gentrification

a statistical analysis

Concept of gentrification?

Economics?

THE MANHATTAN SUBWAY RENT MAP

- Rent increases
- House prices increase
- City gets more revenues from taxes

Unaffordable housing =>leave

- People have to leave neighborhood, leave friends and social connections.
- May have longer commute to work.

Other Social Impacts?

- Traffic
- Construction
- Social services: health, education, ..

Whole Foods effect

- ## What Effect?
  - Affordable food?
  - Other upscale retailers gather around?
  - Rents they can pay vs Mom & Pop shops?

Define gentrification in NYC?

- NYC Sub-Borough Areas (SBA):
- Low-income: bottom 40% of household income: i.e. 22 of 55 SBAs in NYC.
- Since 1990 all rent grew.
- BUT, for 15 low-income SBAs, rent increases were higher than median.
- **THESE ARE CALLED "GENTRIFYING"**

Figure 1: Classification of Sub-Borough Areas

- Gentrifying
- Non-Gentrifying
- Higher-Income
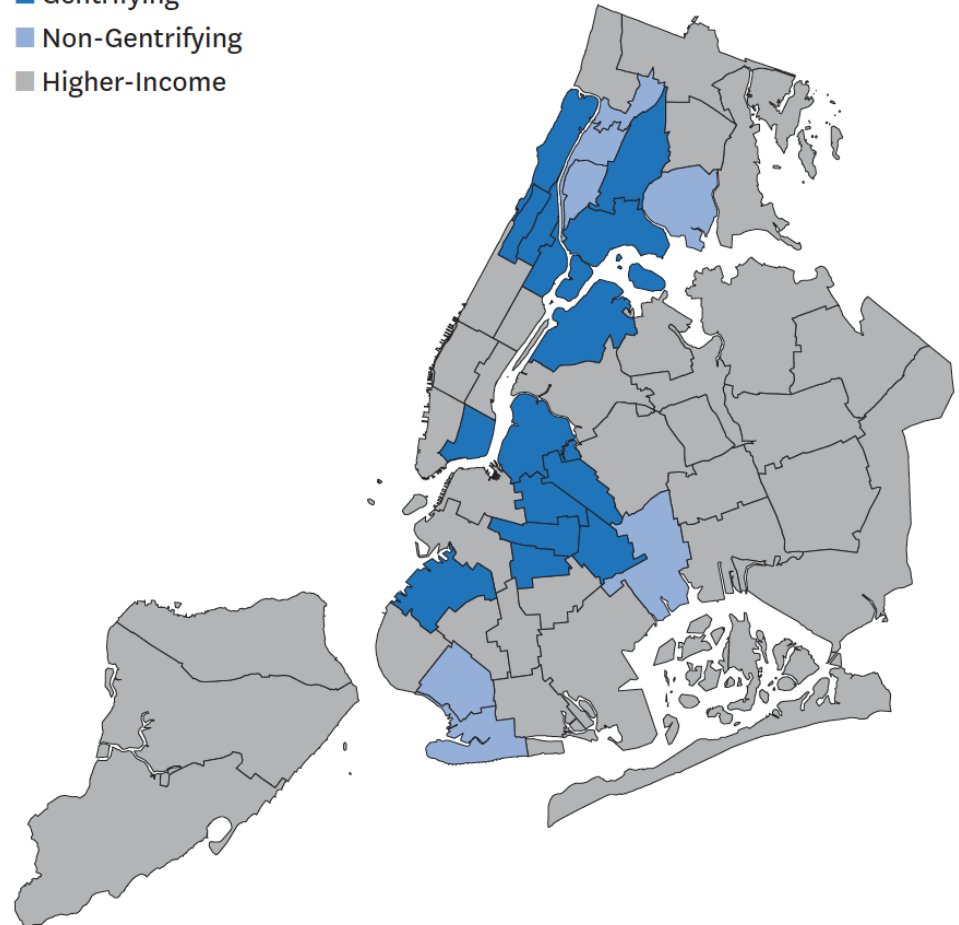
Source: NYU Furman Center

Income Changes:

VELOCITY ?

Table 1: Average Percent Change in Mean Household Rent by Neighborhood Type

	1990 to 2000	2000 to 2010-2014	1990 to 2010-2014
Citywide	1.9%	18.9%	22.1%
Gentrifying	3.0%	30.4%	34.3%
Non-Gentrifying	-2.5%	16.1%	13.2%
Higher-Income	1.8%	15.8%	17.8%

Sources: Neighborhood Change Database (1990, 2000), American Community Survey (2010-2014), NYU Furman Center

Household Income

Table 4: Inflation-Adjusted Average Household Income by Neighborhood Type (2015$)

	1990	2000	2005-09	2010-14
Citywide	$78,500	$80,300	$79,900	$79,950
Gentrifying	$51,400	$55,150	$55,400	$58,550
Non-Gentrifying	$53,500	$53,100	$48,300	$49,000
Higher-Income	$95,700	$96,450	$96,300	$95,200

Sources: Neighborhood Change Database (1990, 2000), American Community Survey (2005-2009, 2010-2014), NYU Furman Center

Sub-borough ▲

Figure 2: Percent Change in Average Income by Gentrifying Sub-Borough Area

■ 1990 to 2000   ■ 2000 to 2010-2014

Sub-Borough Area	1990 to 2000	2000 to 2010-2014
Mott Haven/Hunts Point	23.8%	-16.0%
Morrisania/Belmont	6.5%	-12.6%
Greenpoint/Williamsburg	1.0%	41.1%
Bedford Stuyvesant	8.2%	12.0%
Bushwick	8.2%	16.4%
Sunset Park	4.7%	-0.9%
N. Crown Hts/Prospect Hts	6.1%	4.5%
S. Crown Heights	-6.1%	-3.5%
Brownsville/Ocean Hill	-1.0%	-2.8%
Lower East Side/Chinatown	21.0%	13.9%
Morningside Hts/Hamilton Hts	9.5%	7.6%
Central Harlem	18.1%	34.7%
East Harlem	16.2%	5.8%
Washington Hts/Inwood	4.8%	1.8%
Astoria	3.0%	5.0%

Source: Neighborhood Change Database (1990, 2000), American Community Survey (2010-2014), NYU Furman Center

Income ▲ Impacts

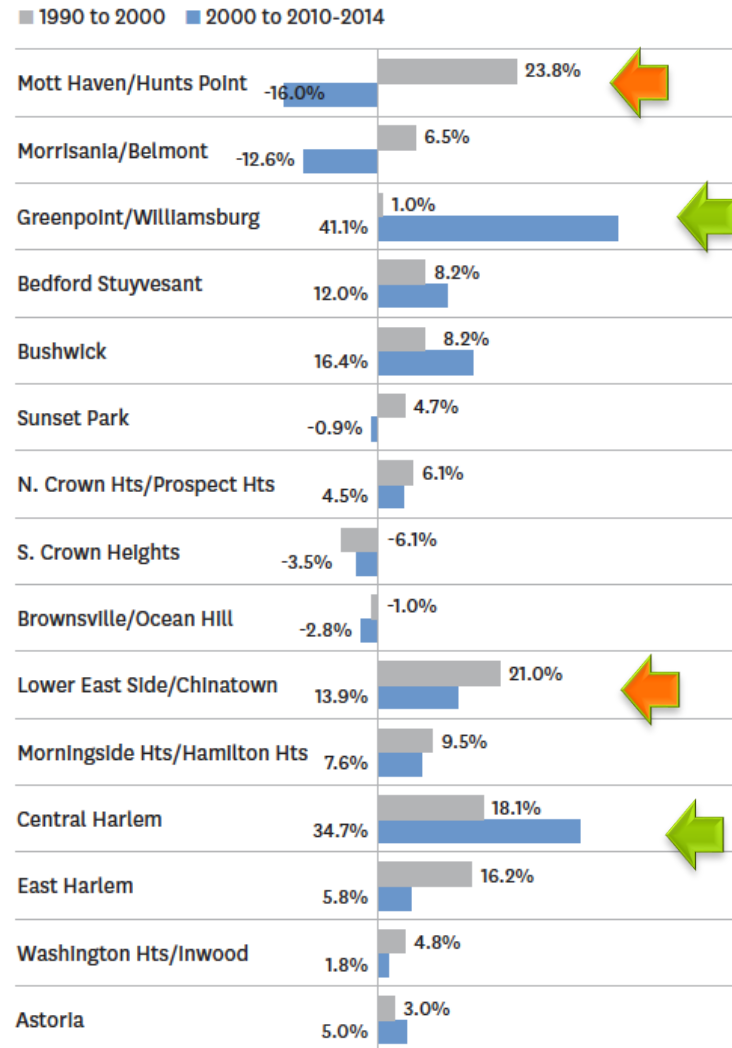**Table 10: Number and Share of Persons below the Poverty Line by Neighborhood Type**

	1990		2000		2010-14	
	Number	Share	Number	Share	Number	Share
Citywide	1,384,996	19.4%	1,668,938	21.3%	1,696,394	20.7%
Gentrifying	630,582	32.9%	666,354	32.9%	633,931	29.7%
Non-Gentrifying	257,904	28.8%	307,030	31.3%	306,171	30.4%
Higher-Income	496,510	11.4%	695,554	14.4%	756,292	14.9%

Sources: Neighborhood Change Database (1990, 2000), American Community Survey (2010-2014), NYU Furman Center

Table 11: Share of Households Rent Burdened by Neighborhood Type and Household Income

	2000	2005-09	2010-14
Citywide	40.7%	48.2%	51.7%
Gentrifying	42.3%	50.7%	52.9%
Non-Gentrifying	45.7%	54.3%	58.5%
Higher-Income	38.7%	45.2%	49.3%

Sources: US Census (2000), American Community Survey (2005-2009, 2010-2014), NYU Furman Center (ACS PUMS)
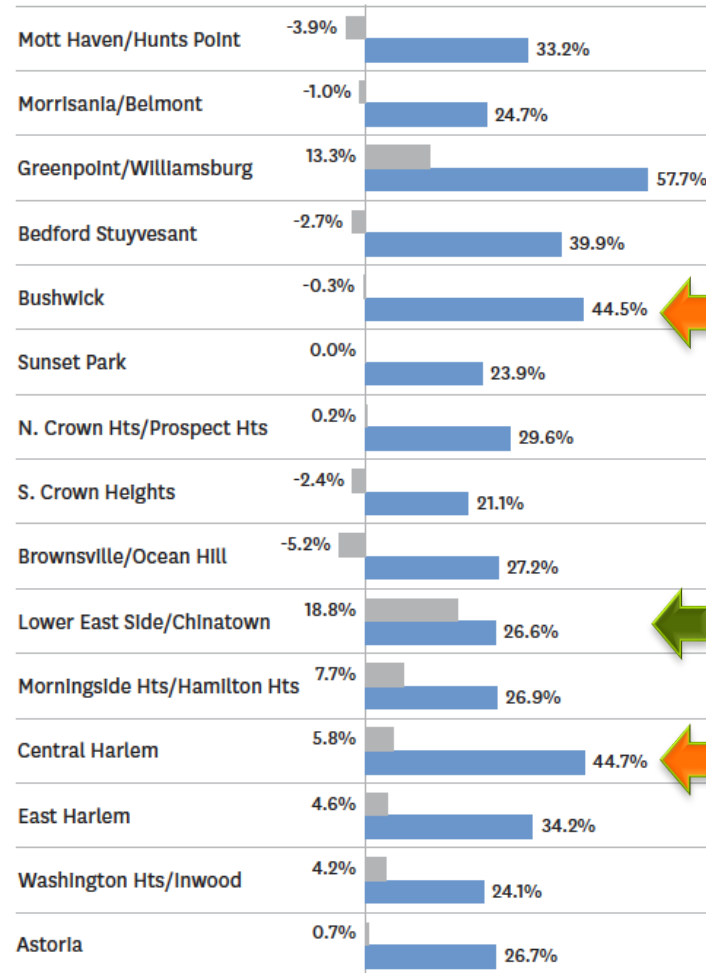
INCOME ≠

Classification of Sub-Borough Areas

Sub-Borough Area	Percent Change in Average Rent, 1990 to 2010-2014	Average Household Income in 1990 ($2015)
New York City	**22.1%**	**$ 78,500**
Gentrifying		
Williamsburg/Greenpoint	78.7%	$ 53,550
Central Harlem	53.2%	$ 39,650
Lower East Side/Chinatown	50.3%	$ 54,350
Bushwick	44.0%	$ 42,500
East Harlem	40.3%	$ 47,300
Morningside Heights/Hamilton Heights	36.7%	$ 61,500
Bedford Stuyvesant	36.1%	$ 46,150
North Crown Heights/Prospect Heights	29.9%	$ 56,600
Washington Heights/Inwood	29.3%	$ 55,650
Mott Haven/Hunts Point	28.0%	$ 32,250
Astoria	27.6%	$ 64,600
Sunset Park	23.9%	$ 62,550
Morrisania/Belmont	23.5%	$ 36,900
Brownsville/Ocean Hill	20.5%	$ 43,100
South Crown Heights	18.1%	$ 62,900

Non-Gentrifying		
Highbridge/South Concourse	17.8%	$ 43,150
Kingsbridge Heights/Moshulu	17.5%	$ 54,750
University Heights/Fordham	14.2%	$ 39,600
Soundview/Parkchester	14.0%	$ 58,900
Bensonhurst	10.3%	$ 66,750
Coney Island	9.9%	$ 53,200
East New York/Starrett City	8.2%	$ 52,750

Sub-Borough R$

Figure 1: Percent Change in Average Rent by Gentrifying Sub-Borough Area

■ 1990 to 2000   ■ 2000 to 2010-2014

Sub-Borough Area	1990 to 2000	2000 to 2010-2014
Mott Haven/Hunts Point	-3.9%	33.2%
Morrisania/Belmont	-1.0%	24.7%
Greenpoint/Williamsburg	13.3%	57.7%
Bedford Stuyvesant	-2.7%	39.9%
Bushwick	-0.3%	44.5%
Sunset Park	0.0%	23.9%
N. Crown Hts/Prospect Hts	0.2%	29.6%
S. Crown Heights	-2.4%	21.1%
Brownsville/Ocean Hill	-5.2%	27.2%
Lower East Side/Chinatown	18.8%	26.6%
Morningside Hts/Hamilton Hts	7.7%	26.9%
Central Harlem	5.8%	44.7%
East Harlem	4.6%	34.2%
Washington Hts/Inwood	4.2%	24.1%
Astoria	0.7%	26.7%

Source: Neighborhood Change Database (1990, 2000),
American Community Survey (2010-2014), NYU Furman Center

Burdened:

Table 12: Share of Households Rent Burdened by Neighborhood Type and Household Income

	2000	2005-09	2010-14
Gentrifying			
Extremely and Very Low-Income (<50% AMI)	67.8%	75.9%	75.4%
Low-Income (51-80% AMI)	28.8%	40.8%	49.8%
Moderate-Income (81-120% AMI)	8.5%	18.7%	26.8%
Non-Gentrifying			
Extremely and Very Low- Income (<50% AMI)	73.8%	80.0%	80.1%
Low- Income (51-80% AMI)	29.4%	40.4%	51.7%
Moderate- Income (81-120% AMI)	3.0%	6.8%	9.6%
Higher-Income			
Extremely and Very Low Income (<50% AMI)	75.9%	81.3%	81.6%
Low- Income (51-80% AMI)	49.1%	58.0%	64.8%
Moderate- Income (81-120% AMI)	18.5%	27.5%	32.9%

Sources: US Census (2000), American Community Survey (2005-2009, 2010-2014), NYU Furman Center (ACS PUMS)

Population ▲

Table 2: Percent Change in Population by Decade and Neighborhood Type

	% Change 1970-1980	% Change 1980-1990	% Change 1990-2000	% Change 2000-2010	% Change 1970-2010
Citywide	-10.4%	3.6%	9.4%	2.1%	3.6%
Gentrifying	-25.9%	5.6%	5.7%	1.8%	-15.8%
Non-Gentrifying	-6.8%	3.1%	9.8%	2.8%	8.4%
Higher-Income	-2.3%	2.8%	10.9%	2.1%	13.6%

Sources: Neighborhood Change Database (1970, 1980, 1990, 2000, 2010), NYU Furman Center

Influx of Younger Adults

Table 6: Share of Population Aged 20 to 34 by Neighborhood Type

	1990	2000	2005-09	2010-14
Citywide	26.4%	24.2%	23.6%	25.1%
Gentrifying	27.1%	25.4%	26.8%	28.8%
Non-Gentrifying	25.5%	22.3%	21.5%	23.0%
Higher-Income	26.2%	24.0%	22.7%	23.9%

Sources: Neighborhood Change Database (1990, 2000),
American Community Survey (2005-2009, 2010-2014), NYU Furman Center

Non-family households

Table 7: Share Non-Family Households by Neighborhood Type

	1990	2000	2005-09	2010-14
Citywide	35.3%	35.7%	37.8%	38.0%
Gentrifying	34.3%	36.5%	41.5%	42.5%
Non-Gentrifying	29.6%	29.1%	32.2%	32.8%
Higher-Income	36.9%	36.7%	37.3%	37.0%

Sources: Neighborhood Change Database (1990, 2000),
American Community Survey (2005-2009, 2010-2014), NYU Furman Center

Table 8: Share of Families with Children by Neighborhood Type

	1990	2000	2005-09	2010-14
Citywide	48.3%	50.7%	48.2%	47.0%
Gentrifying	55.6%	55.7%	51.7%	49.6%
Non-Gentrifying	55.5%	57.2%	53.9%	51.8%
Higher-Income	43.5%	47.3%	45.6%	44.9%

Sources: Neighborhood Change Database (1990, 2000),
American Community Survey (2005-2009, 2010-2014), NYU Furman Center

College Degree

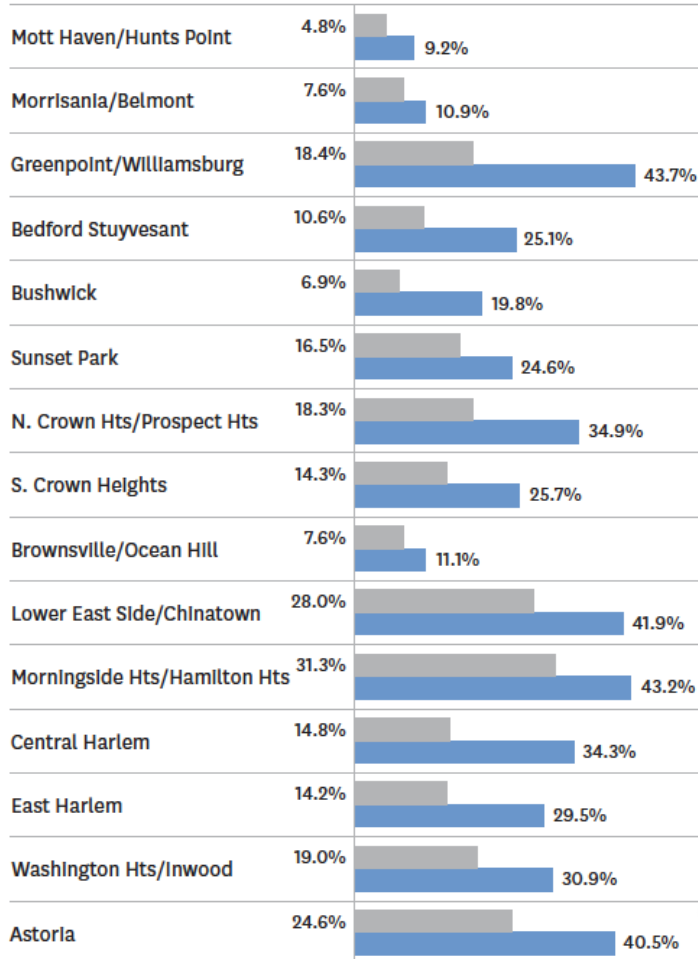**Table 5: Share of Population 25+ with a College Degree by Neighborhood Type**

	1990	2000	2005-09	2010-14
Citywide	21.5%	25.7%	31.6%	33.6%
Gentrifying	12.9%	16.4%	24.7%	28.5%
Non-Gentrifying	9.8%	13.7%	16.6%	18.2%
Higher-Income	27.6%	32.0%	37.4%	38.8%

Sources: Neighborhood Change Database (1990, 2000), American Community Survey (2005-2009, 2010-2014), NYU Furman Center

Figure 4: Share of Adult Population with College Degree by Gentrifying Sub-Borough Area

■ 1990 to 2000 ■ 2000 to 2010-2014

Sub-Borough Area	1990 to 2000	2000 to 2010-2014
Mott Haven/Hunts Point	4.8%	9.2%
Morrisania/Belmont	7.6%	10.9%
Greenpoint/Williamsburg	18.4%	43.7%
Bedford Stuyvesant	10.6%	25.1%
Bushwick	6.9%	19.8%
Sunset Park	16.5%	24.6%
N. Crown Hts/Prospect Hts	18.3%	34.9%
S. Crown Heights	14.3%	25.7%
Brownsville/Ocean Hill	7.6%	11.1%
Lower East Side/Chinatown	28.0%	41.9%
Morningside Hts/Hamilton Hts	31.3%	43.2%
Central Harlem	14.8%	34.3%
East Harlem	14.2%	29.5%
Washington Hts/Inwood	19.0%	30.9%
Astoria	24.6%	40.5%

Source: Neighborhood Change Database (1990, 2000),
American Community Survey (2010-2014), NYU Furman Center

Sub-boroughs

Comparison of Decades

Figure 5: Percentage Point Change in Share of Population 25+ with a College Degree by Neighborhood Type
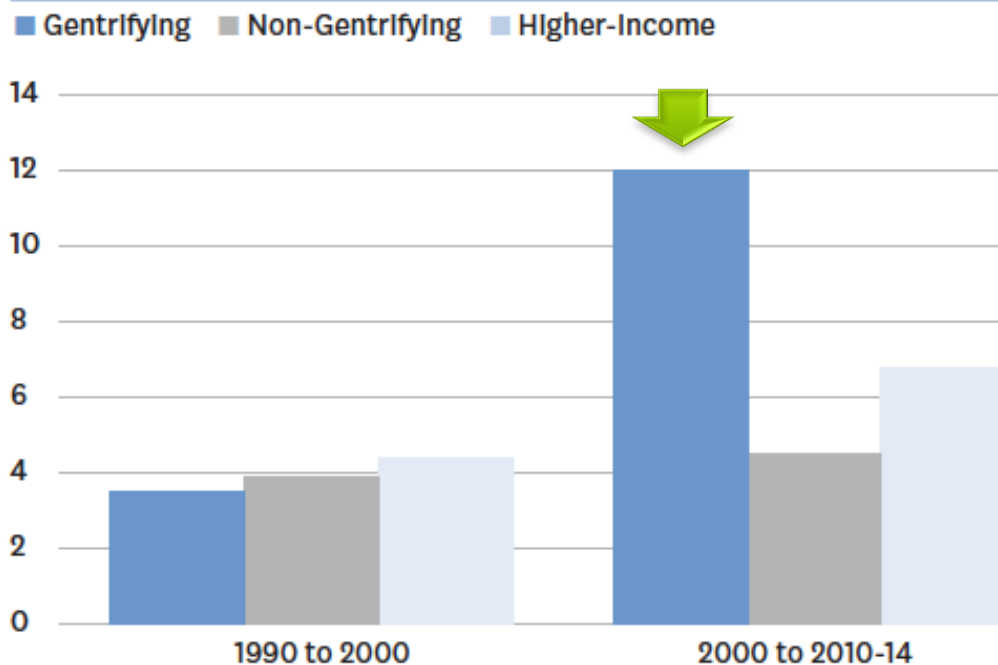
■ Gentrifying ■ Non-Gentrifying ■ Higher-Income

Sources: Neighborhood Change Database (1990, 2000), American Community Survey (2010-2014), NYU Furman Center

Racial:

Table 9: Racial Composition by Neighborhood Type

|	1990	2000	2010
Citywide			
Share Asian	6.8%	10.6%	13.4%
Share Black	25.6%	25.6%	23.6%
Share Hispanic	23.7%	27.0%	28.6%
Share White	43.4%	35.8%	33.4%
Gentrifying			
Share Asian	5.3%	7.5%	8.7%
Share Black	37.9%	34.4%	30.9%
Share Hispanic	37.3%	40.1%	39.2%
Share White	18.8%	17.1%	20.6%
Non-Gentrifying			
Share Asian	5.0%	8.1%	11.1%
Share Black	28.0%	26.7%	24.9%
Share Hispanic	38.4%	42.0%	45.2%
Share White	28.0%	22.1%	17.8%

Housing Units

Table 3: Percent Change in Housing Unit Counts by Neighborhood Type and Decade

	% Change 1970-1980	% Change 1980-1990	% Change 1990-2000	% Change 2000-2010	% Change 1970-2010
Citywide	0.8%	1.7%	7.0%	5.3%	15.5%
Gentrifying	-12.8%	-2.3%	7.5%	7.2%	-1.8%
Non-Gentrifying	-0.9%	-2.1%	8.1%	5.5%	10.6%
Higher-Income	8.1%	4.1%	6.6%	4.5%	25.4%

Sources: Neighborhood Change Database (1970, 1980, 1990, 2000, 2010), NYU Furman Center
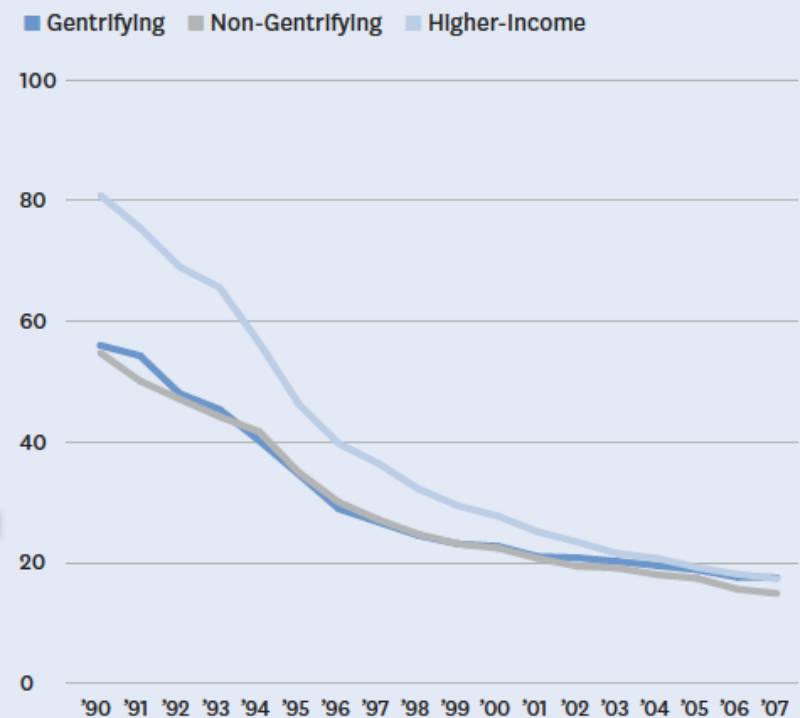
Crime:

Figure 1: Violent crime per 1,000 Residents by Neighborhood Type
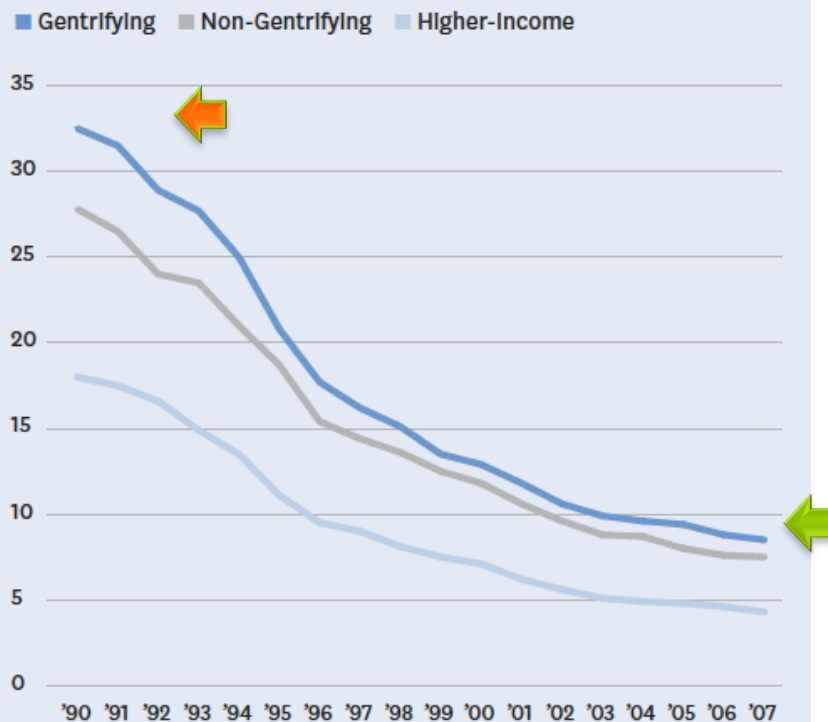
■ Gentrifying ■ Non-Gentrifying ■ Higher-Income

Sources: Federal Bureau of Investigation Uniform Crime Reporting Program, American Community Survey (2005-2009, 2010-2014), NYU Furman Center

Figure 2: Property Crime per 1,000 Residents by Neighborhood Type

■ Gentrifying ■ Non-Gentrifying ■ Higher-Income

Sources: Federal Bureau of Investigation Uniform Crime Reporting Program, American Community Survey (2005-2009, 2010-2014), NYU Furman Center

What can data do?

1. Granular definition of what is gentrification.
2. Time-referenced description of the process of gentrification.
3. Leading indicators of gentrification.
4. Predictions of areas to be gentrified.
5. Transparency informs developers, community, and policy.