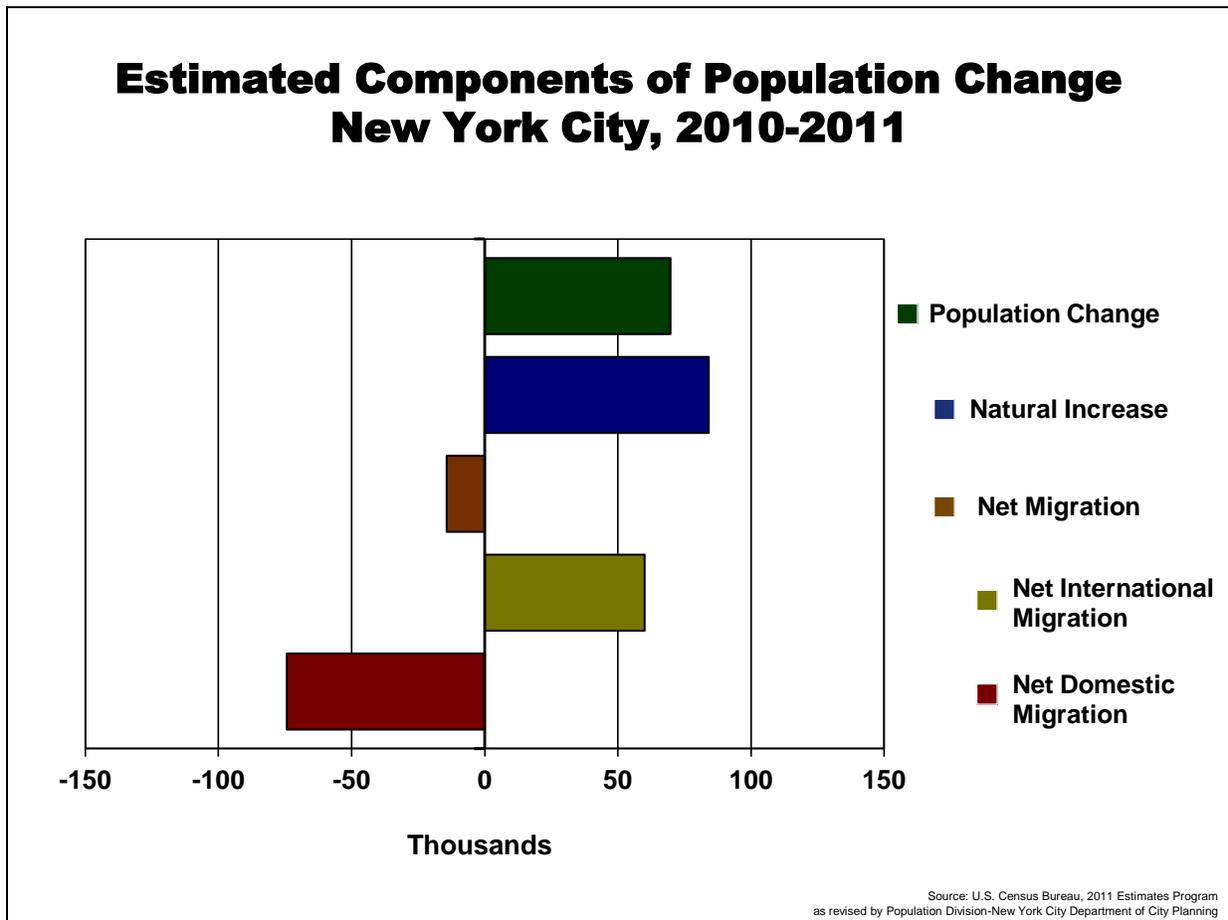# Dynamics of Population Change
New York City

With the economic crisis and slow recovery in the nation, we are often asked about the effects that these events have on the size and characteristics of the city's population, especially concerning patterns of change. In order to address this question, it is important to understand the processes that drive the population of New York City and how these processes are manifested at the neighborhood level.

Population Change
New York City and Boroughs, 2010-2011

	2010	2011	Change, 2010-2011 Number	Percent
New York City	8,175,133	8,244,910	69,777	0.9
Bronx	1,385,108	1,392,002	6,894	0.5
Brooklyn	2,504,700	2,532,645	27,945	1.1
Manhattan	1,585,873	1,601,948	16,075	1.0
Queens	2,230,722	2,247,848	17,126	0.8
Staten Island	468,730	470,467	1,737	0.4

Source: U.S. Census Bureau: 2010 Census-Summary File 1 and 2011 Population Estimates Program
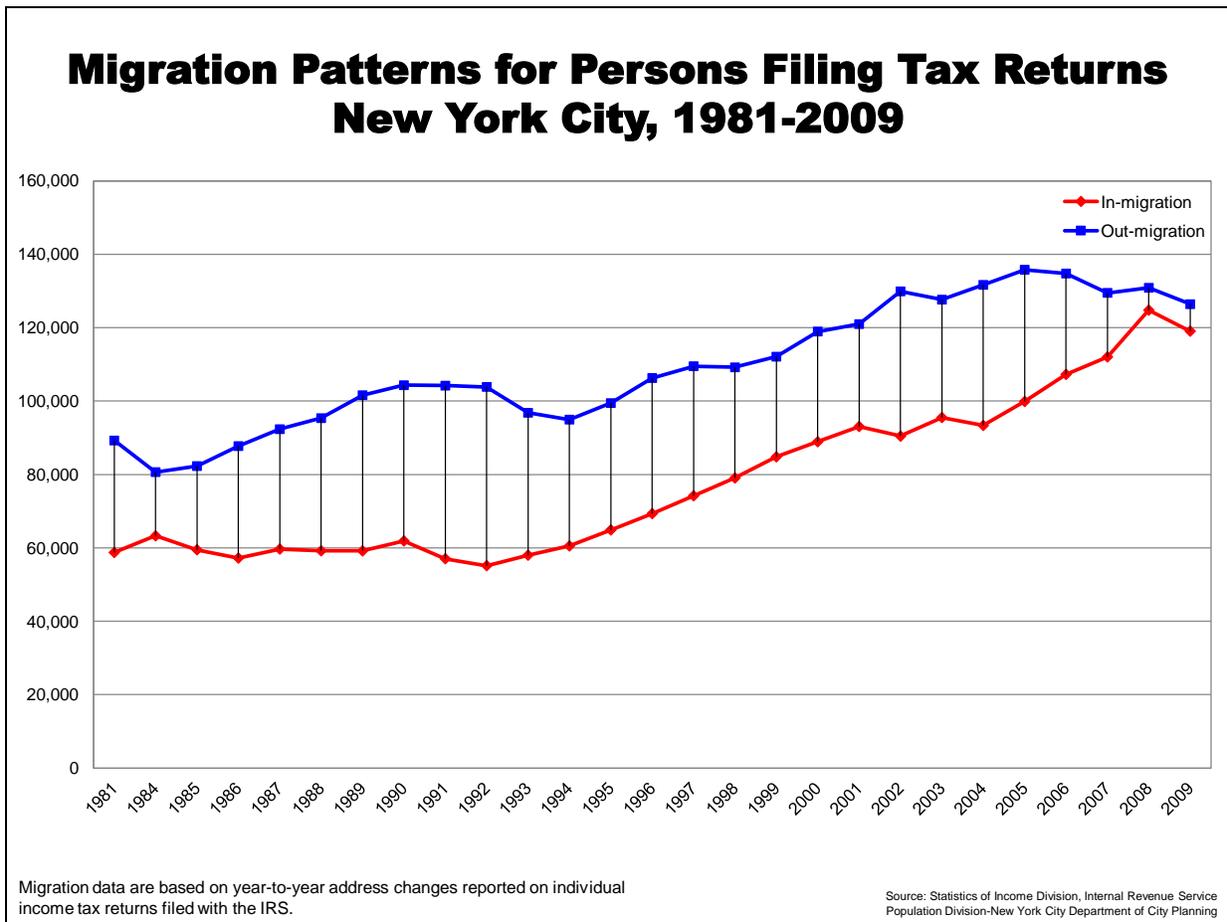Population Division-New York City Department of City Planning

As of July 2011 the official population for the city stood at 8,244,910, an increase of almost 70,000 persons since the April 2010 census enumeration. The change in population was largest in Brooklyn, followed by Queens and Manhattan. It is of interest to note that Brooklyn and Queens were the two boroughs of the city to have the smallest changes over the previous decade, with the change in Queens between 2000 and 2010 reported to be almost zero. This serves to underscore an important point: while these numbers appear to be precise, in reality they are approximations subject to error. The most conservative estimates would put this error in excess of one percent. Thus, it is reasonable to conclude that the actual population of New York City is probably in the range of 8.3 million persons.

Estimated Components of Population Change New York City, 2010-2011

Source: U.S. Census Bureau, 2011 Estimates Program
as revised by Population Division-New York City Department of City Planning

In order to understand how the population of the city changes over time, we need to replace our static view of the population with a more dynamic picture. What does it mean to say that the population increased by 70,000 persons? Let's begin by talking about what the 70,000 does not represent: the simple addition of new people to the population already here. Instead, it *is* the net result of a number of forces that act to change the population over time. These forces are referred to as the components of change: natural increase -- births minus deaths -- and net migration, the result of all the population flows into and out of the city.

 Over this period, New York City experienced a net domestic outflow of more than 74,000 people (seen here in the red bar at the bottom of the chart). This means that our exchanges with the 50 states resulted in a net loss of population to the tune of 74,000. This was largely offset by a net increase of more than 60,000 persons through net international migration; our exchanges with the rest of the world (seen here in the yellow bar). The result is a negligible net migration loss of 14,000 (orange bar), which by itself fails to convey the very large exchanges of population that occurred over just one year. When we add natural increase – 84,000 more births than deaths – we arrive at the total population change for the city of almost 70,000 persons.

When we say that New York City's population is dynamic, the correct image is one of a huge ebb and flow of people. This "churn" is what characterizes New York City and other dynamic population centers. Each year, several hundred thousand people are part of a cycle – they come here to experience the opportunities offered by New York City, then move on, only to be replaced by the next set of those aspiring for a better life. This has been and continues to be the history of New York City.

Migration Patterns for Persons Filing Tax Returns
New York City, 1981-2009

Migration data are based on year-to-year address changes reported on individual income tax returns filed with the IRS.

Source: Statistics of Income Division, Internal Revenue Service
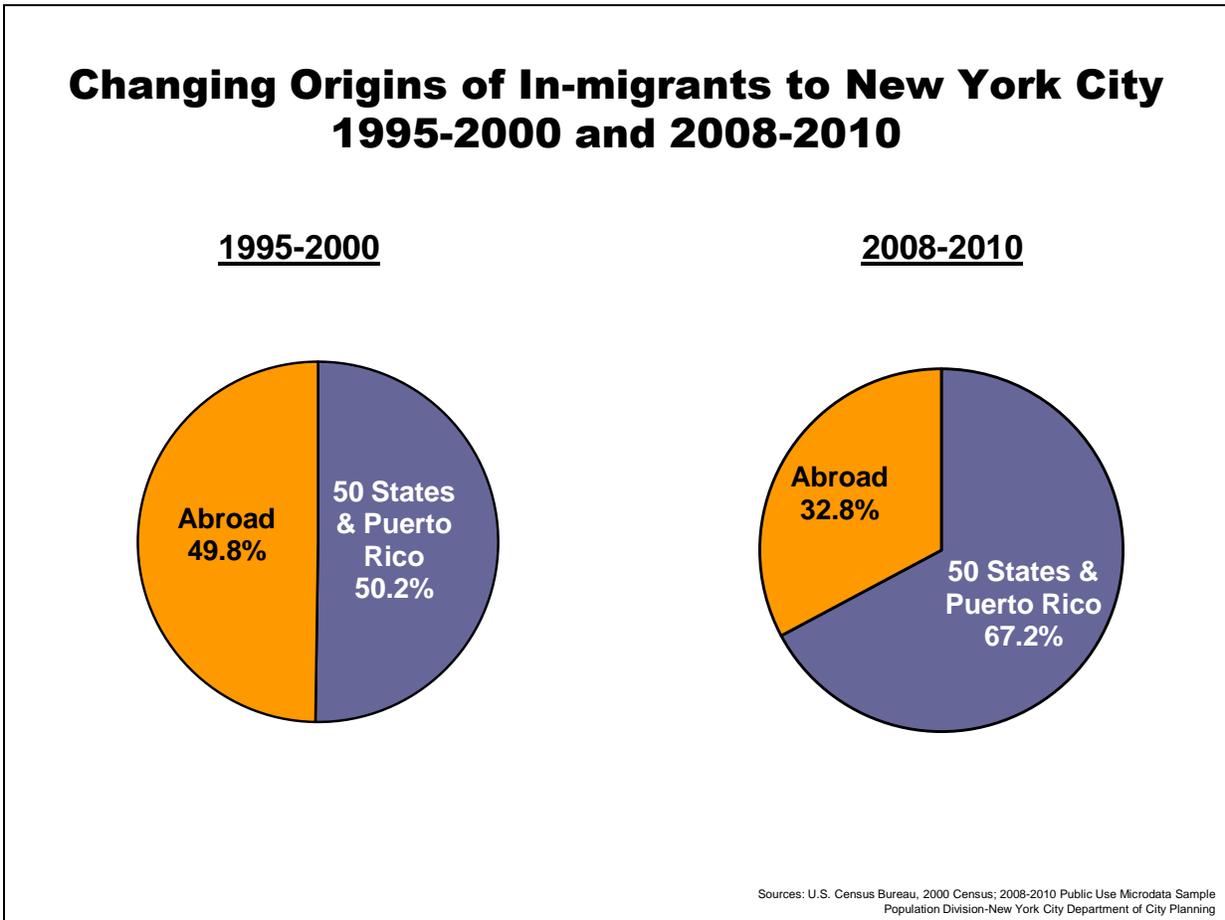Population Division-New York City Department of City Planning

The most volatile component of population change is net migration. Migration is a relative phenomenon. All migrants weigh conditions at origin and at destination. Persons who come to or leave the city need resources, either in the form of networks of friends or family, jobs, or the human capital that they possess, in the form of education and the motivation for a better life. This calculus plays out with every migrant stream, and most of the time New York City has come out on the winning side, attracting many thousands of people to its five boroughs.

Changes of address from year to year on IRS tax returns have been used for almost thirty years as a source of information on domestic migration. Since 1981, we can see the patterns of domestic migration, in and out of New York City. We have exported people to the 50 states for several decades. However in the post-2006 period when the economy of the nation went into deep recession, the domestic migration picture in New York City began to change. While the stream of migrants from the 50 states has increased in recent years, the flow out of the city to the 50 states has lessened. This is not surprising given the difficulties in the housing market and the economic recession, especially in many destinations that New Yorkers have historically sought out: central

and south Florida; Arizona, Nevada and Southern California fell victim to a housing market collapse and the economic recession.

As a result, the gap between the two migration streams has narrowed to the point where, most recently, the number entering and leaving is almost the same, something that is unprecedented in the post-1980 period. Given the relatively youthful age distribution of those who come from the 50 states, it is reasonable to conclude that a lot of young people in the last few years have decided that in bad economic times they want to come to New York City.

Changing Origins of In-migrants to New York City 1995-2000 and 2008-2010

1995-2000

Abroad 49.8%

50 States & Puerto Rico 50.2%

2008-2010

Abroad 32.8%

50 States & Puerto Rico 67.2%

Sources: U.S. Census Bureau, 2000 Census; 2008-2010 Public Use Microdata Sample
Population Division-New York City Department of City Planning

Although the losses through domestic migration have abated, the flows from other nations have remained the same or slowed over the last decade. Reductions in the flows of undocumented immigrants have been especially affected by the economic slowdown. These changes have acted to increase the percentage of all persons coming to the city from domestic origins, from about one-half in the 1995-2000 period to more than two-thirds for 2008-2010.
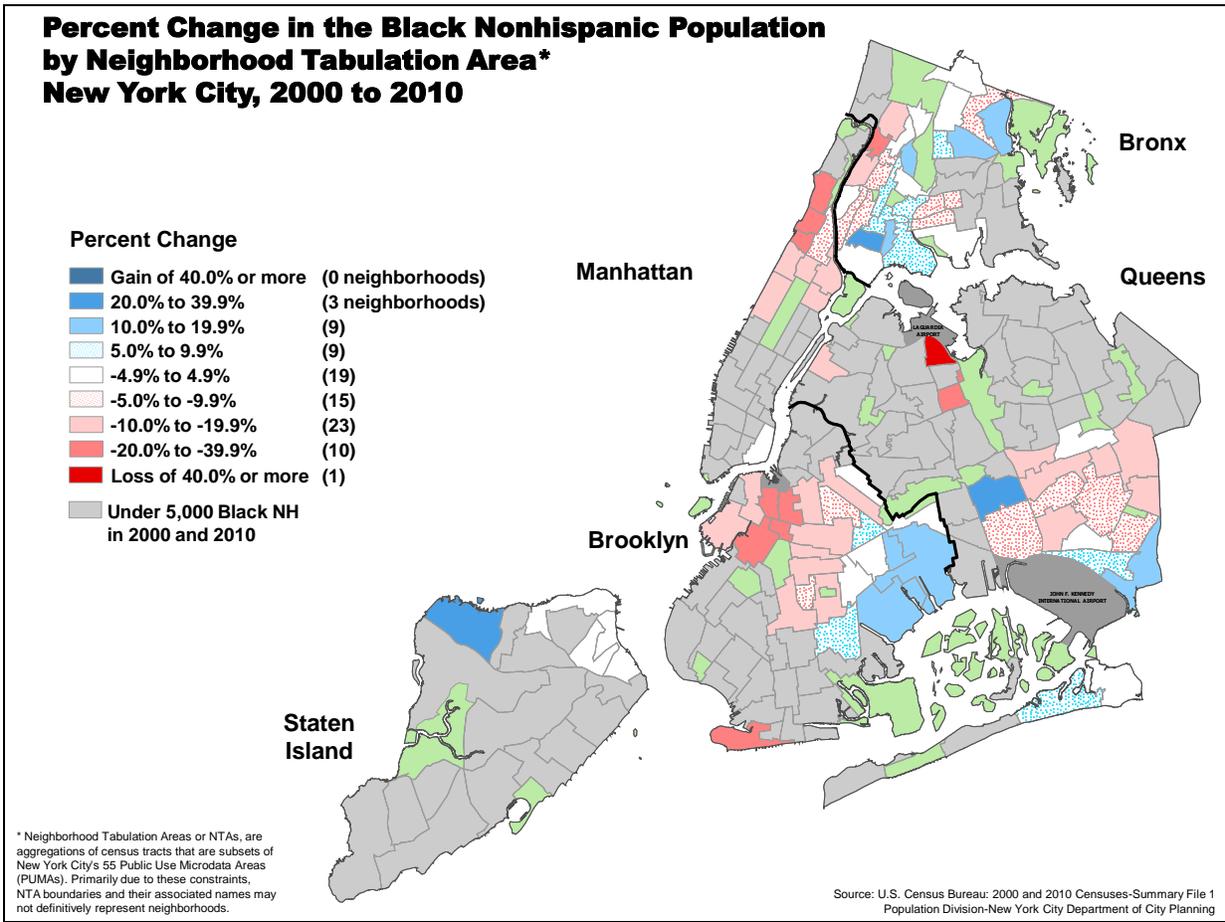
Patterns of Change at the Neighborhood Level

The components of change provide a useful lens through which we can view changes in the city's population; but observations for the entire city only begin to tell the story of the effect that the components of change have had on the race and Hispanic composition of the city's neighborhoods. This next section is not meant to be exhaustive, but to highlight some of the major patterns of change at the neighborhood level. For more detailed information, please see Components of Change by Race and Hispanic Origin, Census Brief #2, available on www.nyc.gov/population.
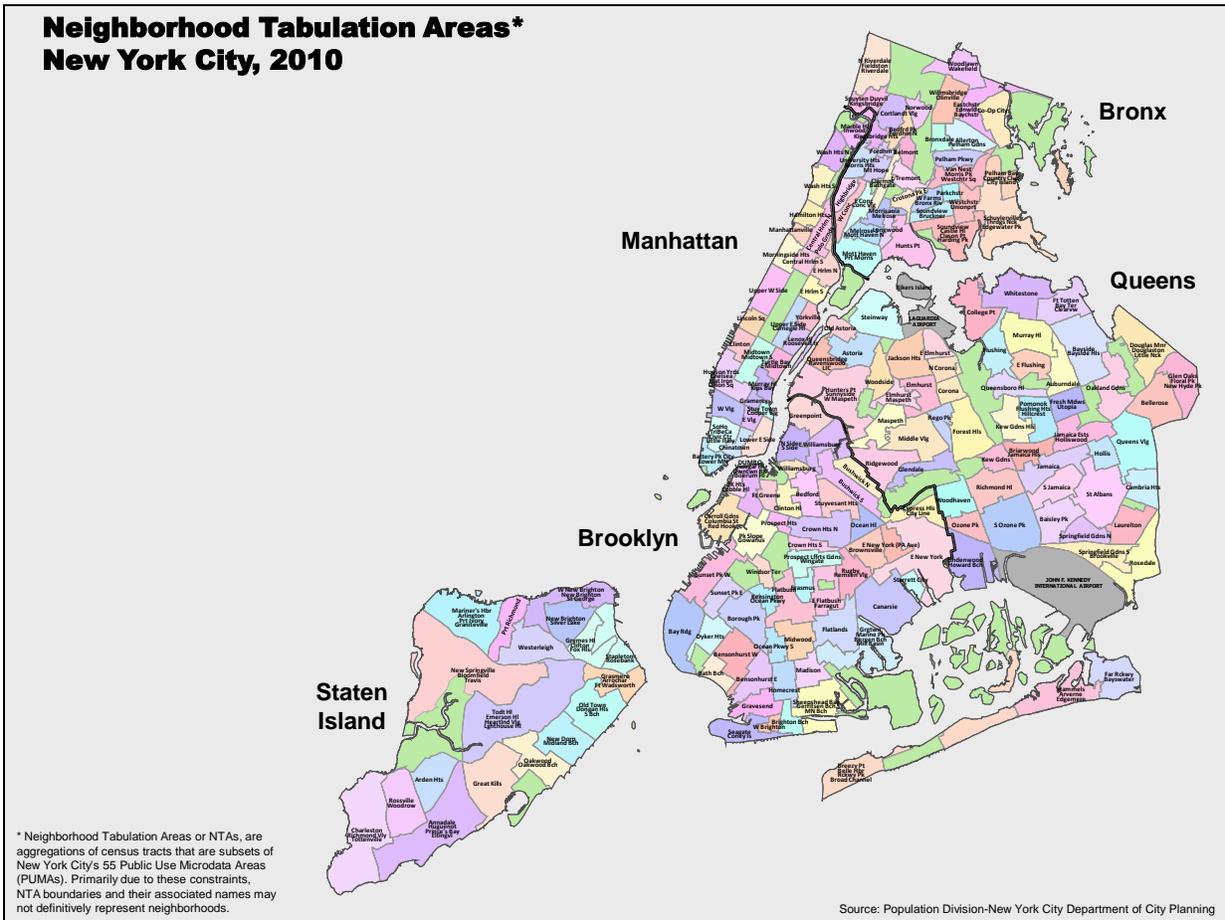
For purposes of this presentation, we divided New York City into 188 Neighborhood Tabulation Areas (NTAs). These areas were constructed using a series of criteria related to the creation of population projections and approximate boundaries of New York City's 59 Community Districts. NTAs represent a reasonable compromise between the broad brush of the 59 Community Districts and the extreme detail of the more than 2,100 census tracts. At the outset, it is important to note that these areas do not define the boundaries of neighborhoods, and neighborhood names are used for general reference purposes only.

Population Growth by Race/Hispanic Origin New York City, 2000-2010
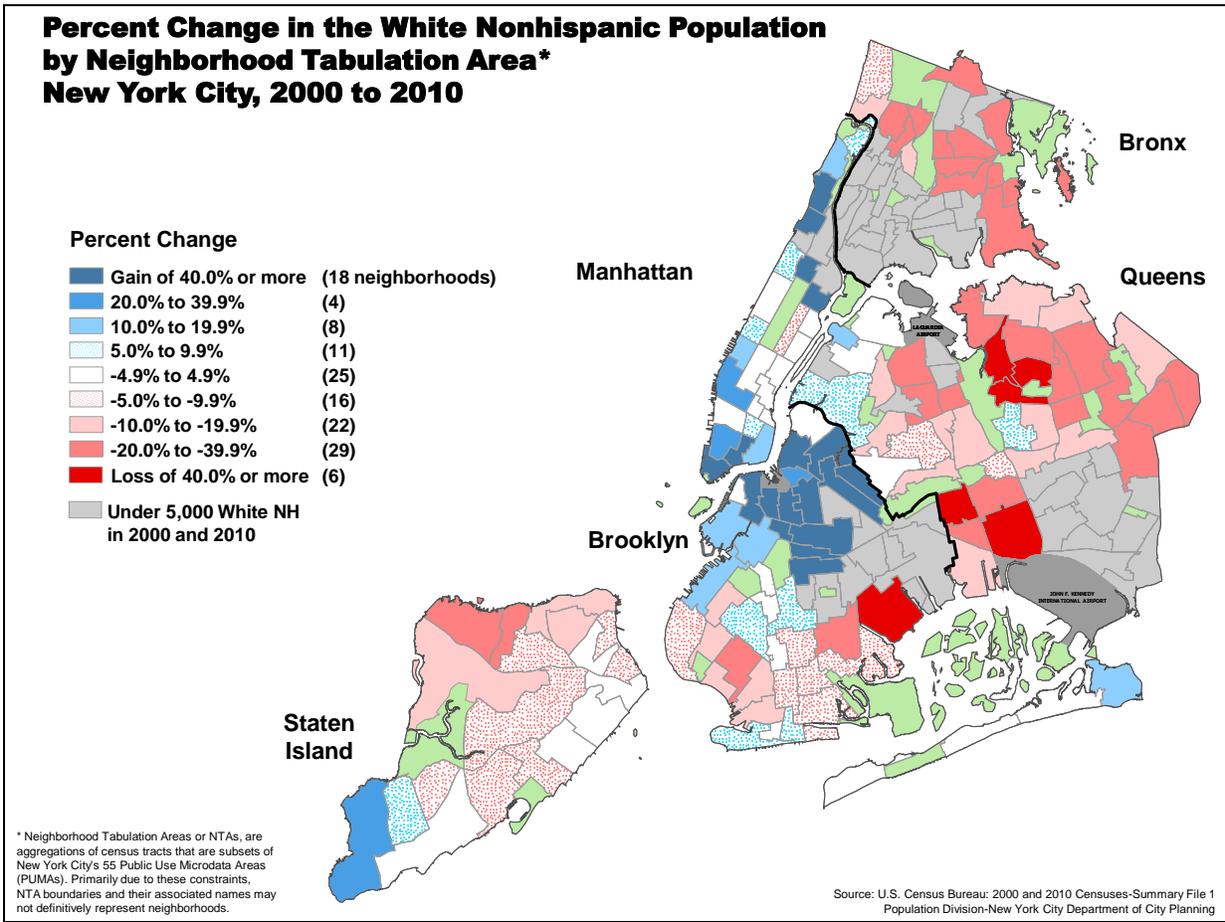
Percent Change = -5.1
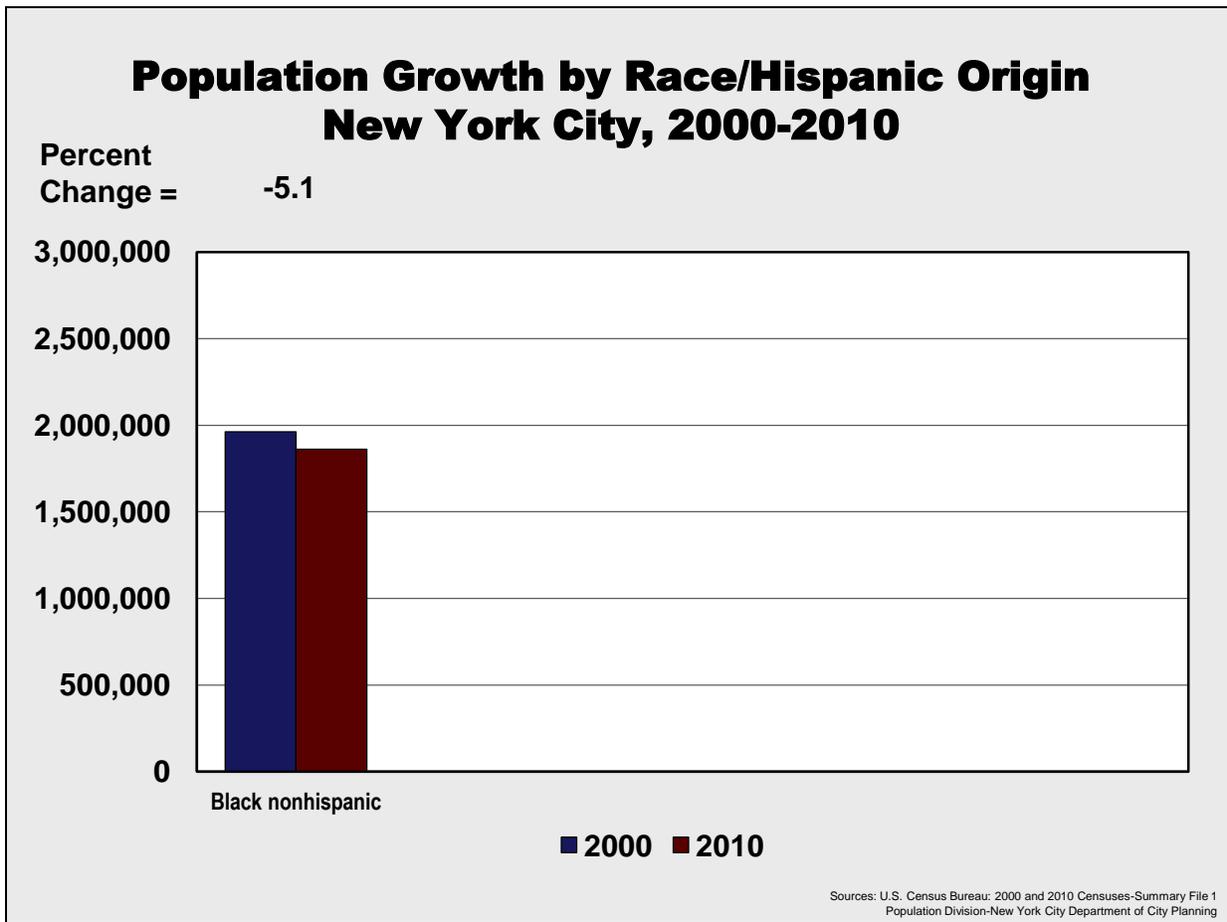
After decades of growth, the number of black nonhispanics in NYC declined by 100,100 or five percent between 2000 and 2010. The loss of black population was the result of substantial out-migration, the continuation of a flow out of the city of African Americans with origins in the southern U.S. that began a few decades ago. The period from 2000 to 2010, however, was the first to record a loss of total black population. Changes in the Caribbean black and new African immigrant populations, while substantial, were insufficient to offset the flow of black migrants to the southern states and the aging-out of black city residents. The share of blacks in the city is now at 23 percent, down from one-quarter in 2000.

Percent Change in the Black Nonhispanic Population by Neighborhood Tabulation Area* New York City, 2000 to 2010

The largest decline in relative terms occurred in Manhattan (13 percent), while the biggest absolute losses were in Brooklyn, which accounted for about one-half of the black losses citywide. The impact of black losses was particularly significant in the historically black neighborhoods in northern Manhattan and north central Brooklyn (Harlem, Bedford, Clinton, Fort Greene), although all remained majority black in 2010. Similar changes can be found on the northern periphery of Queens (East Elmhurst) and in the southeastern areas, although the changes were more muted. These losses were not confined to the out-migration of African Americans, but also include West Indians, who are now dispersing to other parts of the region and the nation. Black losses in north central Brooklyn, while substantial, were tempered by the fact that many moved to neighborhoods on the eastern and southeastern periphery o f the borough (East New York and Canarsie in particular). This may be akin to a kind of suburbanization-in-the-city effect, where people who are searching for lower density housing may look to the fringes of Brooklyn rather than the suburbs outside of the city limits. Staten Island was the only borough to show an increase in black population, mostly on the north shore, with at least some of the growth related to recent African immigration. So too in the Bronx, where African immigrants on the western edge of the borough are offsetting losses of black population in other areas.
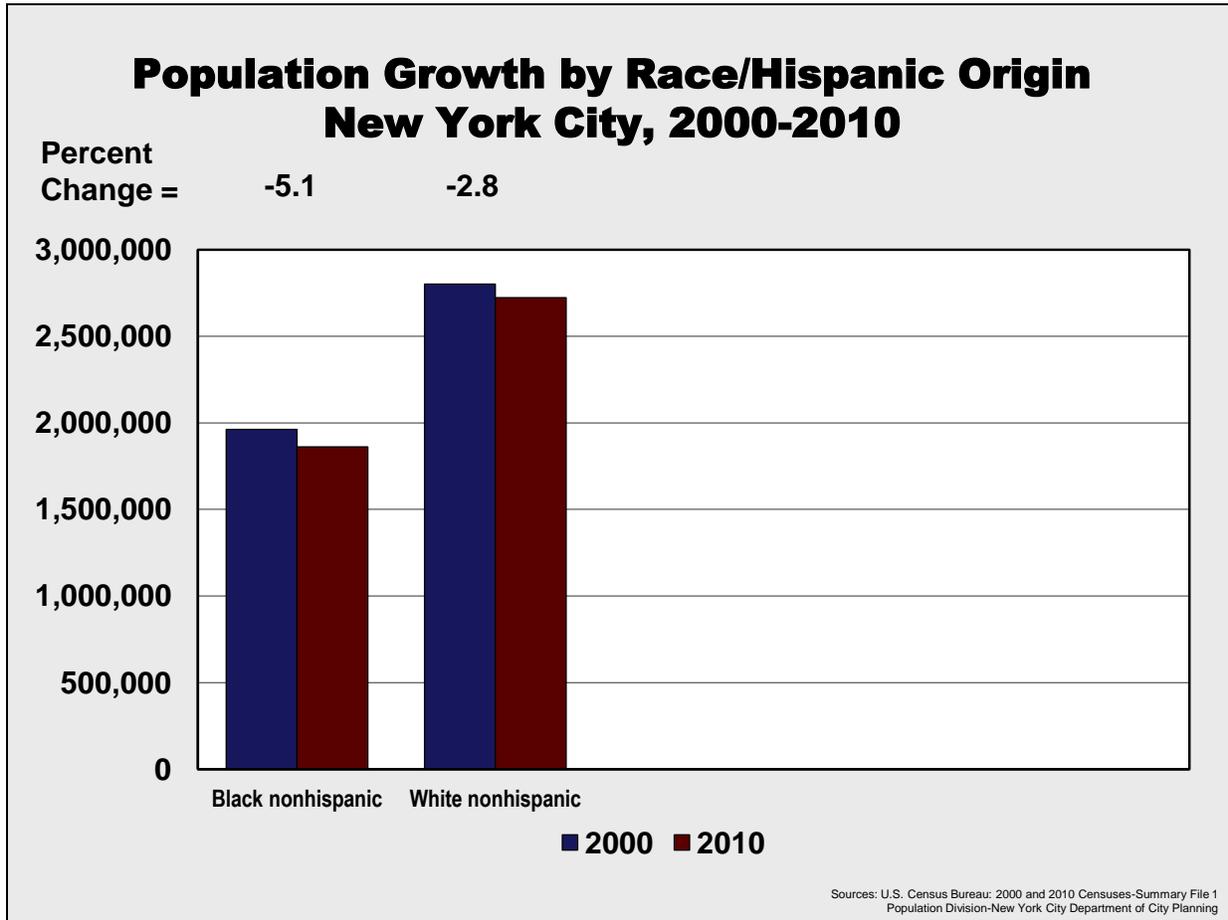
The white nonhispanic population of New York City has been declining since the 1950s, though the rate of decline slowed considerably between 2000 and 2010 to under three percent. The white share of the population is now 33 percent, down from 35 percent in 2000. Manhattan and Brooklyn were the only two boroughs to show an increase among whites, while the Bronx, Staten Island and especially Queens showed declines.

Percent Change in the White Nonhispanic Population by Neighborhood Tabulation Area* New York City, 2000 to 2010

Percent Change

Gain of 40.0% or more	(18 neighborhoods)	
20.0% to 39.9%	(4)	
10.0% to 19.9%	(8)	
5.0% to 9.9%	(11)	
-4.9% to 4.9%	(25)	
-5.0% to -9.9%	(16)	
-10.0% to -19.9%	(22)	
-20.0% to -39.9%	(29)	
Loss of 40.0% or more	(6)	
Under 5,000 White NH in 2000 and 2010		

* Neighborhood Tabulation Areas or NTAs, are aggregations of census tracts that are subsets of New York City's 55 Public Use Microdata Areas (PUMAs). Primarily due to these constraints, NTA boundaries and their associated names may not definitively represent neighborhoods.

Source: U.S. Census Bureau: 2000 and 2010 Censuses-Summary File 1
Population Division-New York City Department of City Planning

There are two nonhispanic white population groups in New York City, defined by age and stage in the life-cycle. One has its origins in the great European immigration of the early 20th century. These descendants of immigrants from southern and eastern Europe have displayed substantial out-migration and, despite increases in life expectancy, are aging out of the population. Losses in this group were seen in northeastern Queens, the east Bronx, most areas of Staten Island, southern Brooklyn, and the Upper East and Upper West Side of Manhattan.

The other white group is younger than the general population, the result of a consistent stream of domestic in-migrants, which has intensified over the recent economic recession. Lower Manhattan doubled in population between 2000 and 2010, largely as a result of an in-migration of young, white non-family households.

While New York has always experienced an influx of young people seeking to establish their careers or pursue higher education, this stream is seeking housing outside of the familiar corridors of Manhattan. Many are finding housing in Northern Manhattan (Washington Heights and Harlem), in northern and north central Brooklyn (Williamsburg, Bushwick, Bedford), and in Western Queens
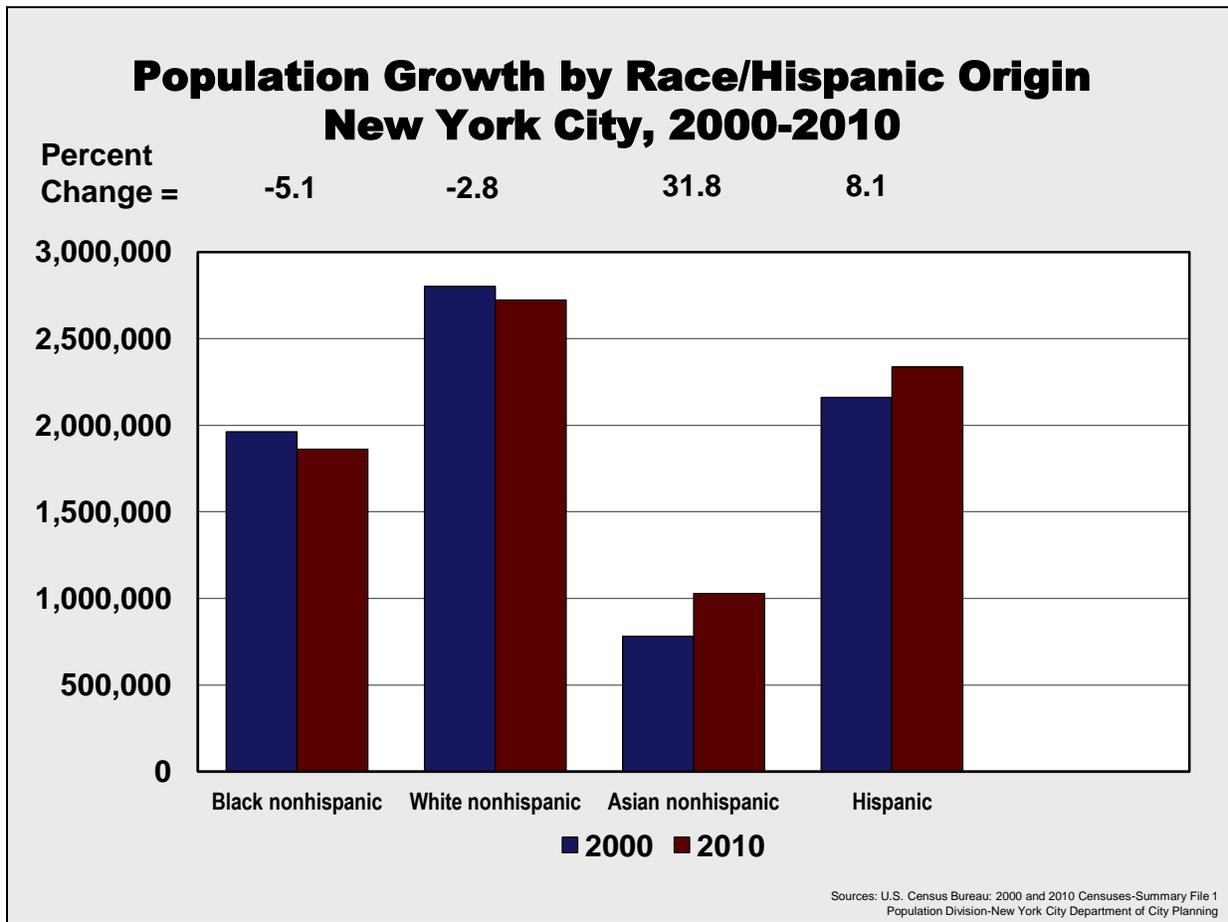
(Long Island City, Astoria, Sunnyside). Other areas that showed a white population increase included the orthodox Jewish communities of Borough Park and Midwood. While most white areas of the city displayed little or no natural increase, these communities grew primarily as a result of natural increase, at a level that more than offset the losses through net migration.
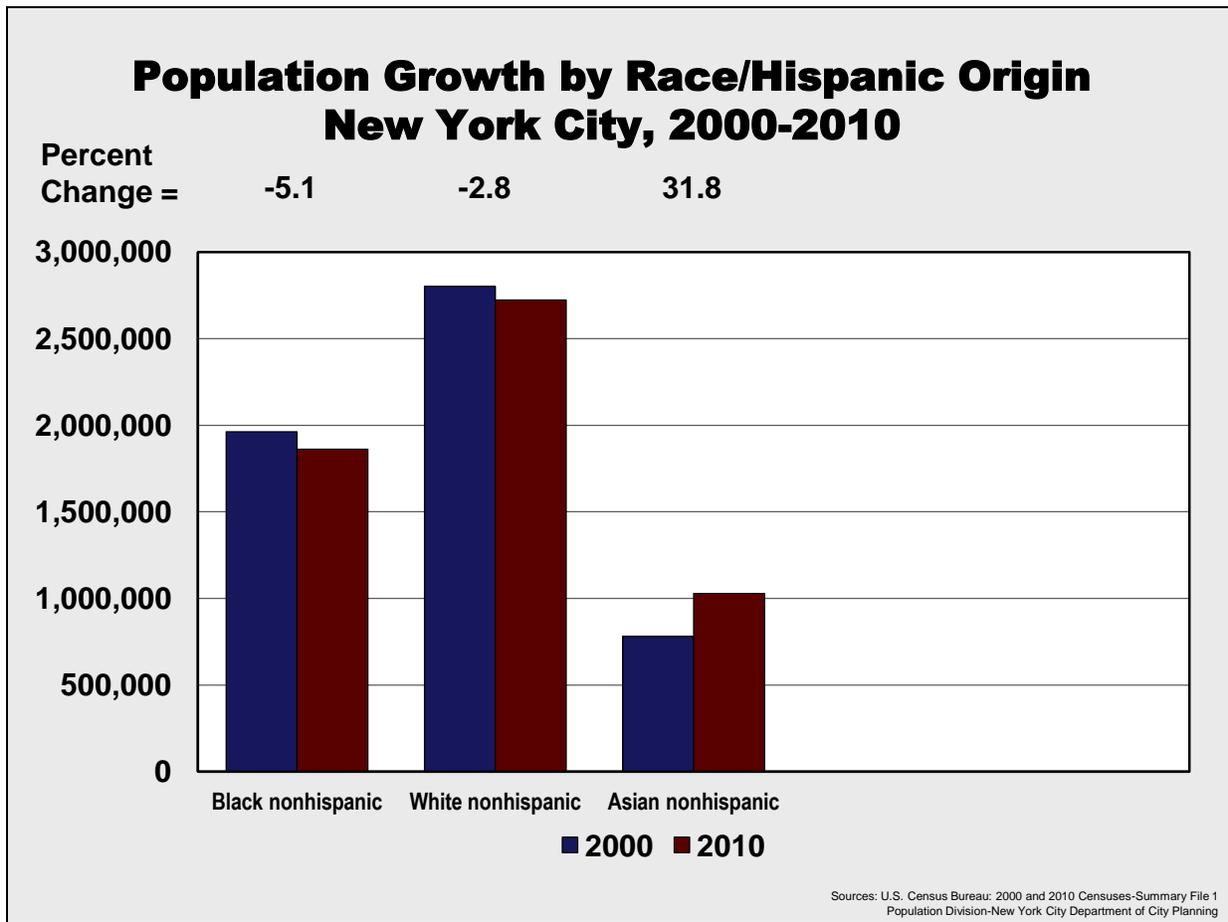
Asian nonhispanics continue to be the fastest growing group in the city, up 32 percent over the last decade, reaching the one million mark for the first time in 2010. One-half of the Asian population lives in Queens and Queens' neighborhoods accounted for one-half of the total increase over the last decade. At 13 percent of the city's population, Asians have settled in a wide swath of neighborhoods, especially those vacated by the white population. Since 1980, the Chinese have accounted for between 40 and 50 percent of the Asian population, with the newest emerging groups hailing from Bangladesh and Pakistan.

Percent Change in the Asian Nonhispanic Population by Neighborhood Tabulation Area* New York City, 2000 to 2010
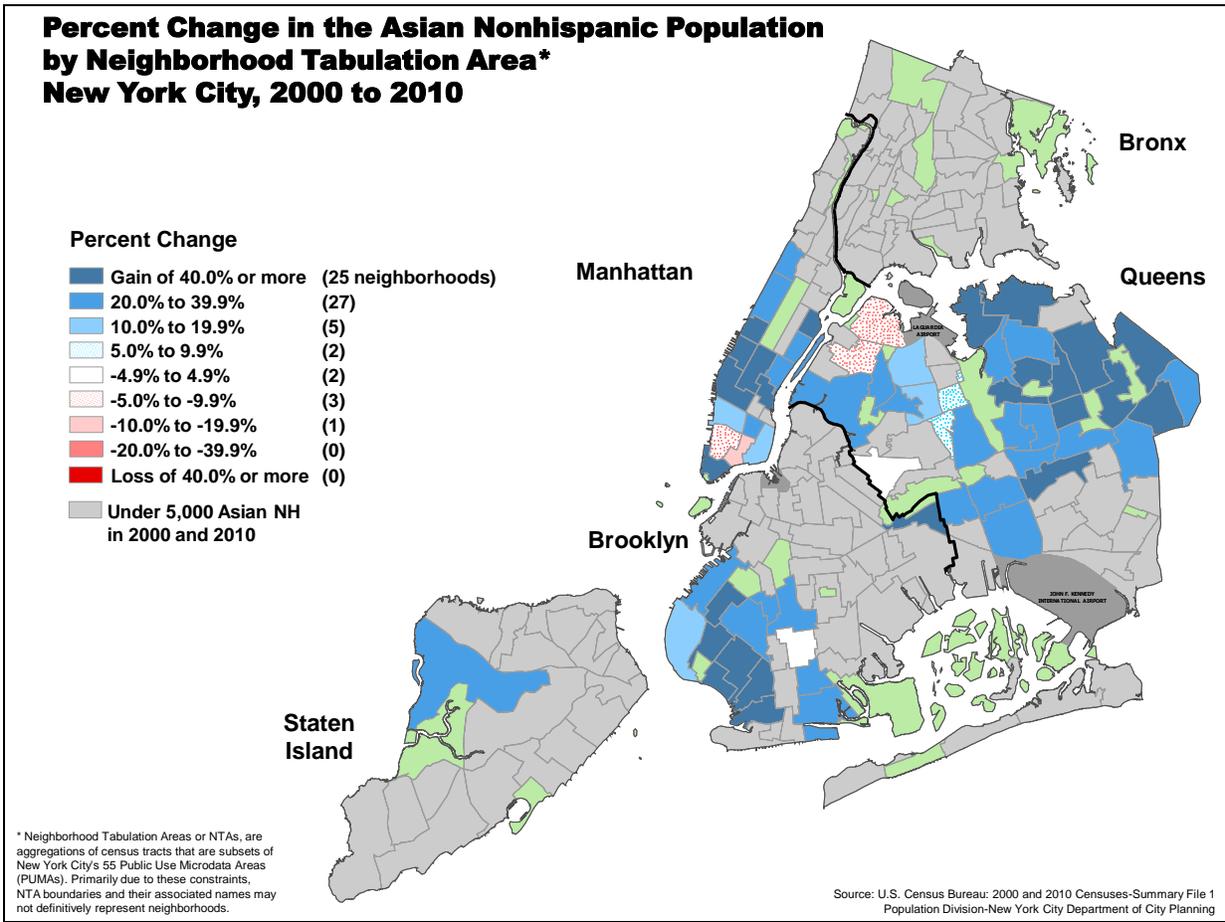
As the Asian population grows, it is replacing the aging white population in a number of neighborhoods, especially in Queens and in parts of Brooklyn. In northeastern Queens, Asians are replacing aging whites at a high rate (Whitestone, Fresh Meadows, and Oakland Gardens). While just 13 percent of the city's population and 23 percent of Queens, Asians now constitute a majority of all residents in a number of Queens' neighborhoods. Moreover, in some areas of Queens to the north and west, Asians continue to be a major component of the population; only now, the subgroup composition is shifting more towards south Asia, especially Bangladesh, which has become a major group in Elmhurst and Jackson Heights. In southern Brooklyn, the loss of aging Europeans has provided opportunities for Asians to obtain housing. The best example is Bensonhurst, which is home to the fastest growing Asian population in the city, with some census tracts where an already large Asian population doubled over the last decade. Like in Queens, the Bangladeshi and Pakistani populations have emerged in the central portion of the borough in the area southwest of Prospect Park. While Chinatown showed a substantial loss in a largely older Chinese population, young Asian, like whites, have migrated to lower Manhattan and points further north along both the east and west side.

Population Growth by Race/Hispanic Origin
New York City, 2000-2010

Percent
Change =   -5.1   -2.8   31.8   8.1

Sources: U.S. Census Bureau: 2000 and 2010 Censuses-Summary File 1
Population Division-New York City Department of City Planning

The Hispanic population grew by 8 percent over the last decade and now has a 29 percent share of the city total. Moreover, the Hispanic population continues to diversify – Puerto Ricans (31percent), Dominicans (25 percent), Mexicans (13 percent) – the fastest growing group in the city, followed by Ecuadorians, Colombians and a whole host of Central and South Americans. The Bronx has the largest Hispanic population in the city, which now constitutes 54 percent of all persons in that borough. Manhattan lost Hispanics between 2000 and 2010, a modest decline of about 4 percent, while The Bronx and Queens increased by 15 and 10 percent respectively.

Percent Change in the Hispanic Population by Neighborhood Tabulation Area* New York City, 2000 to 2010
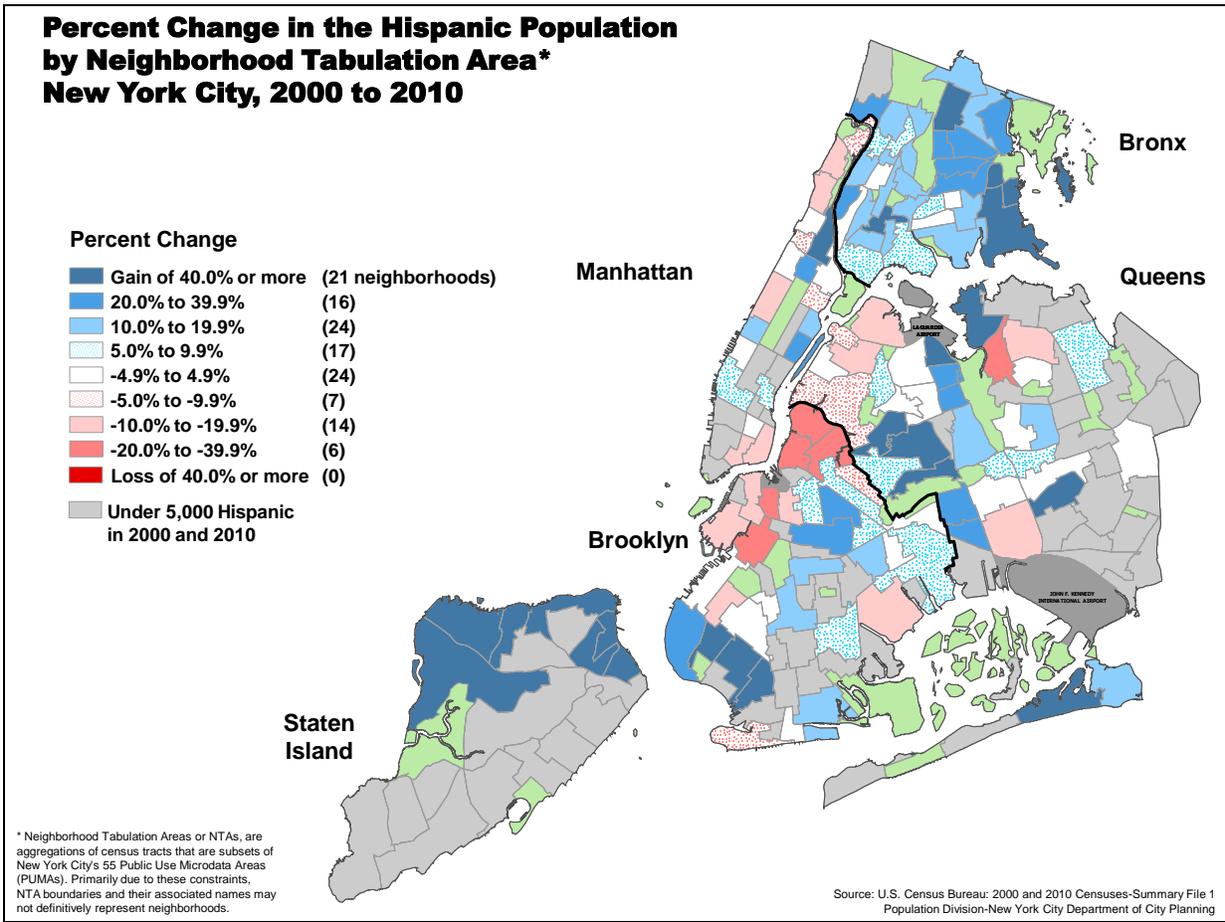
With the largest Hispanic population in the city, The Bronx has experienced several interesting changes. In the south and the south central parts of the borough (Mott Haven, Morrisania), Hispanics have increased as a result of both net migration and natural increase, something which has not been seen for at least 40 years. Although the large Dominican community continues to move out of northern Manhattan, some have stayed but chose to relocate into the northern part of Central Harlem. More significant, however, is the flow across the Harlem River into the western and central parts of The Bronx (e.g. University Heights, Morris Heights). As a result, the Hispanic population in Washington Heights has declined for the first time this decade and The Bronx now has, far and away, the largest Dominican community in the city.

Like the Asians, the Hispanic population has taken advantage of the increase in available housing in southern Brooklyn. The large Mexican community in Sunset Park is now pushing to the south and east into Bensonhurst and surrounding neighborhoods. Given the changing composition of southern Brooklyn, we can expect that Staten Island will follow suit. In fact, between 2000 and 2010, Staten Island experienced a 51 percent increase in Hispanic population (from 54,000 to 82,000), with a doubling of the Mexican population. Also evident in Brooklyn is an out-migration of Hispanics in

the northwestern and north central parts of the borough (Williamsburg, Northside, and Southside), and an in-movement of Hispanics -- primarily Mexicans -- into Bushwick and across the border into Queens (e.g. Ridgewood).

Further north, in Queens, the Dominican population in the Corona area is increasingly giving way to a Mexican influx. In fact, there has been an almost wholesale replacement of Dominicans by Mexicans in North Corona. Finally, to the north, the area behind LaGuardia airport known as East Elmhurst, once a bastion of black homeowners, has now given way to a Hispanic influx, principally from South America.

Conclusion

In summary, most neighborhoods in NYC undergo a process of continual change and renewal related to the huge ebb and flow of people that occurs on a continuous basis. This provides the city with a continuous injection of population that seeks the economic opportunities for upward social mobility afforded by the city. This population, in turn, replaces the population which has moved on to other parts of the nation and the world. This continuous cycle acts to renew the city's population and change the character of neighborhoods over time. And, it is this cycle of renewal that has defined the city throughout its history and continues to make New York a vital place.