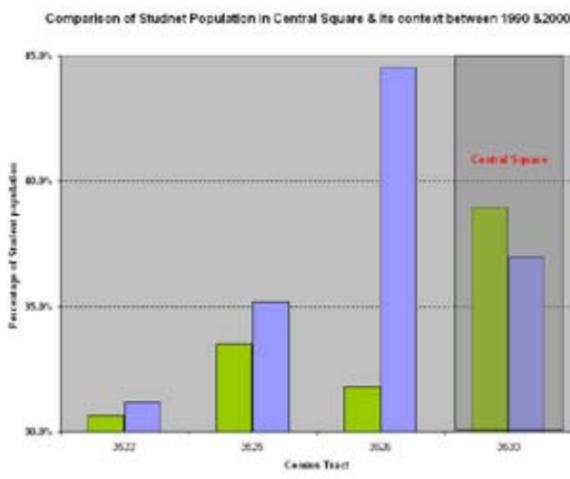


Percentage Owner Occupied Housing Units in Cambridge in year 2000



% of owner occupied units has more than doubled from 1990 to 2000 in Central Square.

Students might be part of the population leaving Central Square.



Decrease in low and middle income, renter groups, and students -manifested in the decrease in the percentage of 20-34 population age- suggest that they groups are moving out of Central Square. Additional data might assert if students are gradually renting towards East Cambridge.

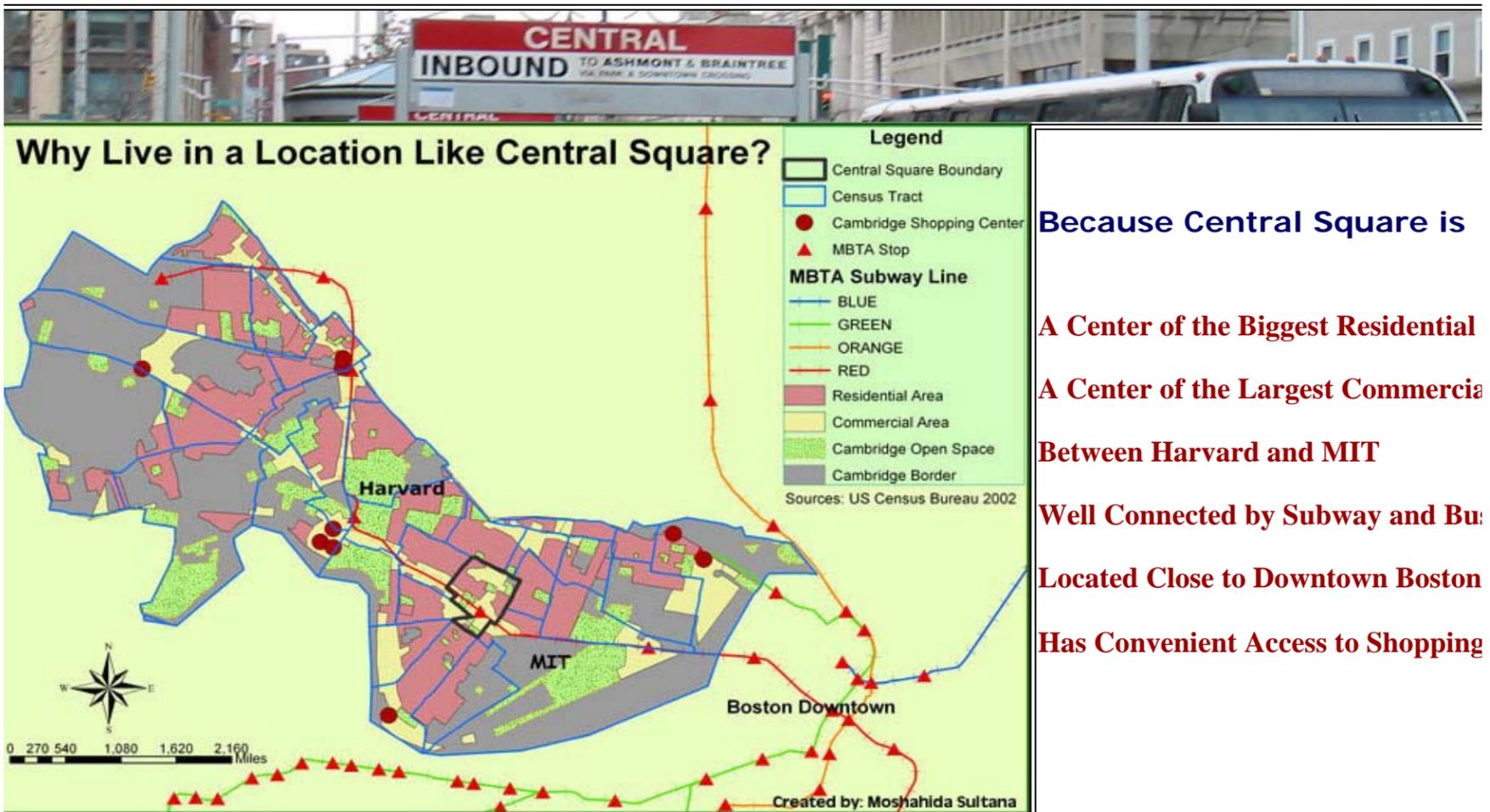
[link to: Purpose, Process, and Reflections](#)

[link to: Who is moving out?.doc](#)

Home

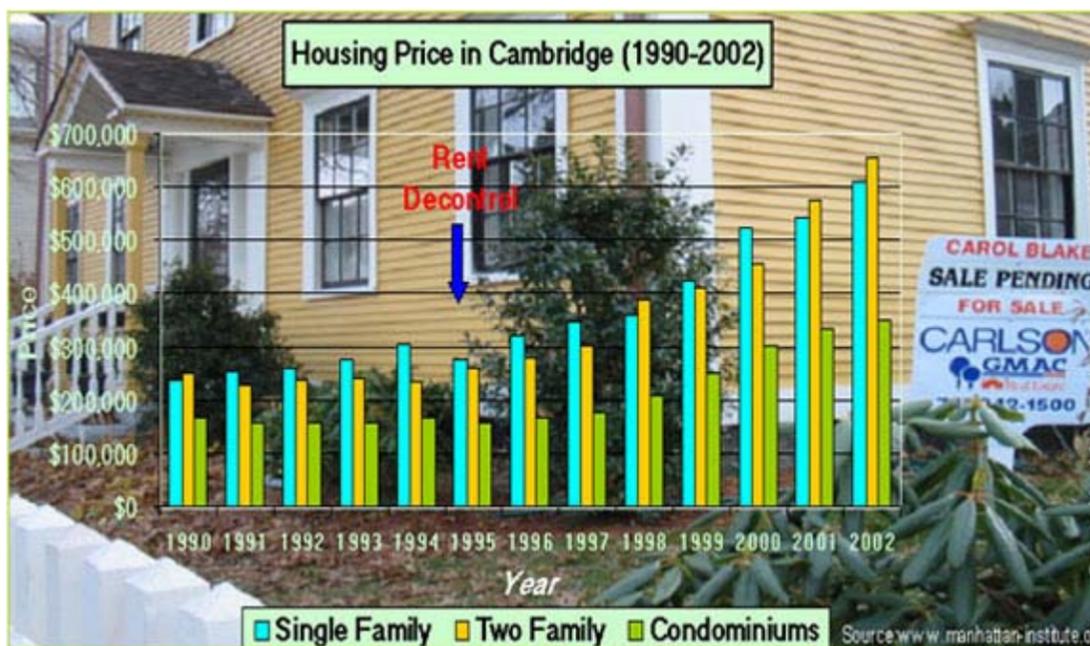
Rent Decontrol and September 11

How Has Central Square's Housing Market Changed?

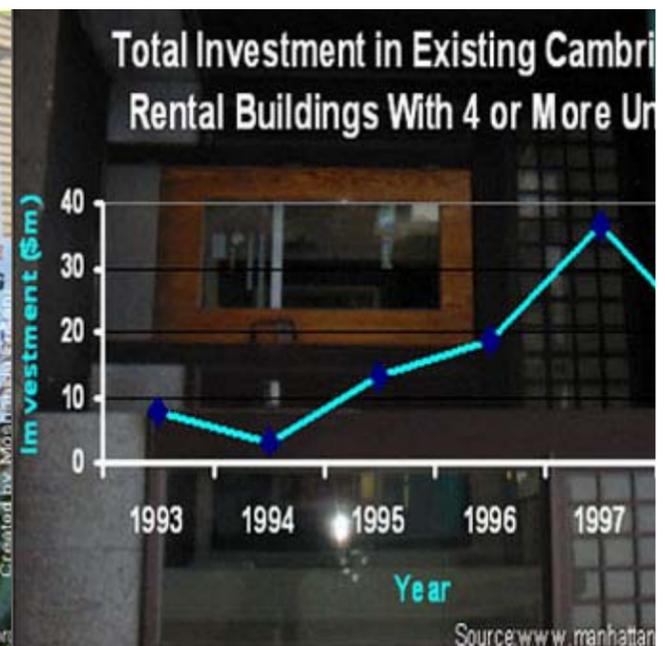


Rent Decontrol in 1995

Housing Sales Price Increased



Investment Increased

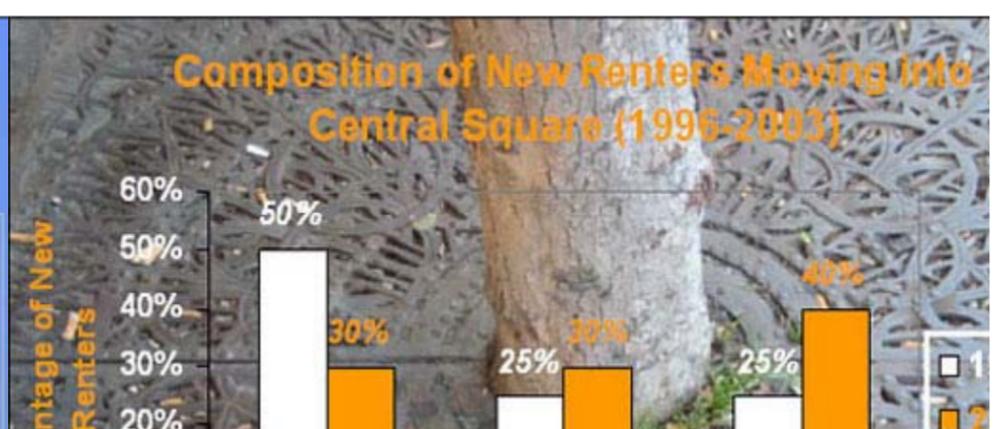


After September 11 - Influx of Immigrants and Corporate Relocation Decreased

Rent Decreased



The Composition of New Renters Changed





About the Research

My Argument: After September 11, rent decontrol has actually caused rents in Central Square to decrease. September 11 has also changed the composition of new renters moving to Central Square.

My Position: I am a planner at the Manhattan Institute of Policy Research. The Manhattan Institute is a think tank whose mission is to develop and disseminate new ideas that foster greater economic choice and individual responsibility. I have come to the MIT Center for Real Estate (CRE) to present my preliminary findings about Central Square to some real estate economists at CRE.

What is the question and why is it important?

Henry O. Pollakowski has been a housing economist at the MIT Center for Real Estate since 1996. He studied the effect of rent decontrol in Cambridge after 1995. Cambridge maintained a very strict form of rent regulation till 1995 and rents were held considerably below market rents. After 1996 investment increased by approximately 20% over what would have been the case if rent control had been maintained. Manhattan Institute of Policy Research hired me to find out if New York City could achieve the same result from deregulation. To do so I have selected Central Square as a sample to understand what kinds of changes are taking place in Central Square after September 11 attack of 2001. Specifically, I want to see if rent is increasing and how the composition of renters is changing. My research finding will be helpful in understanding how housing market has changed after September 11 attack and how effective deregulation is after 2001.

One assumption inherent in my position: Increase in housing price also increases rent but decrease in rent does not necessarily decrease the price of housing.

My methodology: For this project I had to rely heavily on data but I paid equal attention to the qualitative data too. For example, I have consulted my observations with one of the real estate agencies located in Central Square and requested them to share with me their own opinion about the new trend after September 11. This gave me a very useful insight and helped me to go beyond the available statistics of U.S. Census Bureau. It was fascinating to discover something with own eyes rather than depending on the information available in books and Internet.

Research Findings: My research finding is completely different from what I expected it to be. I focused more on rent decontrol than on any other shock like September 11 attack.

The Most Significant Constraint: Gathering additional data was the most significant constraint in such a short period of time. I spent a good amount of time to find an argument that excites me and after that getting data to support my argument was the most difficult part.

One action that I would take to overcome this constraint: I will clearly define my goal and play with the already existing data to find a significant relationship between variables. I will narrow the topic from the beginning in order to avoid last minute rush.

Did I enjoy?

I enjoyed the part of taking photos and creating website in this process. I would prefer to have the topic given so that I could spend more time in learning the technical issues and finding out creative ways to do the same thing differently.



What has been the impact of gentrification on Central Square?

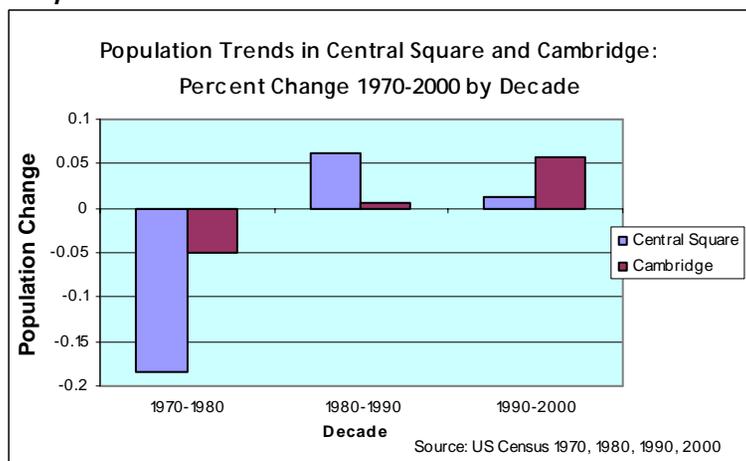
On rents? On the racial and income mix? On the neighborhood fabric?

Rent and Real Estate Value Trends

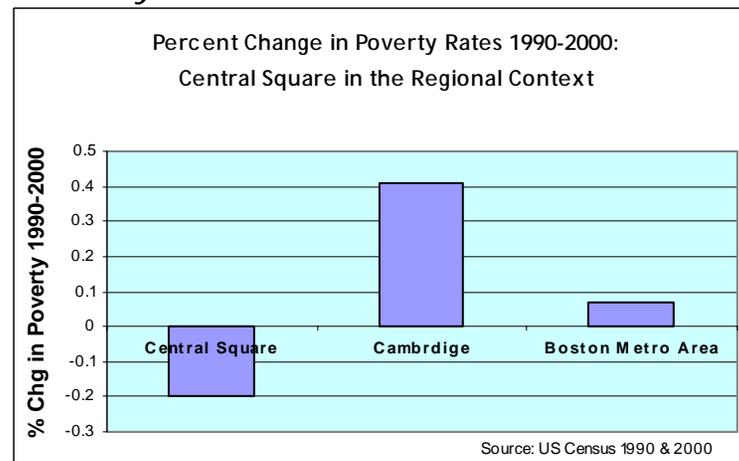
	Central Square			Cambridge		
	1990	2000	% Chg	1990	2000	% Chg
Median Gross Rent*	\$493	\$971	97.0%	\$538	\$962	78.8%
Median Value Owner-Occupied Unit*	\$219K	\$224K	2.4%	\$256K	\$331K	29.1%

*Values are not adjusted for inflation. Source: US Census 2000 and 1990

Population Trends

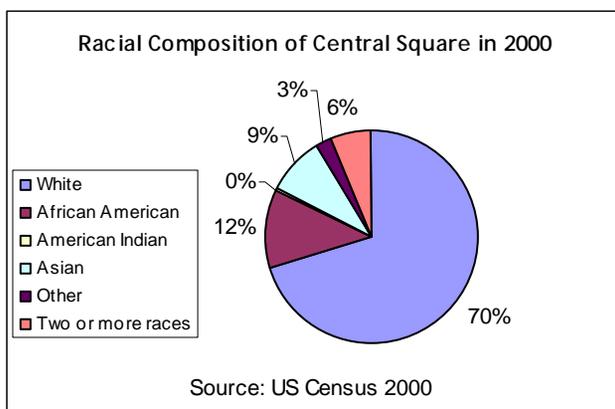
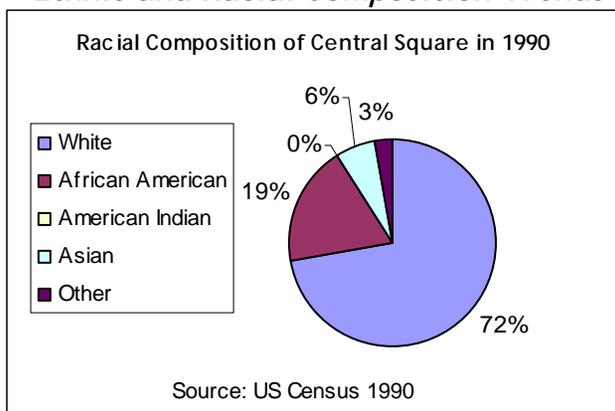


Poverty Trends

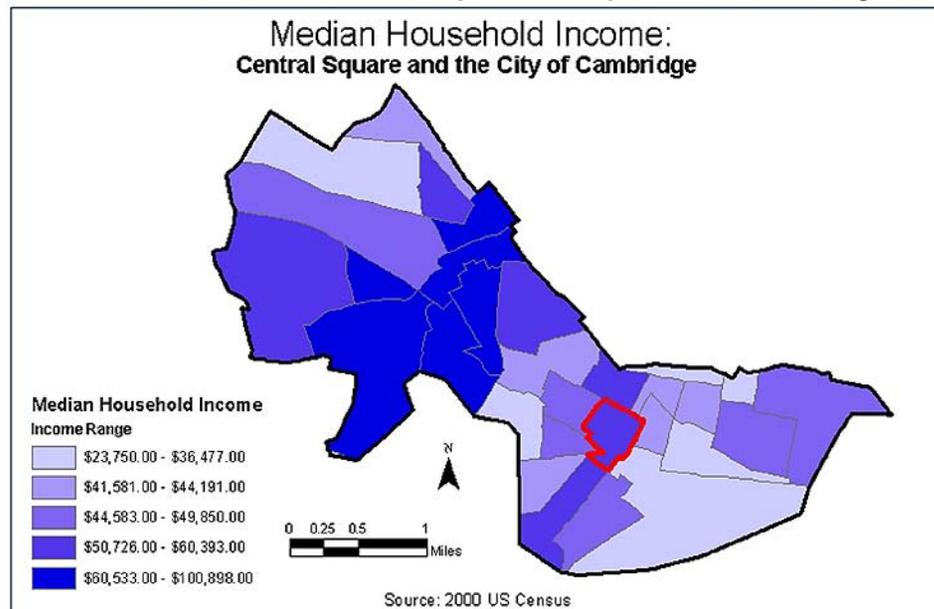




Ethnic and Racial Composition Trends*



Income: How Does Central Square Compare to Cambridge?



Hispanic Population Trends

*Census data asks respondents if they are "Hispanic" in separate question. In 2000, 7.2% of Central Square residents identified themselves as Hispanic, compared to 7.7% in 1990. The figures for Cambridge were 7.3 (2000) and 6.4 (1990), (Source: US Census 1990 & 2000).

DIVERSITY IN CENTRAL SQUARE

Analysis prepared for:

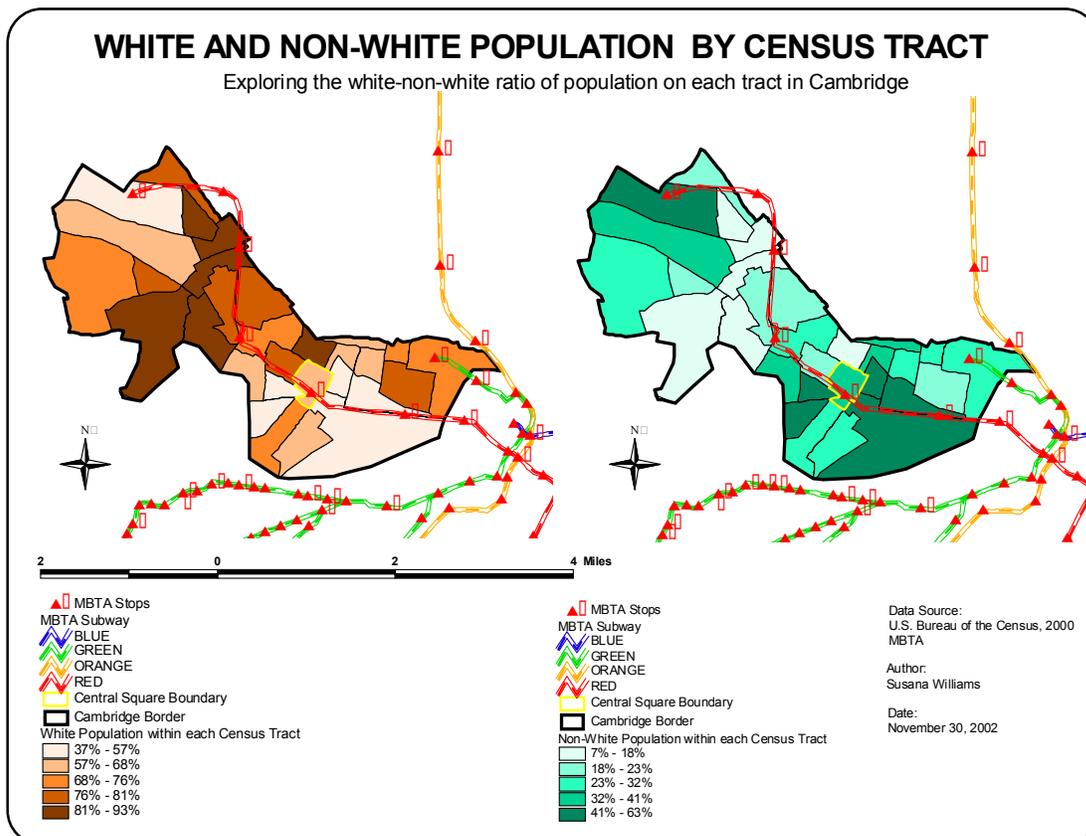
THE CENTRAL SQUARE ECONOMIC DEVELOPEMENT ASSOCIATION

By: Williams and Associates.

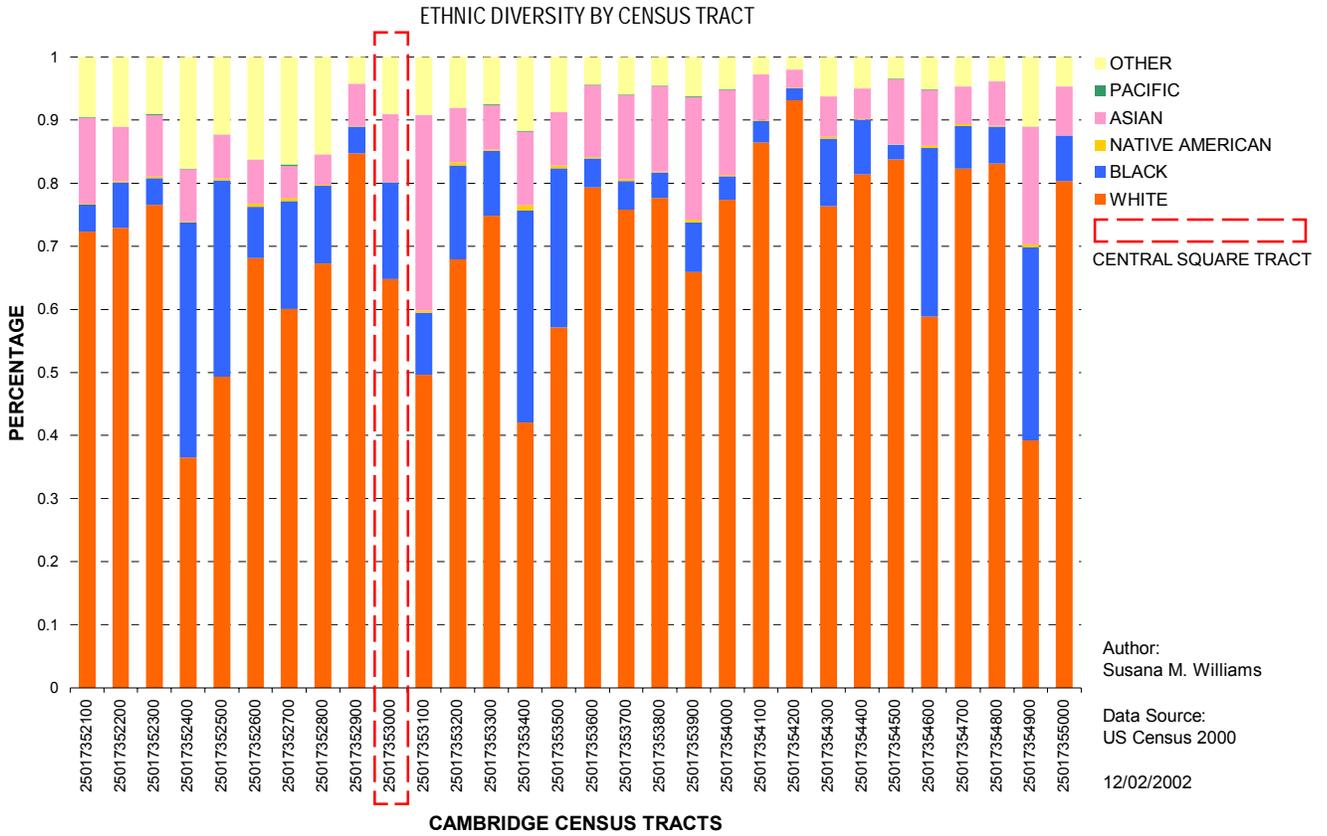
Central Square businesses have invested in its diversity as one of its greatest strengths and have marketed itself that way. But how diverse is Central Square?



Central Square portrays an image of diversity along Massachusetts Avenue.



Analyzing the percentages of white and non-white population in the Central Square Tract, one can see that the percentage of white people is much higher than that of non-white.



This chart provides a more detailed understanding of the different groups comprising the Central Square area. It is very easy to see how Central Square is not one of the most diverse areas in Cambridge anymore.

ANSWERS TO QUESTIONS:

1. What is your position and who is your intended audience?

I am a private consultant for the Central Square Economic Development Association which is comprised of all the businesses in the area. Their marketing strategy relies heavily on the “*diversity*” in Central Square manifested through its murals and ethnic stores. The association wants to ensure that they should continue investing on this image or if they should refocus their goals since there is also a trend for gentrification.

2. What is the question and why is it important?

The question is: Is diversity a true character of Central Square or is it just a nostalgic image and a current business tool? It is important for the businesses of the area since there are conflicting views about gentrification and economic development among businesses themselves. Central Square has always portrayed itself as a community of immigrants and celebrates that fact. Some stores (and also residents) capitalize on this issue and set restrictions for other types of development. However, different business interests feel the need to refocus some of their strategies and be able to learn for sure what they can count on.

3. After some analysis, you will likely refine your question. Describe one assumption inherent in your position.

The assumption made was that Central Square was viewed as the most diverse area in Cambridge and that this diversity was only based on race and ethnicity since there was not more specific information broken down into neighborhoods to estimate diversity in income levels (professional, students and blue collar), different age groups etc.

4. Briefly describe your methodology. Do you rely heavily on quantitative data? Qualitative data? A combination of the two?

For the framing of the questions, qualitative data was important to me since it was matter of the image of Central Square. However, I relied heavily upon quantitative data to find ethnicity rations within each tract, population densities and percentages that would give me a better insight on this project.

5. What is the principal finding? Did your analysis support or deny your original hypothesis? Did you discover a finding that was only remotely related to your original question, and change your question?

My findings corroborated one of my assumptions that questioned whether diversity was being used to preserve a nostalgic image and a current business tool to promote an identity for the area.

6. Identify at least three constraints you experienced during the research process.

- a. Restrictions on the amount of data provided for the project. Diversity for me is not only based on race or ethnicity, but also on different educational and income levels that may bring professionals or blue-collar workers to live close together. An aspect of diversity is also manifested on different age levels (i.e. young professionals, children and seniors in the same neighborhood). It would have been interesting to get more of this information in a smaller level than the census tract to see the actual composition of Central Square.
- b. Schedule of TA's was incompatible with most of my classes. Many of the scheduled hours were set when most of us were having the core courses. This was more of an inconvenience than a constraint because I have to chase them later otherwise.
- c. Some of the programs are more user-friendly than other ones and I found myself repeating one of the labs thoroughly to re-understand the main concepts.

7. Describe one action you would take to overcome one of these constraints. Be specific. Imagine that you were given the entire semester to complete the project. What action(s) would you take to improve the end result?

With a full semester, I think we would have been able to utilize much more of the data existing in the network and have the opportunity to look for missing data on our own.

8. Did you enjoy the process? Why or why not? How might you change your approach or question so that it had more meaning or held your interest?

I certainly enjoyed the process. I felt I had the opportunity to actually utilize the tools we learned in a more comprehensive way. My current approach and questions were influenced by availability of data for the course. I may have approached Central Square in a different way if I knew I had no restrictions on what it could have been used (i.e. community organizations and citizen participation, minority levels of involvement in the neighborhood, role of religious groups in community building and immigrant access to some of these services).