

A city outside Australia: New York City

New York City, also referred to as NYC, New York or The Big Apple, is one of the world's best-known urban places. It is a place of great economic and cultural authority. It is one of the world's largest megacities (as defined by the UN) and is one of just three or four cities at the top of the world city hierarchy, the others being London, Tokyo and perhaps Paris.

New York City's economic and cultural authority spans a range of sectors. It plays a central role in the global economy, especially in its influence on global financial markets. Its cultural authority spans the entertainment, sporting, and media sectors, and those focused on education, research, health care and life sciences. As home to the headquarters of the United Nations, New York plays an important role in international diplomacy. If the New York City metropolitan area was a country, it would be the eighth-largest economy in the world. The city's gross annual city product exceeded US\$678 billion in 2022.

In this chapter, the focus is on the character and spatial dimensions of New York City; the geographical processes shaping the city and how these have changed over time; the challenges of living in the city; and the ways these challenges are being addressed to promote sustainability, improve people's quality of life, and reduce spatial inequality.

New York is not a city. It's a world.

Iman, Somali-American model, actress and entrepreneur

9.0.1 New York City



Chapter glossary

absolute poverty where household income is below the level necessary to afford basic food and shelter

amenity those things that make a place pleasant to live in

borough an administrative division

economic restructuring a significant and enduring change in the nature and structure of an economy

functional differentiation the physical and spatial characteristics that give an area its primary identity; how the functions of one neighbourhood are different from another

gentrification the process whereby the character of a poorer urban area is transformed by wealthier people moving in, improving housing and attracting new businesses, sometimes displacing current inhabitants in the process

globalisation the growing interdependence of the world's economies, cultures and populations, brought about by cross-border trade in goods and services, technology, and flows of investment, people and information

heat island effect an urban area that is significantly warmer than its surrounding areas due to human activities

inner mixed zone (IMZ) the older inner-city neighbourhoods that lie on the fringes of the CBD

megapolis a very large, heavily populated urban complex

metropolitan area a city and its densely populated surrounding areas

neighbourhood a geographically localised community within a larger urban space

relative poverty where household income is a certain percentage below median income

suburbanisation a population shift from central urban areas to the suburbs

urban form the physical elements that structure and shape a city, including land uses, building types, streetscapes and public spaces

woke the term used to denote an awareness of, and being actively attentive to, important facts and issues, especially those related to racial and social justice

UNIT 9.1

The spatial dimensions and character of New York City

Like all large cities, New York City has faced a range of urban challenges, many of which are associated with periods of rapid growth and economic change. New York City became an industrial powerhouse in the nineteenth century, as the United States transitioned from an agricultural to an industrial economy (see Figure 9.1.1). The rapid population growth accompanying this transition contributed to the emergence of a range of urban problems including overcrowded slums, inadequate sanitation, water shortages and pollution. Much of this population growth was driven by immigration. New York City attracted, and continues to attract, migrants from around the world. All sought a better way of life for themselves and their children. As a result, New York City's ethnically diverse population is one of its defining characteristics.



9.1.1 New York City, a place of great economic and cultural authority



9.1.2 New York City is located on the east coast of the USA.

More recent challenges stem from the restructuring of the city's economy—a transition from one based on industry to an information and services-based economy. These challenges include congestion, social inequality and housing shortages. Geographers seek to understand the morphology of cities such as New York City. By investigating a city's **functional form** and character, and the processes involved, we are better placed to propose and assess initiatives that enhance sustainability and liveability.

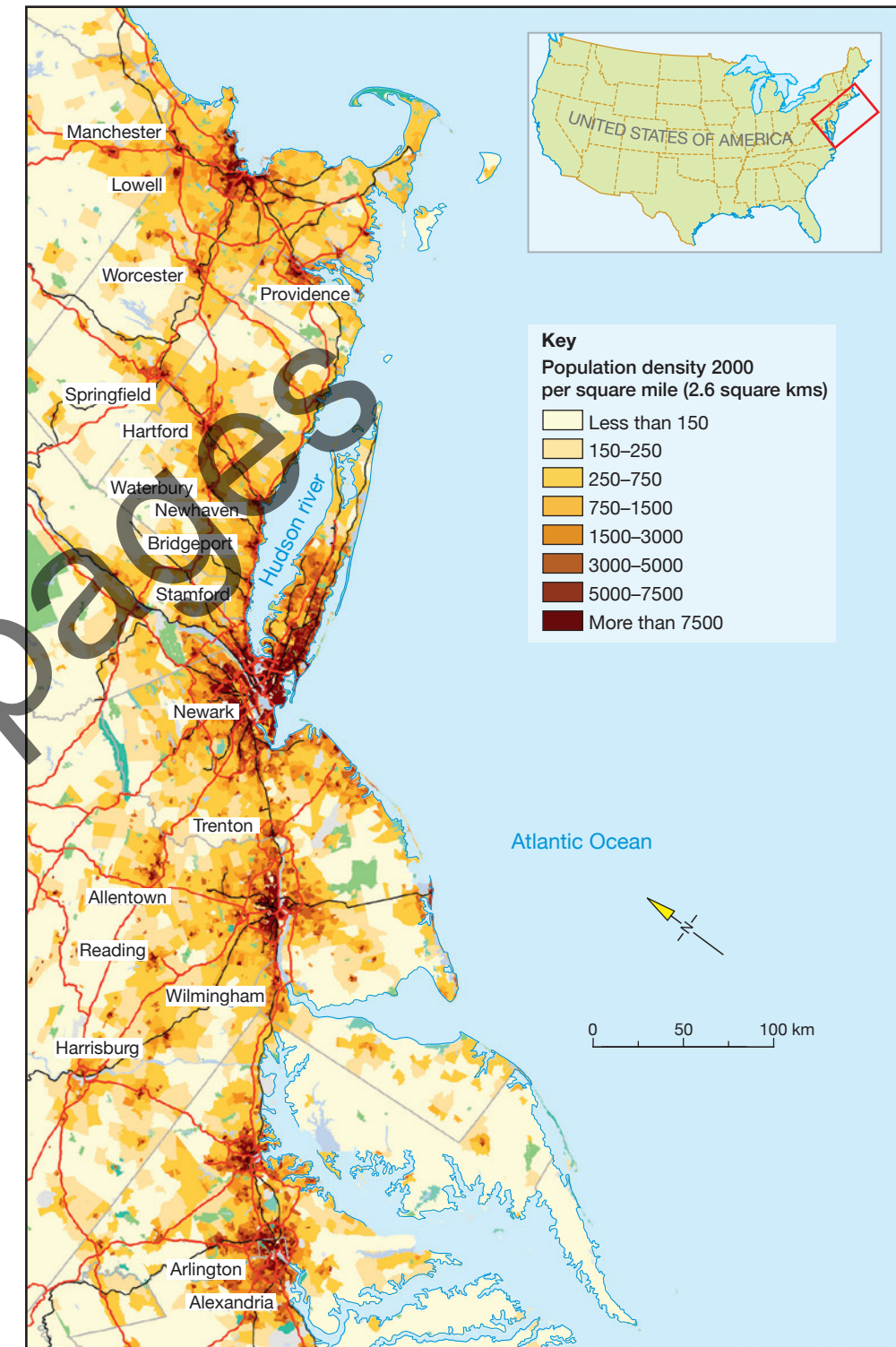
Location and spatial extent

New York (latitude 40° 40'N, longitude 73° 50'W) is located on the east coast of the United States, where the Hudson River enters the Atlantic Ocean (see Figure 9.1.2). It lies at the southern end of New York State, and it forms the geographical and demographic centre of both the New York **metropolitan area** and the larger northeast **megalopolis**.

The New York **metropolitan area** includes New York City, Long Island, the Mid and Lower Hudson Valley in the state of New York; the six largest cities in the state of New Jersey (Newark, Jersey City, Paterson, Elizabeth, Lakewood and Edison); and six of the seven largest cities in the state of Connecticut (Bridgeport, Stamford, New Haven, Waterbury, Norwalk, and Danbury). In terms of area, this is the largest metropolitan area in the world. The New York metropolitan area covers 34 494 square kilometres (about half the size of Tasmania).

The northeast megalopolis takes in the vast metropolitan areas extending from Boston in the north down through NYC and Philadelphia to

Baltimore and Washington DC in the south (see Figure 9.1.3). The Boston–Washington DC area (often referred to as BosWash) is home to more than 52.3 million people. The northeast megalopolis covers 145 557 square kilometres.



9.1.3 The northeast megalopolis



9.1.4 New York City's five boroughs



9.1.5 Annotated satellite photograph of New York City



9.1.6 This iconic perspective of New York City's Manhattan Island shows one of the most densely settled places on Earth.

New York City is composed of five **boroughs** (administrative divisions): the Bronx, Brooklyn, Manhattan, Queens and Staten Island (see Figures 9.1.4 and 9.1.5). Each borough is also a county of New York State. Queens and the Bronx are also known as Queens County and Bronx County. The other three counties have a different name from their borough name: Manhattan (New York County), Brooklyn (Kings County) and Staten Island (Richmond County). In total, there are 62 counties in the state of New York.

The organisation and extent of New York City as defined by its five boroughs is best understood a political definition, as it describes the distinct divisions by which the city is governed. In fact, the metropolitan area extends well beyond the five boroughs, as do the city's commuting zones.

Jersey City, in the state of New Jersey, houses some 292 500 people just across the Hudson River from Manhattan (see Figure 9.1.6).

Site of New York City

Much of New York is built on the three islands of Manhattan, Staten Island and western Long Island (Brooklyn and Queens). Land is scarce, which has led to high population density and the quest to build ever taller buildings. Only the Bronx forms part of mainland United States.

The city is dissected by the Hudson and East rivers, which flow in the Atlantic Ocean. The city's access to the sea and deep waters made it inevitable that it would develop into a major port. Today, New York City is a global maritime hub.

Manhattan is 21.6 kilometres long and about 3.7 kilometres wide at its widest point. Except at its northern and southern tips, the borough's avenues run roughly north-south, and streets run east-west. Fifth Avenue divides the island into east and west sides and plays an important role in determining Manhattan's addresses. The Museum of Modern Art (MoMA), for example, lies to the west of Fifth Avenue on 53 Street, hence it has the address of 11 W 53rd Street. East-west streets are numbered sequentially from lower Manhattan northward.

Much of New York City is spread across the undulating Atlantic coastal plain, with generally flat land across much of the urban area. To the city's west lie the Appalachian and Catskill mountains which are barriers to inland development. They would, however, become major catchment areas for New York City's water supply.

Developments in bridge and tunnelling technology, and the construction of freeways, over time, have allowed for the outward expansion of the urban area. The rivers, which once

represented physical barriers, were spanned. The opening of the famous Brooklyn Bridge in 1868, for example, led to the development of Brooklyn and areas beyond. The construction of New York City's subways in the early twentieth century facilitated the development of the outer boroughs. It also resulted in the development of centres of economic activity throughout the five boroughs and beyond (see the box, Spotlight: New York City subway). Eight bridges (including the Brooklyn, Williamsburg, Queensboro, Manhattan, George Washington and Verrazano Narrows bridges) and four tunnels (the Holland, Lincoln, Queens Midtown and Brooklyn Battery Tunnel) now play a critical role in maintaining a functioning city.

Much of the city's topography bears the imprint of human intervention, with substantial land reclamation taking place along the island's waterfronts since colonial times. Reclamation is most notable in Lower Manhattan with modern developments like Battery Park City. Elsewhere, much of the city's natural variations in topography have been erased. While the West Side of Manhattan retains some hilliness, especially in Upper Manhattan, the East Side has been extensively flattened. Some areas are low-lying and subject to flooding during storm surges.

SPOTLIGHT

The founding of New York City

From its first sighting by Italian explorer Giovanni da Verrazano in 1524, New York's harbour was a prize all the great European powers sought to control. The Dutch first sent traders to the area in 1621 and named the settlement they established New Amsterdam. The English displaced the Dutch in 1664 and renamed the colony New York. The name was retained, even after the English lost the colony in 1783, at the end of the War of American Independence.

In the nineteenth century, New York grew rapidly and became a major port which, in turn, fostered the development of manufacturing (see Figure 9.1.7). Trade and commerce became the city's principal focus and great fortunes were made.

In 1898, Manhattan joined with the four outer boroughs to form what was then the world's second-largest city. Only London was larger.

The city's population grew rapidly during the nineteenth century, from 79 000 in 1800 to 3 million in 1900. Much

of this growth was driven by immigration. This mix of cultures enriched the city and became one of its defining qualities.



9.1.7 Illustration of Manhattan, looking north, in 1873

SPOTLIGHT

New York City subway

First opened in 1904, the New York City Subway is one of the oldest public transport systems in the world, and one of the most patronised (see Figure 9.1.8). Its 399 kilometres of track and 472 stations catered for 5.6 million passengers each weekday in 2022. This makes it the seventh-busiest rapid transit system in the world. Of the 28 routes or services, 25 pass through Manhattan.

The efficiency of the subway system, combined with the lack of parking in Manhattan, helps to explain why per capita car ownership in New York City is well below the national average. The subway is a key factor in the sustainability and liveability objectives of New York City.



9.1.8 In high-density cities such as New York City, mass transit systems play a critical role in the functioning of urban areas.

The Big Apple

New York City is sometimes called the Big Apple. The name's origin is from the term applied to the prizes awarded at horse racing events in the 1920s. The term meant 'the ultimate prize' or 'the best'. Musicians and journalists started using the name when referring to New York City. Tourism authorities officially adopted the term in 1971 to boost tourism.

Did you know?

The factors that contribute to the character of a place include its location, topography, physical geography, land use, the built environment and infrastructure, and its demographic and economic characteristics.

Did you know?

Politically, New York City is among the most progressive of all American cities. In the 2020 presidential election, the Democratic candidate (Joe Biden) gained 76.19 per cent of the city's vote compared to just 22.7 per cent for the Republican candidate (Donald Trump). At the city level, the Democratic Party holds most public offices. Sixty-eight per cent of registered voters in the city are Democrats. There are pockets of Republican support in some of the wealthier parts of Brooklyn and Queens, and suburban Staten Island is a stronghold of Republican support. The last time a Republican candidate for president received a majority of votes in New York City was 1924.

The character of New York City

New York City is a global financial centre and a major hub for business and commerce. As a world city, it is one of the world's most important centres for banking and finance, trade, transportation, traditional and new media, advertising, legal services, accounting, insurance, retailing, theatre, fashion, the arts and sport. Many of the world's largest TNCs are headquartered in New York City. These include American Express, Citigroup, JP Morgan Chase, Goldman Sachs, Morgan Stanley, News Corporation, Viacom and Warner Media.

New York is also one of the world's major tourist destinations. Popular attractions include Broadway shows, Times Square, Central Park, the Statue of Liberty, shopping on Fifth Avenue, the site of the former World Trade Center and its 9/11 Memorial Museum. The city's world-famous museums are also popular with tourists and include the Metropolitan Museum of Art, MoMA, American Museum of Natural History, and the Whitney, Frick, Neue Galerie and Guggenheim art museums.

New York's defining characteristic is its cultural diversity. It's a city where you can find people from almost every country, culture and tradition, and who, together, constitute the heart and soul of arguably the most dynamic city on the planet. This cultural diversity is evident in the city's food, art, theatre, music, literature and its **neighbourhoods**.

Throughout its history, New York City has been a major point of entry for immigrants. The term 'melting pot' was coined to describe densely populated immigrant neighbourhoods on the Lower East Side. Today, ethnic communities are found throughout the New York metropolitan area, often forming distinctive neighbourhoods with cultural characteristics reflecting the mix of ethnicities found in the area.

New York City's climate

New York City has a humid subtropical climate. This typically gives the city cool, wet winters and hot, humid summers with plentiful rainfall all year round. The city is prone to extremes. Snowfalls are infrequent, occurring on average only 12 days per year. It can, however, be heavy when it occurs. The city can also experience strong winds, given its proximity to the Atlantic Ocean.

New York's distinctive neighbourhoods

Its neighbourhoods are one of the city's unique characteristics. New York has more than 250 such neighbourhoods, with Manhattan (one of the city's five boroughs) having 53 discrete neighbourhoods, each with its distinct character.

Manhattan's neighbourhoods

Some of Manhattan's best-known neighbourhoods include:

- those popular with tourists. For example, Times Square and the Theater District (see Figure 9.1.13 on page XXX), Midtown, Lower Manhattan, Soho and West Village
- chic residential and commercial neighbourhoods, for example, Upper East Side, Upper West Side and West Village
- principally residential neighbourhoods, for example, East Village, Lower East Side, Greenwich Village, Chelsea and Tribeca.

Some districts derive their identity from past land uses. The Meatpacking District, for example, was once home to hundreds of meatpacking plants and slaughterhouses. Today it is a bustling high-end retail, dining and residential area. Other districts derive their character from the immigrants who settled there. These include Chinatown in Lower Manhattan (see Figure 9.1.9), Little Italy and the Lower East Side, a neighbourhood founded by the first Italian immigrants who came to New York.



9.1.9 Manhattan's Chinatown

The Hell's Kitchen neighbourhood, located on the western side of Midtown, was, until the 1970s, home to poor, working-class Irish Americans. Today, the area has a large LGBTIQ+ population and is home to many LGBTIQ+ bars and businesses. It is also popular with fledgling and working actors, given its proximity to the Theater District.

Harlem, to the north of Central Park, has long been associated with the city's African American population and culture. Today, trendy eateries, stylish clubs and hip bars make for an energetic nightlife scene.

Businesses are concentrated in the Financial District, at the southern end of Manhattan, and in Midtown. Midtown is also home to some of the city's best-known buildings, including the Empire State Building, the Chrysler Building, the United Nations headquarters, Grand Central Terminal and the Rockefeller Centre. It is also home to several prominent tourist destinations including Broadway and Times Square.

Manhattan's striking skyline is arguably the most famous in the world. The construction of the city's famous skyscrapers, made possible by the invention of the hydraulic lift, is driven by its high population density and limited space for development. Developers have traditionally looked to build upwards rather than outwards to make the most of the available land. The latest trend, driven by developers looking to profit on incredibly high property prices, is the construction of pencil towers—very tall, thin buildings.

Each of the other four boroughs that make up New York and their districts/neighbourhoods is also distinctive in terms of its character (See Figure 9.1.10).



9.1.10 Manhattan's neighbourhoods

● SPOTLIGHT

Central Park

New York's Central Park is world-famous. It is located between the Upper West and Upper East sides of Manhattan and stretches from 59th Street in the south to 96th Street in the north. Work started on the 4.6 square kilometre park in 1858, to address the recreational needs of the rapidly growing city.

The original purpose of the park was to provide urban dwellers with an experience of the countryside, a place to escape from the challenges of urban life, and to engage with nature and fellow New Yorkers (see figure 9.1.11).

Today the park continues to meet these needs, as well as newer forms of recreational activities. With 42 million visits a year, Central Park is one of the most visited urban parks in the world.

The park's designers, Frederick Law Olmsted and Calvert Vaux, sought to incorporate a variety of landscapes and experiences, including sweeping lawns, picturesque woodlands, meandering streams and broad lakes (see Figure 9.1.12). All of this can be experienced by moving through the park along winding paths, a carriage drive and a horse-riding path. Over time, additional features have been added to the park, including baseball and soccer fields, a carousel, two ice-skating rinks, a zoo, formal gardens, commemorative monuments and concert and theatre venues.

In addition to diverse recreational facilities and experiences, Central Park provides a range of ecological and environmental benefits. Its more than 18 000 trees cool and clean the air, and the park provides a habitat for a variety of wildlife.



9.1.11 Oblique aerial photograph of New York City's Central Park, looking towards the northern end of Manhattan from above Midtown



9.1.12 Central Park in autumn



9.1.13 Times Square, is the entertainment heart of Manhattan and NYC more generally.

Brooklyn's neighbourhoods

Brooklyn lies to the south and east of Manhattan across the East River. It has the largest population of the five boroughs and is the second most densely settled urban area in the United States after Manhattan. In recent decades, Brooklyn has become a fashionable destination for those who can't afford the high cost of housing in Manhattan. As a result of the **gentrification** taking place, house prices in many of Brooklyn's 77 neighbourhoods have increased dramatically.

Many of Brooklyn neighbourhoods are closely identified with a particular culture or ethnicity, thereby exhibiting a high degree of concentration of certain ethnic groups. The south-west half of Brooklyn is more ethnically diverse, although it contains few African American residents; the north-east section is mostly African Americans and Latino Americans. Overall, African Americans account for 26.7 per cent of the borough's population, the Jewish community 22.4 per cent, Latino Americans 18.9 per cent and Asian Americans 13.6 per cent. European Americans account for 35.4 per cent of the population.

Queens's neighbourhoods

Queens, located on Long Island, is the largest borough by area and the second most populous after Brooklyn. The borough is often described as one of the most ethnically diverse urban areas in the world. The borough is a patchwork of 91 unique neighbourhoods, each with its own distinct identity. Queens residents often identify more closely with their neighbourhood, rather than with the borough or city. Flushing, for example, has a large and growing Asian population. Elsewhere are neighbourhoods with large Greek, Italian, Latino, Indian, Guyanese, and Central and South American populations.

Queens has the most diversified economy of the city's five boroughs. Key areas of employment include health care, retail trade, manufacturing, construction, transportation, and film and television production. Queens is home to two of the three major NYC area airports, JFK International and LaGuardia. Attractions include Flushing Meadows Park—home to the New York Mets baseball team and the US Open tennis tournament.

Bronx's neighbourhoods

The Bronx is the fourth largest borough by area, the fourth largest by population and third in terms of population density. It has at least 50 neighbourhoods and is home to a large Latino American population—54.8 per cent of its 1 472 654 people in 2020. Parts of the Bronx are among the poorest neighbourhoods in the United States.

In the latter half of the twentieth century, parts of the Bronx experienced a sharp decline in population, liveable housing and quality of life. The South Bronx experienced severe urban decay and social unrest. Beginning in the late 1990s, population growth returned and today some parts of the borough are home to upper- and middle-class neighbourhoods. Despite some interventions to enhance the liveability of the borough, it continues to have the highest rate of poverty in the city. Poverty-related social problems persist. These include high rates of violent crime, substance abuse, overcrowding and substandard housing conditions.

Staten Island's neighbourhoods

Staten Island, with 62 neighbourhoods and a population of 500 000, is the least populated of the five boroughs. Like the other boroughs, though, there are high concentrations of people based on their ethnicity. Most of the borough's African American and Latino American residents live in the north. Other neighbourhoods are home to Russian, Polish, Sri Lankan and Jewish American communities.

In recent times, artists and musicians have moved to Staten Island's North Shore because of its proximity to Manhattan and affordable spaces to live and work. Staten Island is an attractive place to live. Its slower pace of life, quiet neighbourhoods, sandy beaches, green space and easy commute to Manhattan are major attractions. The borough is connected to Lower Manhattan via the Staten Island Ferry.

There are few, if any, cities that can match New York's energy, fast pace of life, buzzing traffic, 24-hour hustle and bustle, ever-changing skyline and creative spirit evident in all aspects of life. Together, these make NYC one of the most vibrant places on Earth. New York is literally, a city that never sleeps.

A word about terminology

The authors recognise the importance of culturally appropriate terminology and sensitivity to the perspectives of people from diverse cultural backgrounds.

In this chapter, we use the terms Black and African American in the discussion of New York and its communities. African Americans are American-born people of African descent. Black is more inclusive and is often preferred by people who do not identify as African and/or American, or can't trace their lineage back to Africa. This may include Americans that identify as African, Afro-Caribbean, Afro-Latino, and many other races and ethnicities.

Identifying as Black in the US isn't just about ethnicity, it refers to an entire culture. In this way, those who identify as African Americans are part of Black culture. The term Black is said to encompass all non-white people, to emphasise the common experience of systemic racism.

The term Black is now widely used in US media and popular culture, and even in government, but it is always used with care. The term is never used as a noun. The Associated Press style guide, for example, stipulates that Black should always be used in 'a racial, ethnic or cultural sense, conveying an essential and shared sense of history, identity and community among people who identify as Black, including those in the African diaspora and within Africa.'

For a long time after the first Europeans arrived on the Australian continent, they referred to First Nations Australians as 'the blacks'. Media headlines and stories used this term as a way of conveying a perceived superiority. Changes to the use of the term began in the twentieth century and now the term is considered highly offensive. The term Black is not intended to be and should not be used when talking or writing about First Nations Australians.

SPOTLIGHT

NYC's Black neighbourhoods

New York's Black community is a multicultural one, which comprises American-born African Americans and immigrants (and their descendants) from Africa, the Caribbean (in particular Jamaica, Trinidad and Tobago, Barbados, Guyana, Belize, Grenada and Haiti) and Latin America.

Many of the city's Black residents live in the boroughs of Brooklyn, Queens, The Bronx and in the neighbourhoods of northern Manhattan. Specific neighbourhoods with high numbers of African Americans include Brooklyn's Bedford–Stuyvesant, Manhattan's Harlem and the neighbourhoods of Eastern Queens and The Bronx. The highest concentration of Black New Yorkers is in Bedford–Stuyvesant (see Figure 9.1.14). These neighbourhoods were the birthplace of urban Black culture.

African American culture and identity—a blending of native African cultures of West Africa and Central Africa with European cultural traditions—first developed during the period of slavery in the US southern states. For many years, African American and white American cultures developed separately, due to the legacy of slavery, segregation and racial discrimination.

Significantly, Christianity plays a defining role in African American culture. Seventy-nine per cent of African Americans identify religion as 'very important' in their life, compared to 56 per cent of the wider US population.

Eighty-three per cent of Black Americans identify as Christian, including 45 per cent who identify as Baptist.

Today, African American traditions flourish as a dynamic innovative presence, especially in the fields of music, dance, art, literature, fashion, religion and cuisine, and is a defining feature of the NYC's Black neighbourhoods. It is also apparent that African American culture and identity have had a profound impact on American culture, as well as globally.



9.1.14 Street life in Bedford–Stuyvesant, one of New York City's vibrant Black neighbourhoods.

Activities

Acquiring and processing geographical information

- 1 Explain why New York City is defined as both a mega city and a world city. Why is it considered a place of great economic and cultural authority?
- 2 Summarise how the challenges facing New York City have changed over time. What have been the key drivers of growth?
- 3 Describe the climate of New York City.
- 4 Define the term morphology. Why do geographers study the morphology of cities such as New York City?
- 5 Describe the location and spatial extent of New York City.
- 6 Summarise the key features of the site of New York City. What led to the outward expansion of the city? How have the interventions of people affected the city's site?
- 7 List the factors that contribute to the character of place of New York City.
- 8 Summarise the role of neighbourhoods in defining the character of New York City.
- 9 Explain why the city is so ethnically diverse.
- 10 Explain why New York City has so many skyscrapers.
- 11 Explain how the character of each of New York City's boroughs differs.

Applying and communicating geographical understanding

- 12 Write a paragraph explaining why New York City is described as among the most progressive American cities.
- 13 Study Figure 9.1.3. Describe the spatial extent of the northwest megalopolis.

- 14 Study Figure 9.1.4. Write a sentence describing the site and relative location of the five New York City boroughs.
- 15 Access Google Earth. Familiarise yourself with the geography of New York City. Locate the features shown in Figure 9.1.5.
- 16 Study the box, Spotlight: The founding of New York City. Summarise the origins of New York City.
- 17 Study the box, Spotlight: New York City subway. Explain why the subway is so central to the effective functioning of New York City. How does the subway contribute to the sustainability of New York City?
- 18 Study Figure 9.1.10. Locate the Manhattan neighbourhoods mentioned in this unit.
- 19 Study the box, Spotlight: Central Park. Summarise how the park has changed over time. What purpose does it serve? What are its ecological and environmental benefits?
- 20 Study the box, Spotlight: NYC's Black neighbourhoods and complete the following tasks.
 - a Identify the sub-groups of New York City's Black population.
 - b Describe the spatial distribution of NYC's Black neighbourhoods.
 - c Where and when did the urban Black American culture develop? In what ways is it evident and what impact has it had?
 - d Describe the nature of the relationship between Black American culture and Christianity.

UNIT 9.2

New York City's urban morphology

Urban morphology is the study of **urban forms** and of the agents and processes responsible for their transformation over time. Urban form refers to the main physical elements that structure and shape the city, including land uses, building types, streetscapes and public spaces.

The morphology of New York City, like that of Sydney and the world's other great port cities, has over time been transformed by technological advances in shipping and cargo handling. Ever larger and increasingly specialised vessels and the introduction of containerisation in the 1970s, made most of the city's existing port infrastructure (wharves, railway goods yards and associated warehouses) obsolete. Large tracts of waterfront land were abandoned in the 1970s and 1980s, making it available for urban renewal initiatives.

The process of **economic restructuring** has also impacted the morphology of the city. This restructuring resulted in labour-intensive industrial processes and manufacturing moving to low-cost developing countries. Over time, this gap in the city's economy was replaced by the growing knowledge and service sectors. This resulted in the obsolescence of the old industrial districts and the demand for space in new technology parks or repurposed buildings close to the city centre.

These processes complicated the morphology of cities. The distinct zoning of urban activities, once characteristic of cities, has given way to more integrated forms of urban land use. For example, it's not unusual to find service providers and information industries located within mixed residential and commercial neighbourhoods.

The large distribution centres, which play such an important role in the modern economy, are typically located on greenfield sites in outer urban areas with good transport links. Imported goods are unloaded from ships in vast container terminals and then transferred to distribution centres before being transported to the points at which they are purchased by consumers or used in other industrial processes.

It is, however, still possible to identify a degree of **functional differentiation** in the neighbourhoods of New York City. We can, for example, identify the two principal commercial centres, the Financial District and Midtown, the transitional neighbourhoods surrounding them and those that are primarily residential. We can also identify those areas that remain industrial in nature.

For the sake of clarity, we will focus this discussion on Manhattan. The same processes operate in the other boroughs to a greater or lesser extent.

Central Business Districts

Accessibility has been the principal factor in determining the location of New York City's two CBDs, both of which are in Manhattan. These are the Financial District and Midtown.

Midtown CBD

Midtown extends from the southern edge of Central Park, or 59th Street (see Figure 9.2.1). Its southern boundary is not well defined, somewhere from 34th to 14th Street. The Financial District occupies the southern tip of Manhattan, the site of the original Dutch settlement.

Midtown has a high level of accessibility. It is where all the major rail and bus routes converge. Grand Central Terminal, Penn Station and the Port Authority Building bus terminal are all located in Midtown. The functions served by Midtown are different to those of the Financial District. Midtown is dominated by retail, entertainment and the media (see Figures 9.2.2 to 9.2.5). This is where you find big department stores such as Saks Fifth Avenue, Macy's, Nordstrom, Bloomingdales and Bergdorf Goodman, and the luxury retailers of Fifth Avenue. Midtown is also where you find Times Square, the Broadway Theater District and Madison Square Garden.

The American broadcaster NBC Universal is based in Rockefeller Plaza, and News Corporation on the nearby Avenue of the Americas. Other media and entertainment providers based in Midtown include CBS Corporation, Paramount, Time Warner and The New York Times, Univision Communications and Marvel Entertainment. Popular retailers headquartered in Midtown include Calvin Klein, Polo Ralph Lauren and Foot Locker. Other corporate headquarters include those of Citigroup, Colgate-Palmolive, Deloitte, Estée Lauder, JP Morgan Chase, MetLife, Morgan Stanley, and pharmaceutical giant, Pfizer.

CBDs are not confined to Manhattan. Each of the boroughs has several smaller business districts serving the surrounding neighbourhoods. There are also numerous shopping malls meeting the needs of people living in the city's boroughs and the metropolitan area beyond the city's boundaries.



9.2.1 Oblique aerial photograph of Midtown.



9.2.2 Fifth Avenue is home to the world's greatest luxury retailers including Louis Vuitton and Prada. It has the world's most expensive retail rent.



9.2.3 The Rockefeller Center is a complex of 19 commercial buildings, covering the area between 48th Street and 51st Street and Fifth and Sixth Avenues in Midtown Manhattan. The 14 original Art Deco buildings were commissioned by the Rockefeller family. The Center is one of NYC's most popular tourist attractions.



9.2.4 Saks Fifth Avenue, one of New York City's most fashionable department stores, mounts a spectacular light display each Christmas.



9.2.5 New York City's Times Square



9.2.6 Oblique aerial photograph of New York City's Financial District, located on the southern end of Manhattan

The Financial District

The Financial District is a relatively compact neighbourhood with an irregular street pattern (see Figure 9.2.6). The size of the area has resulted in intense competition for land. This has resulted in the vertical zonation of functions within the skyscrapers that dominate the area.

The World Trade Center, devastated by the terrorist attacks of September 11, 2001, once dominated the area. The Center's Twin Towers, which both exceeded 400 metres in height, collapsed after being struck by hijacked aeroplanes piloted by terrorists. Ultimately, 2753 deaths (excluding those of the terrorists) were attributed to the attack. Memorial fountains on the footprint of the Twin Towers, a moving underground museum and the 541-metre Freedom Tower now occupy the site (see Figure 9.2.8).

The Financial District is home to the offices and headquarters of many of the city's major financial institutions, including Wall Street's New York Stock Exchange and the Federal Reserve Bank of New York (see Figure 9.2.7). New York City is widely regarded as the most financially powerful city and the leading financial centre of the world.



9.2.7 The New York Stock Exchange on Wall Street in the Financial District



9.2.8 One of two September 11 memorial fountains and the Freedom Tower in the background

Inner Mixed Zone

Adjacent to the city's two CBDs is an area referred to as the **Inner Mixed Zone (IMZ)**. The IMZ is made up of the older inner-city neighbourhoods that lie on the fringes of the CBD. This zone of transition between the mainly commercially focused CBD and residential areas features a mix of land uses, including some office and retail functions, apartment buildings, restaurants and the services needed by residents.

To the south of Midtown Manhattan are the transitional neighbourhoods of Chelsea, Gramercy and Flatiron. To the west is the Theater District and Hell's Kitchen. Chelsea, while traditionally residential, has experienced a degree of gentrification in recent decades. The vast garment warehouses in the west of the neighbourhood near the Hudson River have, in many instances, been converted into commercial office space, fashionable boutiques, art galleries (there are more than 200), antique stores and loft-style apartments.

The neighbourhood remains primarily residential, with a mix of tenements, apartment blocks, city housing projects, townhouses and renovated rowhouses. Social inequalities are evident and there is a widening income gap between the wealthy living in luxury apartment buildings and the poor living in housing projects. The many retail businesses in Chelsea reflect the ethnic and social diversity of the population. The area has, for example, a large LGBTIQ+ population. Twenty per cent of those living in the neighbourhood are LGBTIQ+ couples.

The neighbourhoods of Gramercy and Flatiron were largely residential, characterised by fashionable townhouses occupied by the wealthy. Today, boutiques, trendy cafes and high-rise apartments dominate a stretch of lower Fifth Avenue. The Theater District extends from Fifth Avenue and the Avenue of the Americas (an area still dominated by CBD-like commercial activities) to the Hudson River in the west. Broadway and Times Square dissect the neighbourhood. As the name suggests, the area houses numerous theatres where patrons can see all the great musicals and plays (see Figure 9.2.9). The Theater District also houses recording studios, record label offices, theatrical agencies, television studios, restaurants and movie theatres.

Hell's Kitchen was, until the 1970s, home to poor and working-class Irish Americans. Beginning in the 1980s, the area became increasingly gentrified which drove up housing prices leading to the flight of the poor and working class. Today, the area provides transport, medical and warehouse infrastructure support to the business district of Manhattan. It is also known for its extensive selection of multicultural restaurants, delicatessens, bars and associated nightlife. The area is popular with New York City's gay community.

Just to the north of the Financial District are the transitional neighbourhoods of SoHo (south of Houston Street) and TriBeCa (triangle below Canal Street). Once an industrial area, SoHo was threatened with demolition in the 1960s, until activists drew attention to the neighbourhood's unique cast-iron architecture. The area was saved, and artists began to move into the restored buildings. High-end galleries, cafes, shops and then boutiques followed (see Figure 9.2.10). As rents rose, many artists were priced out of SoHo and moved to TriBeCa. Expensive loft apartments in renovated warehouses and attractions such as the High Line continue to transform the neighbourhood.

The gentrification and urban renewal taking place throughout Manhattan is a product of the trend towards city living evident since the 1990s. Spurred by a chronic shortage of affordable rental accommodation in the more desirable neighbourhoods, tens of thousands of young, middle-class professionals have moved into and developed once unloved neighbourhoods. This, in turn, increased rents in the gentrifying neighbourhoods forcing out poorer residents, reducing diversity and changing the mix of small businesses found there. This renewal stands in stark contrast to 1970s when people fled the city for detached housing in the suburbs on the outskirts of the metropolitan areas. Back then, New York City was perceived to be dirty and crime-ridden. Today, city living is back in favour. Being close to work and all that city living offers is now a preferred lifestyle, especially for young professionals.

Residential zones

While people reside in all of New York City's neighbourhoods, some places are more readily recognisable as residential areas. The Upper West Side and Upper East Side are best known for their wealthy residents living in a mix of classic brownstone row houses and upscale apartment buildings (see Figures 9.2.11 and 9.2.12). There are also fancy restaurants and exclusive boutiques frequented by the rich locals. Both neighbourhoods house some of New York City's most famous institutions. The Upper East Side is home to cultural institutions that include the Metropolitan Museum of Art and the Solomon R. Guggenheim Museum. The Upper West side is home to the American Museum of Natural History and the Lincoln Centre for the Performing Arts.



9.2.9 There are currently 41 theatres operating on Broadway.



9.2.10 People queue for Japanese pancakes on a Saturday in SoHo, New York



9.2.11 The Upper West Side is one of New York City's wealthiest neighbourhoods.



9.2.12 Residential brownstone row houses on the Upper East Side



9.2.15 Restaurant in Greenwich Village



9.2.16 New York City's High Line. The popular attraction is a 2.33 km elevated linear park and rail trail developed on a former New York Central Railroad spur on the west side of Manhattan.



9.2.13 Veselka, an iconic Ukrainian restaurant in the East Village

East Village, in lower Manhattan, is a densely settled residential area famous for its nightlife music venues, bars and performance spaces (see Figure 9.2.13). The birthplace of American punk rock, the neighbourhood continues to attract an eclectic mix of residents. Gentrification of the area has led to an influx of posh cocktail lounges and hip restaurants which often stand side-by-side with vintage clothing shops and tattoo parlours.

Today, Greenwich Village is an expensive residential neighbourhood, with tree-lined residential streets and well-patronised cafes, bars and restaurants (see Figure 9.2.15). This is quite a change from the 1960s when the area was at the centre of the city's counterculture movement. The widespread gentrification and commercialisation of the area over time has resulted in it being ranked among the ten most expensive residential areas in the United States by median housing price. The Meatpacking District and West Village are generally considered sub-areas of Greenwich Village.

The Meatpacking District, once home to meatpacking plants as the name suggests, is now a hip commercial area (see Figure 9.2.14). It's home to the Whitney Museum of American Art, high-end designer clothing stores and a stretch of the High Line Park (see Figure 9.2.16). Its cobblestone streets are filled with trendy restaurants and clubs housed in the area's historic industrial buildings.



9.2.14 The Meatpacking District. The onetime industrial area is now a fashionable neighbourhood featuring a mix of land uses.

The Lower East Side, once known for its gritty alleyways and tenement-style buildings, is now home to an increasing number of upscale apartments and chic boutiques. At night, young people are drawn to the area's trendy bars, music venues and restaurants. The rate of gentrification of the area recently prompted the National Trust for Historic Preservation to place this neighbourhood on their list of America's Most Endangered Places. The neighbourhood's Jewish heritage is still apparent in the neighbourhood, especially in its remaining kosher delis and bakeries.

Special purpose zones

There are several special-purpose zones in New York City. The most significant of these is the United Nations precinct in Turtle Bay on the East River (see Figure 9.2.17). The complex consists of several structures, including the Secretariat, Conference and General Assembly buildings and the Dag Hammarskjöld Library. The complex has served as the headquarters of the United Nations since 1951. Other special purpose zones include the John F. Kennedy and La Guardia airports, both of which are in Queens.

Did you know?

Between 1881 and 1914, some two million Jews immigrated to the US from Europe. About 75 per cent of them settled in New York City, most of those on the Lower East Side. In the period 1900–1910, almost 500 000 residents of the Lower East Side were Jewish, making this the largest Jewish community in the world at the time.



9.2.17 The United Nations Headquarters, Manhattan, seen from the East River



9.2.18 Barclays Centre in Brooklyn, the home of the Brooklyn Nets basketball team

Recreational spaces

New York City has 113 square kilometres of parkland. This includes Central Park, Prospect Park, Flushing Meadows Corona Park and Forest Park. The largest is Pelham Bay Park, followed by the Staten Island Greenbelt and Van Cortlandt Park.

Sporting venues are spread throughout the city and are accessible by public transport. They include Citi Field stadium (home of the New York Mets baseball team) and the Billie Jean King National Tennis Centre which hosts the US Open tennis tournament, both located within Flushing Meadows Corona Park, Queens. Yankee Stadium, in the Bronx, is another significant sporting venue as is the Barclays Centre in Brooklyn, the home of the Brooklyn Nets basketball team (see Figure 9.2.18).

Industrial zones

Economic restructuring and competing land uses have driven industry away from the city's core. To protect existing manufacturing areas, industrial zones were established across the city in 2006. Examples include Hunts Point (Bronx), Jamaica (Queens), North Shore (Staten Island) and the Brooklyn Navy Yard (Brooklyn). The latter ceased being a military facility in 1966 and is now an industrial centre occupying 121 hectares along Brooklyn's waterfront. The Yard is now home to over 450 businesses related to manufacturing, design and technology. These businesses employ more than 11 000 people and generate over US\$2.5 billion per year in economic impact for the city.

Activities

Acquiring and processing geographical information

- 1 Define the term urban form.
- 2 Summarise the processes transforming the morphology of New York City.
- 3 Explain what is meant by the term functional differentiation.
- 4 Describe the location of New York City's two CBDs. How are they functionally different?
- 5 Explain what is meant by the term inner mixed zone. What are its key features? How have they changed over time?
- 6 Explain the process of gentrification.
- 7 Briefly describe the diverse character of Manhattan's neighbourhoods.
- 8 Describe the purpose of special purpose zones.
- 9 List some of New York City's famous recreational and sporting places and facilities.
- 10 Describe how the location of the city's industrial zones has changed over time. What has been the city's response?

Applying and communicating geographical understanding

- 11 Using Google Earth, explore some of the neighbourhoods mentioned in this unit. Use Google Street View to investigate the nature of the streetscapes and architecture of the selected neighbourhoods.

UNIT 9.3

The changing demography of New York City

New York City is the most populous city in the United States, with a population of 8 804 190, according to the 2020 US Census. This is an increase from 8.2 million in 2010, 8.0 million in 2000; and 7.3 million in 1990. The city grew by 7.7 per cent (629 057 people) in the period 2010–20, a faster pace of growth than the rest of the country (7.4%). New York City remains the largest city in the United States, with more than twice the population of the second-largest city, Los Angeles.

Population changes in the city

Figures 9.3.1 and 9.3.2 show the growth of New York's population since 1900. The city's population grew rapidly in the first few decades of the twentieth century, more than doubling between 1900 and 1930 from 3.4 million to 6.9 million. This period experienced high levels of immigration, domestic in-migration, and natural increase (births minus deaths).

In the 1930s and 1940s, the population continued to grow, though more slowly, rising to just short of 7.9 million in 1950. Population growth during this period was in large part due to domestic migration from the southern states and from Puerto Rico, as immigration slowed. In the middle of the twentieth century, the city's population growth stalled.

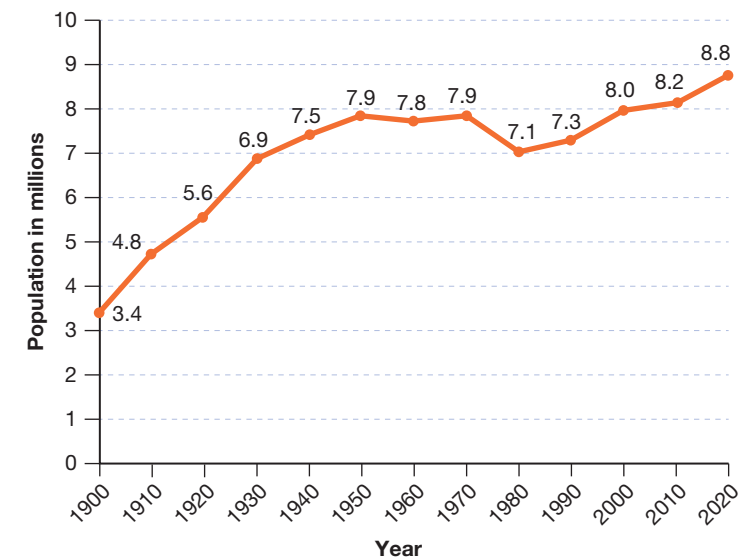
The city experienced a small population decline in the 1950s, as large domestic outflows to newly formed suburbs were only partially offset by domestic in-migration and a high natural increase from the baby boom.

In the 1960s, international immigration began to increase again after an overhaul of the country's immigration laws in 1965, and the city returned to modest growth, just surpassing the 1950 population.

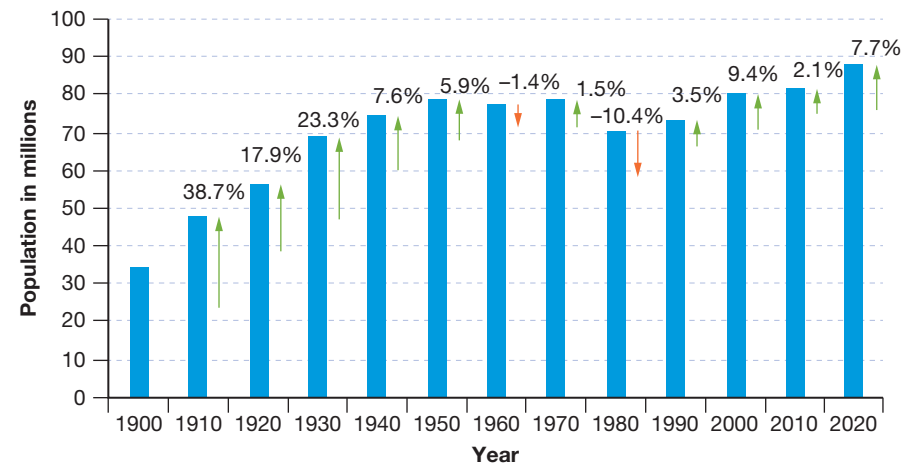
In the 1970s, growing immigration was insufficient to offset large domestic outflows, leading to substantial population losses. The population stood at approximately 7.1 million in 1980, only slightly higher than the population a half-century earlier.

The population rebounded in the 1980s as natural increase grew, immigration increased, and domestic outflows slowed.

The city's population has grown steadily since the 1980s, driven, in part, by the gentrification of neighbourhoods and large-scale urban renewal projects within the five boroughs, especially Manhattan and Brooklyn.



9.3.1 New York City's population growth, 1900–2020



9.3.2 Percentage change in population, 1900–2020

Population changes in the boroughs

The population growth experienced in the 2010–2020 period was not evenly experienced across the city (see Figure 9.3.3). Brooklyn grew at the fastest rate, 9.2 per cent, adding 231 374 people from 2010, and reaching a population of 2 736 074 in 2020. It continued to be the most populous borough. The Bronx finally surpassed its 1970 population peak, reaching a record population of 1 472 654. Its population grew by 6.3 per cent. Queens reached a new record population of 2 405 464 in 2020, a gain of 7.8 per cent. The population of Manhattan increased by 6.8 per cent. Staten Island grew at the slowest pace, 5.8 per cent.

Borough	Population 2010	Population 2020	Population increase	Rate of increase (%)
Brooklyn	2 504 700	2 736 074	231 374	9.2
Queens	2 230 722	2 405 464	174 742	7.8
Manhattan	1 585 873	1 694 251	108 378	6.8
Bronx	1 385 108	1 472 654	87 546	6.3
Staten Island	468 730	495 747	27 017	5.8

Source: US Census

9.3.3 Population change by NYC borough, 2010–2020

Within boroughs, the growth was also uneven. Manhattan’s neighbourhoods, for example, saw a mix of dramatic population increases, moderate growth, and even some significant declines. Several neighbourhoods with substantial levels of new construction led the borough in population growth, including Chelsea–Hudson Yards (see the box, Spotlight: Hudson Yards), Hell’s Kitchen and the Financial District–Battery Park, each with a gain of over 13 000 residents. Harlem (North), the Upper West Side–Lincoln Square and Midtown South–Flatiron–Union Square were not far behind, each with a gain of at least 7000 residents. Washington Heights (North and South) and Inwood, located at the far northern end of the borough, experienced substantial population declines, with Washington Heights (South) losing 5400 residents. Rising rents are seen as the principal reason why the largely Dominican community declined in numbers, to be partially replaced by newly arrived White residents.

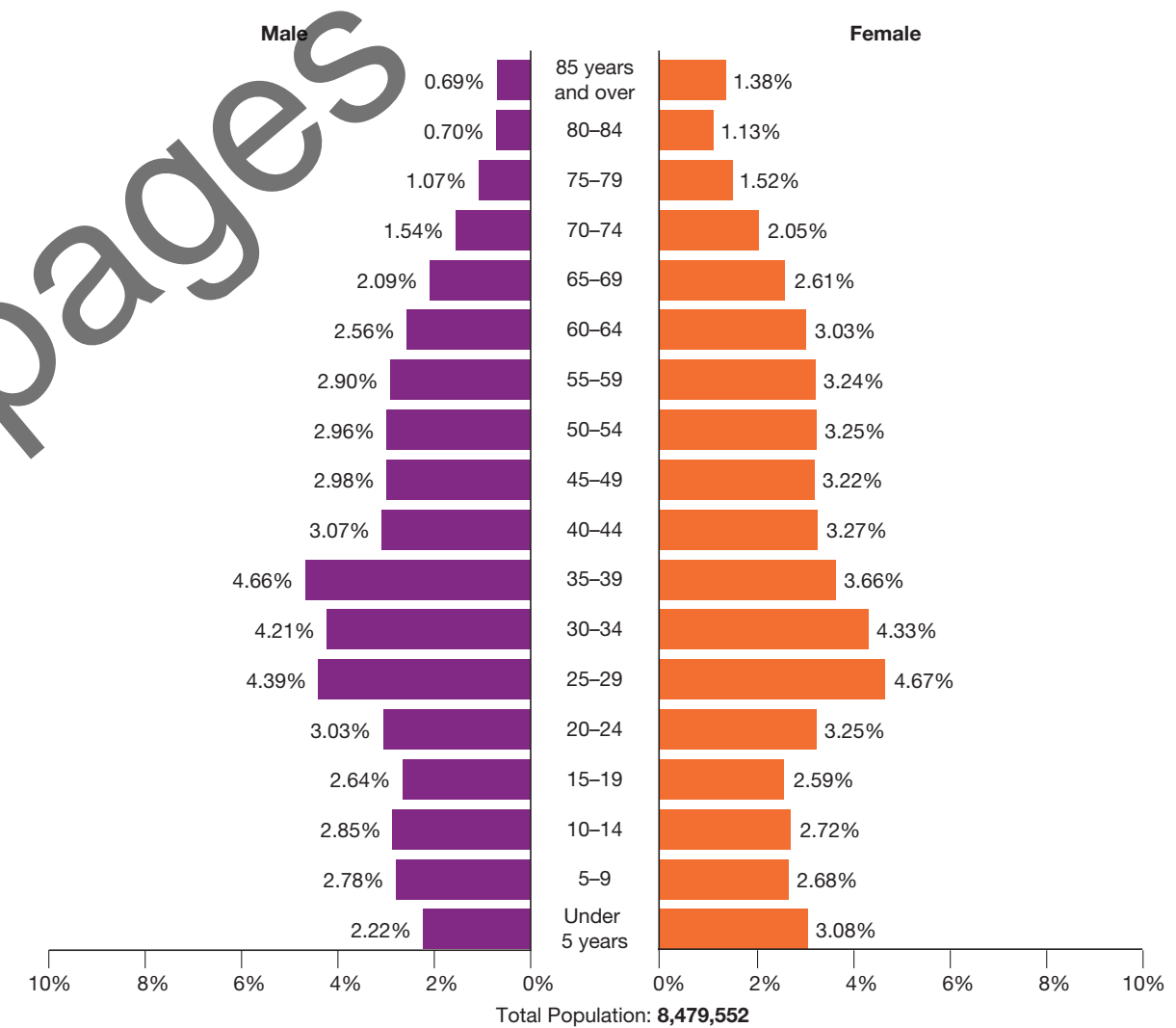
Demographic change in the city

The age/sex structure of New York City also provides insights into the changing demographics of New York City. Like many cities in the developed world, New York City has an ageing population due to longer life expectancies and a declining fertility rate (as indicated by the narrowing base of the pyramid. As the population pyramid

(Figure 9.3.4) illustrates, the birth rate is relatively low, with the percentage of the 25 to 39-year age group increasing. This is best accounted for by young adults choosing to live in the city for work or tertiary education. It is also the age group most likely to arrive in the United States as immigrants.

2020 US Census Bureau data reports:

- between 2010 and 2020, New York City’s median age increased from 35.6 to 38.2 years
- 16.3 per cent of the population is under the age of 15 years
- 3.9 per cent of the population is 80 years or older
- 14.8 per cent of the population is 65 years or older
- 65.3 per cent of the population is between the ages of 20 and 65
- the 30–34 age group is the largest, followed by the 35–39 age group
- females make up 52.3 per cent of the population.



Source: 2020 US Census

9.3.4 Population pyramid, New York City, 2020

● SPOTLIGHT

Hudson Yards

Hudson Yards is an 11 hectare, US\$25 billion urban renewal project in Manhattan (see Figure 9.3.5). It is being built between the Chelsea and Hell's Kitchen neighbourhoods. On completion, 13 of the 16 planned buildings on the West Side of Midtown South will occupy a platform built over the West Side Rail Yard. The first of its two phases, opened in 2019, consists of a public green space and eight structures that contain apartments, a

hotel, office buildings, a shopping mall and a cultural facility. The second phase will include more apartments, an office building and a school. In the condominium towers, available apartments start at US\$4.3 million and go up to US\$32 million for a duplex penthouse. The development, and adjacent projects, now house 25 000 New Yorkers.



9.3.5 The Hudson Yards development is the largest urban renewal project in Manhattan.

Population density and cultural diversity

New York's two key demographic features are its population density and cultural diversity.

Population density

The city's population density of 11 232 per square kilometre, makes it the densest of any American metropolitan area (see Figure 9.3.6). Manhattan's population density is 28 872 per square kilometre. This compares with a Sydney-wide population density of 433 per square kilometre and its inner-city density of 8040 per square kilometre.

The city's high population density has both advantages and disadvantages. It encourages the use of public transport but also concentrates pollution. New York City's public transport use is the highest in the USA and fuel consumption is well below the national average, making the city the most energy efficient in the country. New York City is the only locality in the United States where more than half of all households do not own a car. Parking space is at a premium, especially in Manhattan.

The city's per capita greenhouse gas emission levels are relatively low, at 7.1 metric tonnes per person, compared to the national average, of 24.5 metric tonnes. New Yorkers are collectively responsible for 1 per cent of the nation's total greenhouse gas emissions while accounting for 2.7 per cent of the nation's population. The average New Yorker consumes less than one-quarter of the electricity used by a resident of Dallas. Population concentrations do, however, concentrate pollutants. Managing pollution, together with landfill waste and sewage, is one of the main challenges facing city authorities.

Other challenges associated with high-density living include congestion, lack of open space and overshadowing.

Borough	Population	Population density (per km ²)
Bronx	1 472 654	13 482
Brooklyn	2 736 074	15 227
Manhattan	1 694 263	28 872
Queens	2 405 464	8542
Staten Island	495 747	3327
NYC Total	8 804 190	11 234

9.3.6 Population density of New York City's five boroughs. Source: US Census 2020

Cultural diversity

Throughout its history, New York City has been an important entry point for immigrants entering the United States.

Driven by a need to access existing culturally-specific support networks and services, immigrants are often drawn to the ethnic enclaves or neighbourhoods housing those who have preceded them, just as many immigrants to Australia are. As a result, New York City has a patchwork of neighbourhoods closely identified with people with a shared ethnic or cultural background. This is evident in the streetscapes of these neighbourhoods—the restaurants and retail outlets, the dress of the residents, and the cultural institutions important to a particular group, especially places of worship and the other venues in which people interact.

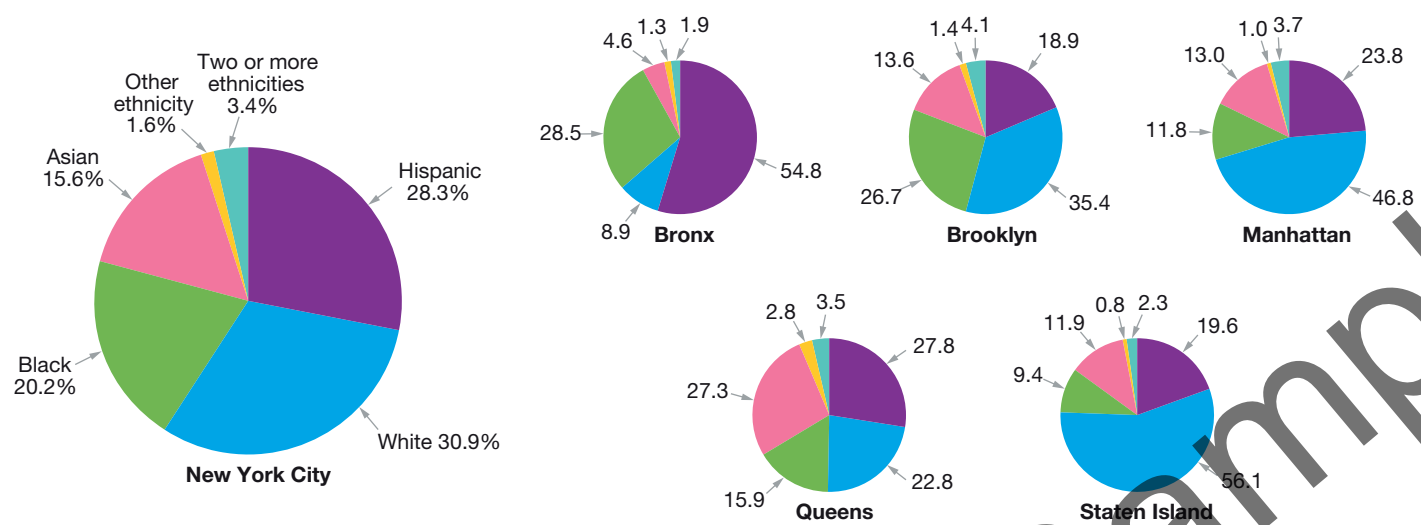
New York City experienced major immigration from Europe in the nineteenth century and another major wave in the early twentieth century. Restrictive immigration laws meant that migration was largely limited to Europeans, with large numbers arriving from Western Europe (especially Ireland, England and Germany). Later waves of migrants from Southern and Central Europe would further enhance the city's cultural diversity.

The passage of the *Immigration and Nationality Act, 1965*, not only increased the rate of immigration, it also diversified the source of immigrants. Immigrants arrived from Latin America, the Caribbean, Asia, Eastern Europe and Africa. No single country or region of origin now dominates. The eleven nations constituting the largest sources of current immigration to New York City are the Dominican Republic, China, Jamaica, Guyana, Mexico, Ecuador, Brazil, Haiti, Trinidad and Tobago, Colombia, Russia and El Salvador.

The 2020 census demonstrates the diversity of the city's population. Among the four major racial groups, the Asian population grew at the fastest rate (33.6%) over the last decade, and other groups saw below-average growth or declines. The Latino-American population grew by 6.6 per cent, while the number of Black New Yorkers declined by 4.5 per cent and the White population fell marginally, by 0.1 per cent. In absolute terms, the Asian American population increased by 345 383, accounting for more than one-half of the city's population growth. Overall, however, the White population remained the largest ethnic group, comprising 30.9 per cent of the population, followed by the Latino American (28.3%), Black American (20.2%), and Asian American (15.6%) populations (see Figure 9.3.7).

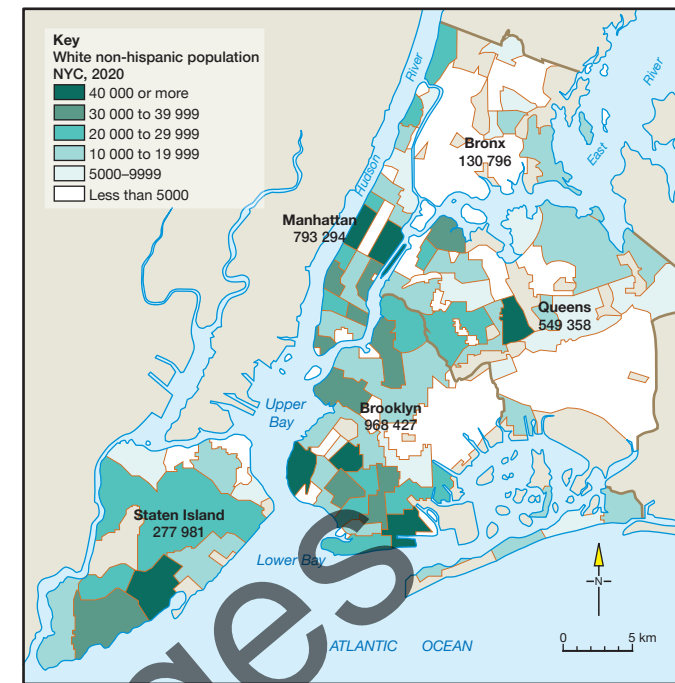
Figures 9.3.7 and 9.3.8 illustrates the ethnic variations in the population of New York City's five boroughs. The Bronx is overwhelmingly Latino (54.8% of its population). Black New Yorkers account for 28.5 per cent and Whites just 8.9 per cent. Contrast this to Manhattan where 46.8 per cent of the population is White and Latino Americans account for 23.8 per cent of the population, followed by Asian Americans (13%) and Black New Yorkers (20.2%), most of whom are concentrated in the north of Manhattan, in Harlem. Whites constitute a clear majority (56.2%) of residents living on Staten Island. Whites are also the largest racial group living in Brooklyn (35.4%), followed by Black residents (26.7%), Latino (18.9%) and Asian (13.6%). While no one group dominates Queens, the borough does have the highest proportion of Asian residents in the city (27.3%).

The racial residential segregation evident in New York City is reflected in a range of social variables including poverty rates, income inequalities, property values, race-based disparities in health and education and incarceration rates (see Figure 9.4.9, page).

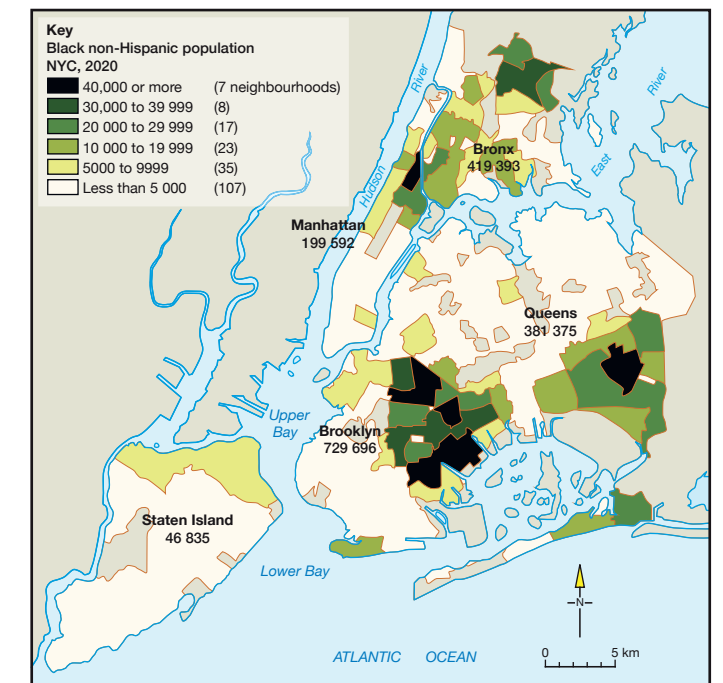


Source: U.S. Census Bureau, 2020 Census Redistrict

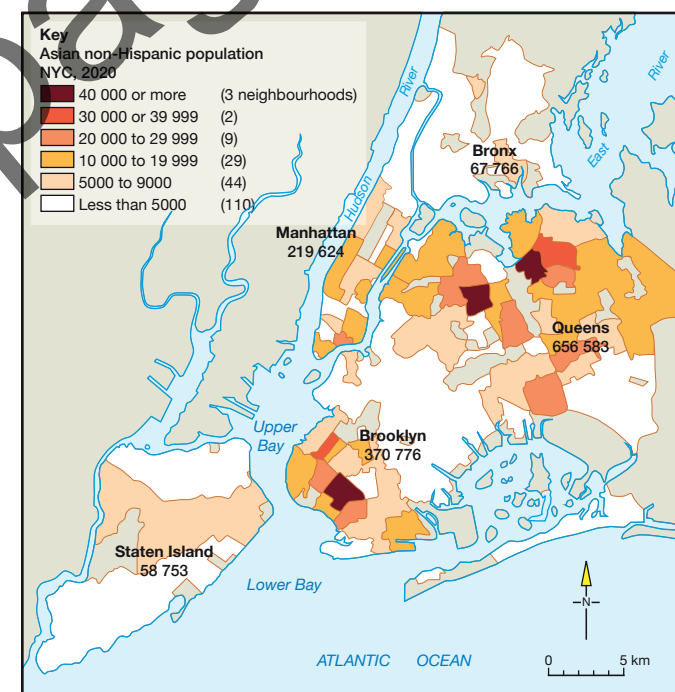
9.3.7 Population by ethnic background for New York City and its boroughs, 2020



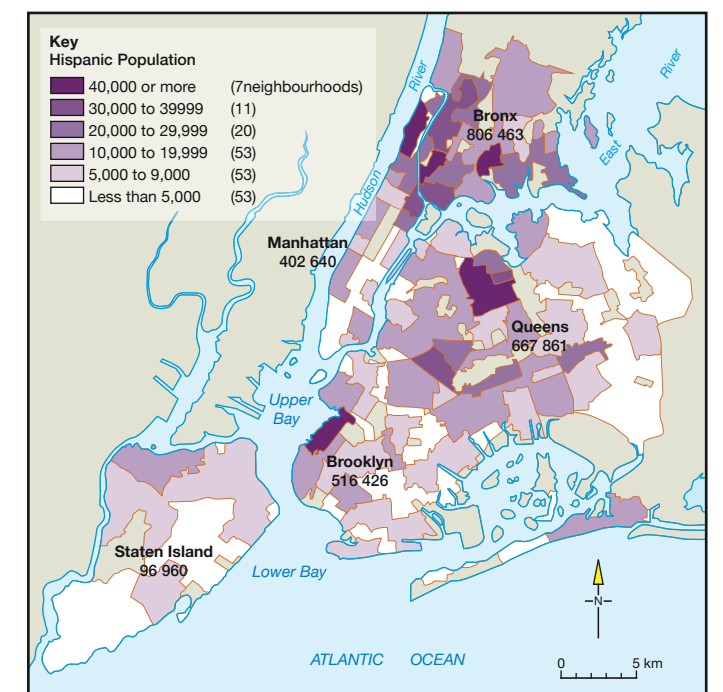
Distribution of NYC's White population



Distribution of NYC's Black population



Distribution of NYC's Asian American population



9.3.8 Distribution of NYC's Latino American population

● SPOTLIGHT

Ten facts about NYC's demography

- Thirty-seven per cent of the city's residents are immigrants.
- Between 55 and 60 per cent of city residents are either immigrants themselves or have at least one immigrant parent.
- The New York City metropolitan area is home to the largest Jewish community outside of Israel.
- Nearly 25 per cent of Indian Americans and 15 per cent of Korean Americans live in New York City.
- There are six Chinatowns in New York City and 660 000 people of Chinese origin. People of Chinese ethnicity make up 6 per cent of the city's population.
- New York City is home to the largest Italian population in North America and the third-largest Italian concentration outside Italy. Italians emigrated to the city in large numbers in the early twentieth century. The Irish also have a notable presence, along with Germans.
- In 2021, Dominicans (770 000) were the largest Latino subgroup, having surpassed the Puerto Rican population (587 000).
- In 2021, the Chinese population remained the largest Asian subgroup (572 000), comprising nearly one-half of the Asian population.
- The Bangladeshi population nearly tripled over the decade, to 102 000 in 2021, vaulting them from sixth to third place among Asians.
- New York is home to more than 1.2 million Asians.

● SPOTLIGHT

Statue of Liberty

The Statue of Liberty is a 93-metre-high neoclassical sculpture on Liberty Island in New York Harbor. The steel and copper sculpture, a gift from the people of France, was designed by French sculptor Frédéric-Auguste Bartholdi. Its metal framework was built by Gustave Eiffel, the same man who built Paris' most famous landmark, the Eiffel Tower. The statue was formally presented to the people of the United States in October 1886.

The statue is a representation of Libertas, a Roman goddess of freedom, holding a torch aloft. The broken shackle and chain at the statue's feet commemorate the abolition of slavery in 1865.

The statue almost immediately became a symbol of freedom and for many years welcomed immigrants arriving by sea (see Figure 9.3.9). Today it is one of New York's most popular tourist attractions.

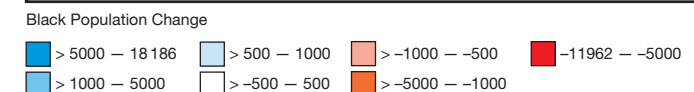
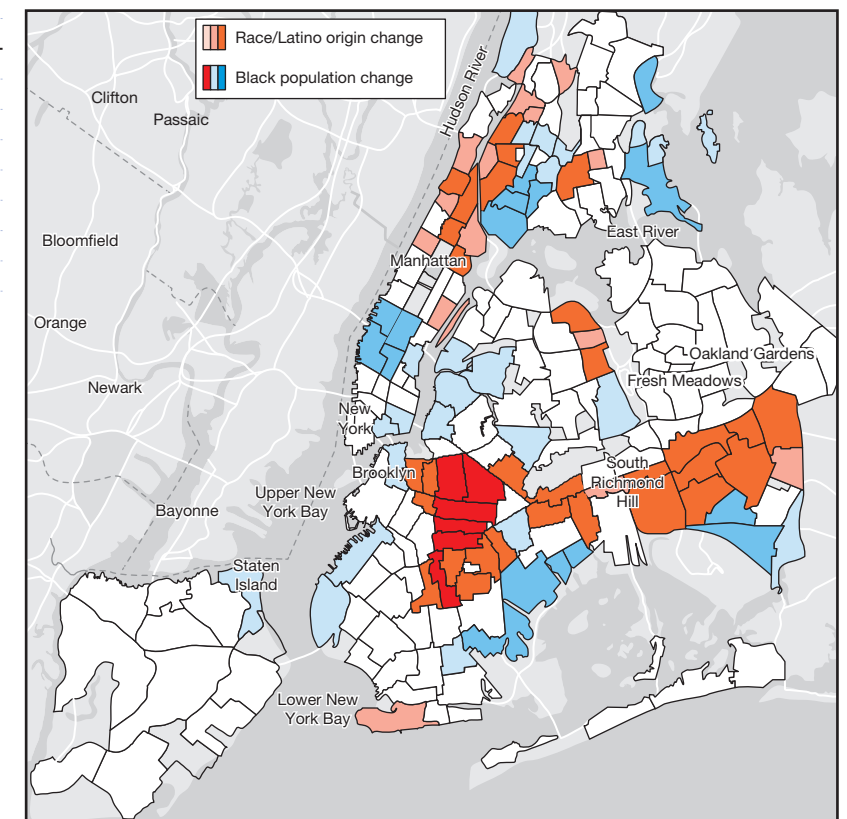
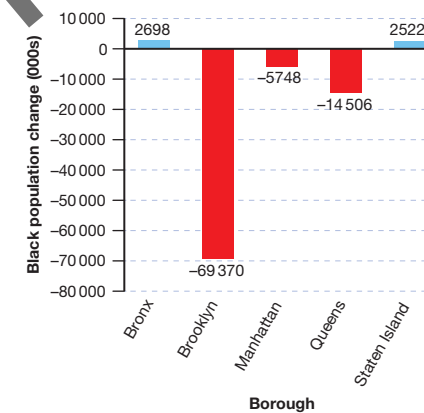
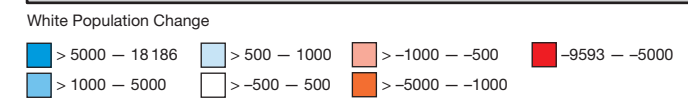
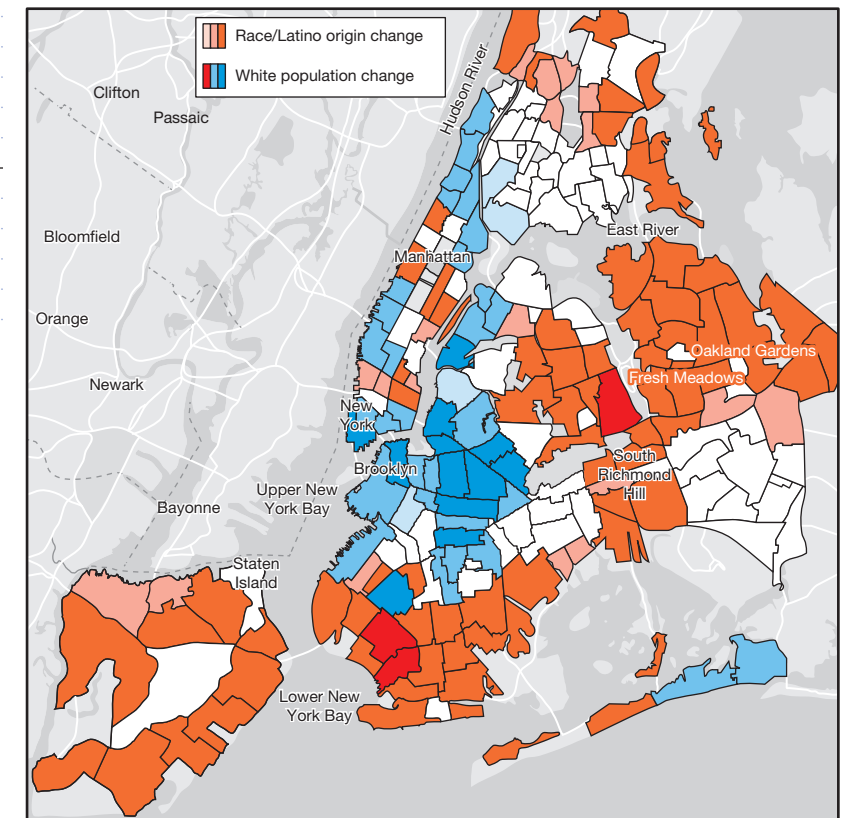
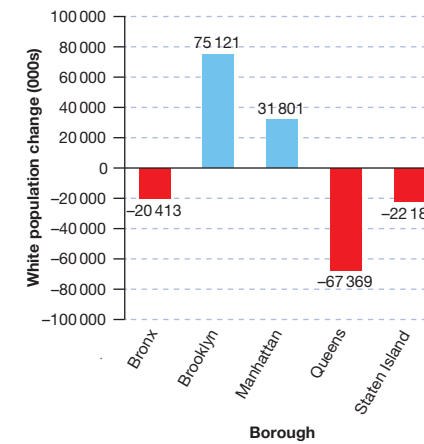


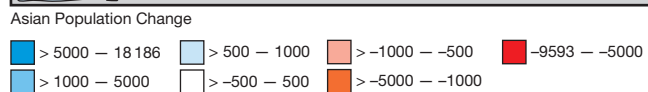
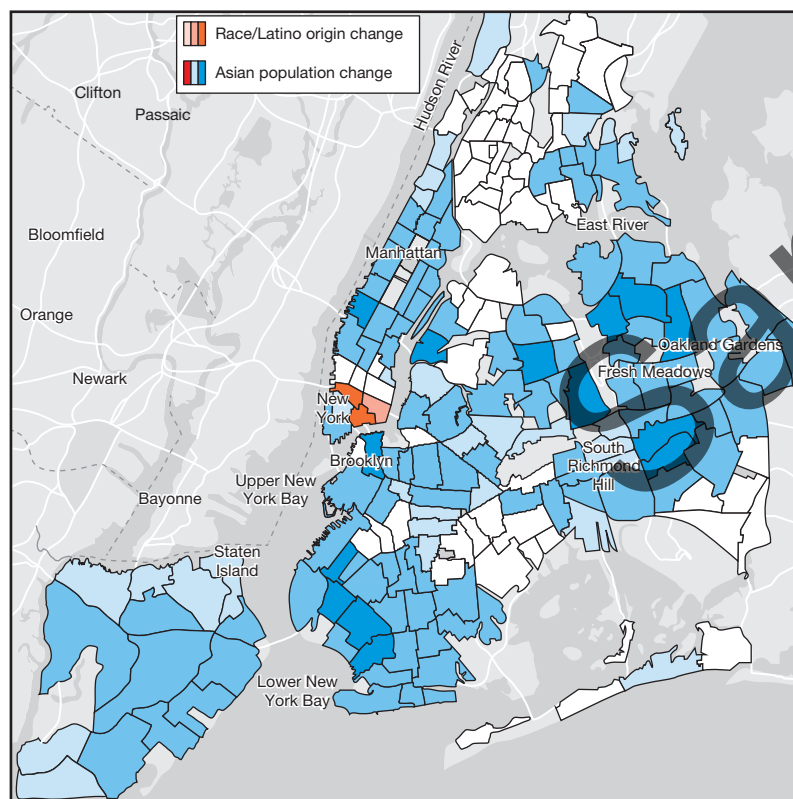
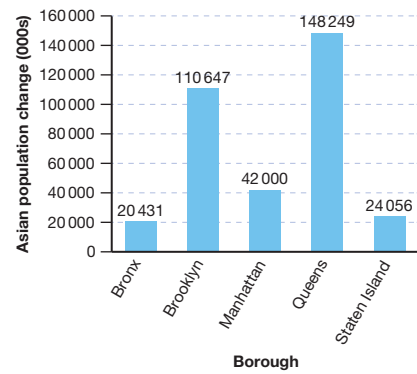
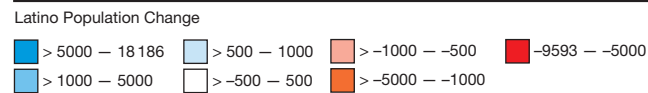
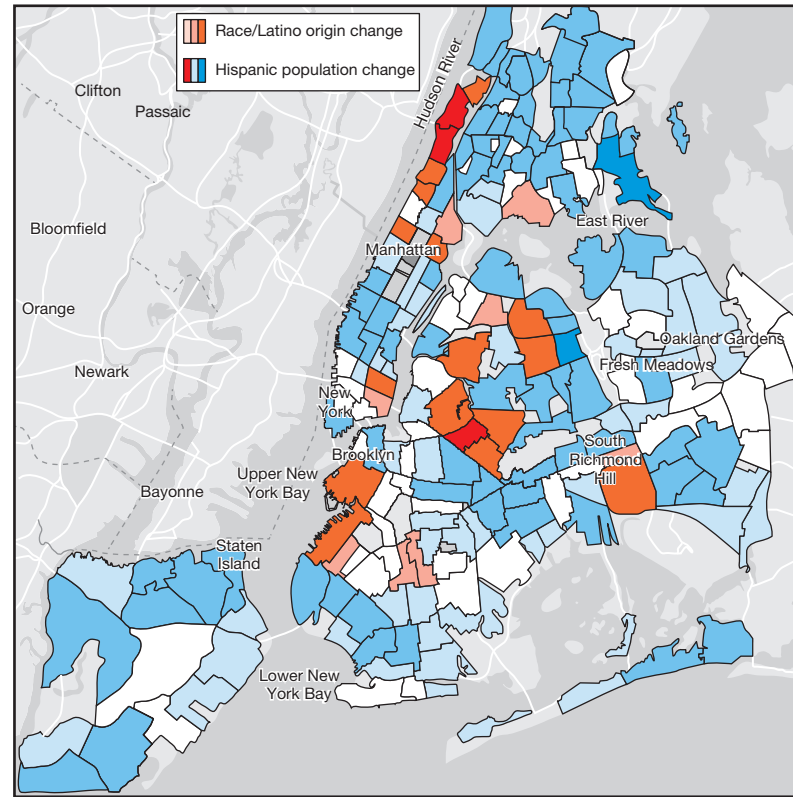
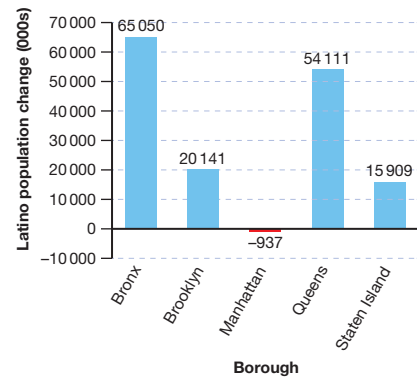
9.3.9 Immigrants arriving in New York Harbour with the Statue of Liberty in the background

Population changes by ethnic group, 2010–2020

The maps in Figure 9.3.10 provide some interesting insights into the changing ethnic composition of New York City's boroughs and neighbourhoods. New York City's White population is increasing in Brooklyn and Manhattan, while declining in Queens, the Bronx and Staten Island. Significantly, the White population in the northern neighbourhoods of Brooklyn (those closest to the southern tip of Manhattan) is increasing as this part of the borough undergoes urban renewal and gentrification. The White population is declining, or increasing only marginally, in the outer neighbourhoods of Brooklyn, Queens, the Bronx and Staten Island. The Black American population has declined most significantly in Brooklyn, and to a lesser extent in parts of Queens. It has increased marginally on Staten Island and the Bronx. Overall, the Black American population of New York City declined in the period 2010–2020.

New York City's Latino American population has grown in all boroughs except for Manhattan, where there has been a small decline. The greatest growth occurred in the Bronx and Queens. Overall, the growth has been widespread. The Asian population has grown in all boroughs, most notably Queens and Brooklyn. Again, the growth is spread across the city.





9.3.10 Population change by race and New York City borough, 2010–2020

Activities

Acquiring and processing geographical information

- 1 What is the population size and current growth rate of New York City? How does the latter compare to that of America as a whole?
- 2 Explain what fuelled the city's population growth between 1900 and 1930.
- 3 Name the cause of the stalled population growth of the 1950s.
- 4 Explain the growth in population beginning in the 1960s and then the decline in the 1970s.
- 5 Give reasons for the population rebound in the 1980s.
- 6 Summarise the spatial variations in population growth rates. When a population's borough grew, did all of its neighbourhoods grow? Give at least one example.
- 7 Give reasons for the shape of the New York City population pyramid.
- 8 What is the population density of New York City? How does it compare to that of Sydney? What are the advantages and disadvantages of the high population density?
- 9 List the environmental benefits derived from New York City's high population density. Give reasons as to why this might be the case.
- 10 Give reasons for New York City's cultural diversity and summarise how it is reflected in the streetscapes and neighbourhoods of the city.
- 11 Summarise the impact of the *Immigration and Nationality Act of 1965*.
- 12 Outline the relative growth rates of the four main racial groups.
- 13 Describe the racial variations across the five boroughs.
- 14 Summarise the population changes by racial group in the period 2010–2020.

Applying and communicating geographical understanding

- 15 Study Figure 9.3.1. Using data from the graph, describe the pattern of New York City's population growth from 1900 to 2020.

- 16 Study Figure 9.3.2 and complete the following tasks.
 - a Identify the three decades that experienced the fastest rate of growth.
 - b Identify three decades that experienced little, if any, growth.
- 17 Study Figure 9.3.4 and complete the following tasks.
 - a State the proportion of the population under the age of 15 years.
 - b State the proportion of the population over the age of 65 years.
 - c State the proportion of the population in the 25–39 years age group.
 - d Speculate on why the 25–29 years age group is so large.
- 18 Study the box, Spotlight: Hudson Yards. Explain why developments such as this are seen as critical to the liveability of New York City.
- 19 Study Figure 9.3.7 and complete the following tasks.
 - a Using data from the graph describe the racial composition of New York City.
 - b Identify the borough with the highest percentage of:
 - i White Americans
 - ii Black Americans
 - iii Latino Americans
 - iv Asian Americans
 - c Identify the borough with the smallest percentage of:
 - i White Americans
 - ii Black Americans
 - iii Latino Americans
 - iv Asian Americans
- 20 Study Figure 9.3.8. Describe the spatial distribution of White, Black, Latino and Asian neighbourhoods.
- 21 Study the box, Spotlight: Statue of Liberty. Explain the relationship between immigration and the symbolism of the statue.
- 22 Study Figure 9.3.10. Describe the spatial variation evident in the population growth rates of White, Black, Latino and Asian New Yorkers.

UNIT 9.4

Social and economic patterns

Like all large cities, New York City has developed its own unique social and economic patterns. Those relating to the city's demography are outlined in Unit 9.3. In this unit, we focus on the city's social and economic patterns. The social patterns examined include those of wealth and poverty, socio-economic class and household type.

Key social indicators

A study of the distribution of the demographic, and the other social indicators featured in Figure 9.4.1, reveals that of New York City's five boroughs Manhattan has the highest proportions of non-family and single-occupant households. It also has the highest proportion of the 18–64 age group (69%)—the working-age cohort. The outer boroughs have more families and more children under 18 years of age. Non-family households (for example, share apartments) represent 57.1 per cent of all Manhattan households, 38.8 per cent of Brooklyn's and 35.4 per cent of those in The Bronx.

In Manhattan, 14.7 per cent of the population is below 18 years of age compared to Brooklyn at 22.7 per cent. Fifty per cent of Manhattan residents are aged between 20 and 49 years old while Brooklyn has 44 per cent of residents in this age group. Staten Island's population is smaller and older. It also has a higher median household income compared with New York City as a whole. The borough has approximately 5.8 per cent of the city's total population, with 17 per cent aged 65 years and over.

Overall, these figures highlight the business and work-focused nature of Manhattan, where high incomes and high rents limit the percentage of family households found in the borough. The average rents across the five boroughs reinforce this observation. In mid-2020, the average monthly rent in Manhattan was US\$5058 compared to Brooklyn (US\$3822), Queens (US\$3352), the Bronx (US\$1650) and Staten Island (US\$1506).

Indicator	Manhattan	Brooklyn	Queens	Bronx	Staten Island	NEW YORK CITY
Population	1 694 251	2 736 074	2 405 464	1 472 654	495 747	8 804 190
Median age	37.7	35.4	39.3	34.5	40.2	36.9
Under 5 years of age	4.4%	6.7%	5.7%	6.7%	5.5%	6.4%
Under 18 years of age	14.7%	22.7%	20.0%	24.5%	21.7%	20.7%
Over 65 years of age	18.3%	15.1%	17.4%	14.0%	17.0%	14.9%
Females (%)	52.4%	52.4%	51.1%	52.6%	51.5%	52.3%
Median household income (in 2020 US dollars)	\$89 812	\$63 973	\$72 028	\$41 895	\$85 381	\$67 046
Bachelor's degree or higher	62.2%	38.8%	33.5%	20.3%	34.7%	39.1%
Median value of owner-occupied housing	\$1 024 500	\$734 800	\$575 600	\$427 900	\$546 100	\$635 200
Homeownership rate	24.1%	30.3%	45.1%	20.1%	68.8%	32.8%
Persons per household	2.07	2.61	2.81	2.86	2.71	2.57
Persons living in poverty	16.3%	17.8%	10.3%	24.4%	10.6%	17.3%

9.4.1 Key social indicators of NYC's five boroughs, 2020. Source: US Census

As with any city, the generalisations we make tend to obscure anomalies. In Manhattan, for example, there are areas of poverty as well as those of great wealth. The Lower East Side, for instance, has traditionally been home to immigrants with generally lower levels of literacy. Such areas also tend to feature poor-quality multi-unit buildings. Many of these buildings were developed in the 1950s as part of the US Government's urban renewal (slum clearance) program (see Figure 9.4.2). Today, this housing (known as 'superblocks'), is often associated with lower-income areas of the city such as the Bronx.

Elsewhere, especially in the upper East and West Side, and just to the south of Central Park in Midtown, iconic apartment buildings and newly built towers such as One57 (see Figure 9.4.3) the very rich pay tens of millions for luxury penthouses. When built, One57 set a record for the city's most and second-most expensive residences, selling respectively for US\$100.5 million and US\$91.5 million. In 2019, however, a new record was set when a hedge fund billionaire paid US\$238 million for a penthouse in Central Park South. Figure 9.4.4 shows some of the ultra-thin 'pencil' towers now transforming Manhattan's skyline.



9.4.2 Red brick public housing development, built by the New York City Housing Authority in the Lower East Side of Manhattan. There are 12 buildings in this complex, each 17 stories tall and it houses approximately 5739 people.



9.4.3 One57. The 306-metre, 75-storey tower houses 92 condominiums above a Park Hyatt Hotel.



9.4.4 Central Park South, Midtown, viewed from Columbus Circle. There are now seven pencil towers transforming New York City's skyline.

Poverty

While few people in New York City live in **absolute poverty** (where household income is below the level necessary to access basic food and shelter), there is widespread **relative poverty** (where household income is a certain percentage below median incomes) (see Figure 9.4.5). In 2000, around 17.3 per cent of New Yorkers lived in poverty, with a further 45 per cent living in near poverty. While this is partly due to the higher costs of living in New York City compared to other American cities, it also reflects the low wages paid to many service sector workers. In 2023, the minimum wage in New York City was just US\$15.00 per hour. In some service sectors, employers can include tips when applying the minimum hourly rate.

Poverty rates vary spatially, both between and within boroughs. Poverty rates are highest in the Bronx (24.4%) and lowest in Staten Island (10.6%) and Queens (10.3%). Perhaps surprisingly, the poverty rate in Manhattan is 16.3 per cent. This finding illustrates the difficulties in relying on averages. The figure reflects the impacts of the poorer neighbourhoods of Manhattan, such as the Lower East Side and those of northern Manhattan. Contrast this with the Manhattan neighbourhoods that are among the wealthiest in the United States.

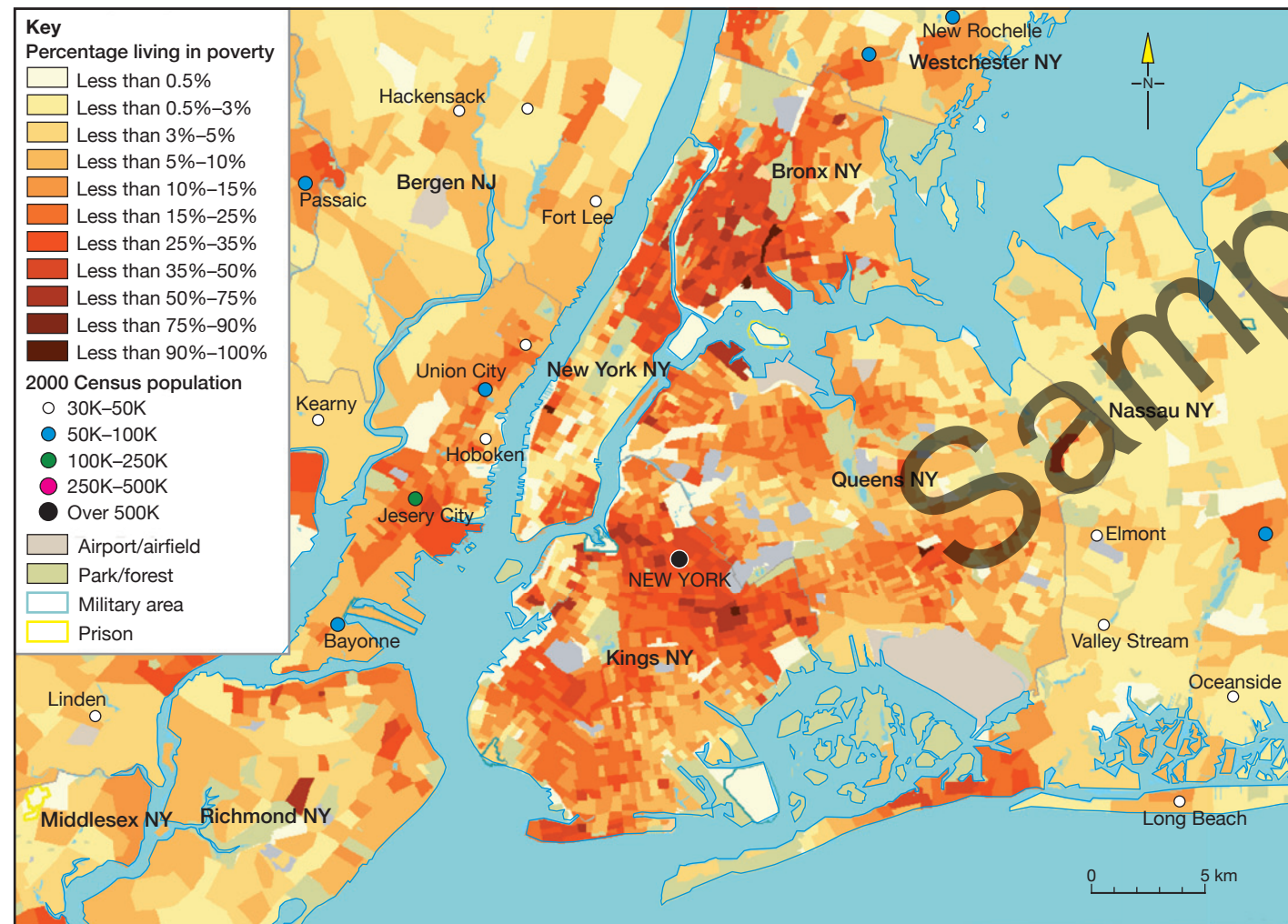


9.4.5 Homelessness is a product of the poverty experienced by some New Yorkers.

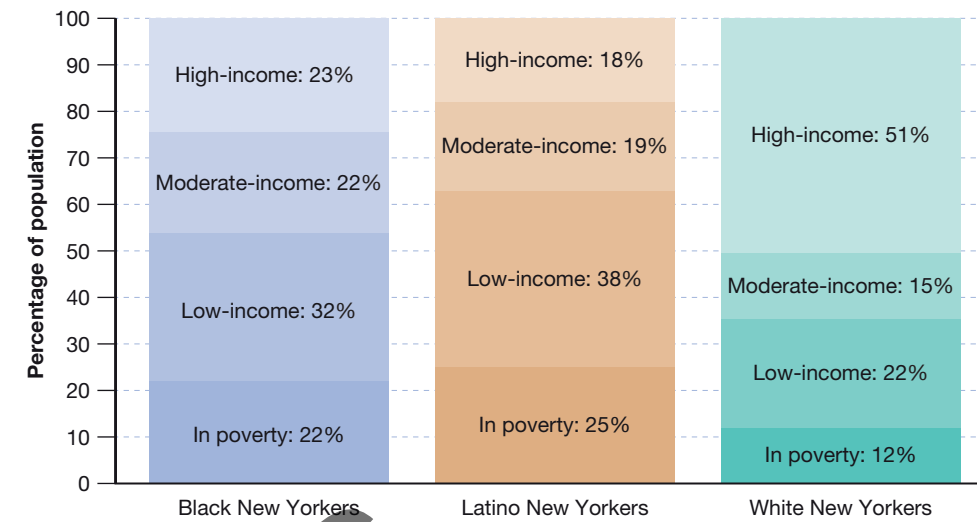
Figure 9.4.6 shows the percentage of the population living in poverty in the census tracts (data collection areas) in different parts of New York City's metropolitan area. This map highlights the spatial variations in poverty rates within boroughs.

Comparing the data mapped in Figure 9.4.6 with the distribution of racial groups in New York City (see Figure 9.3.8, page XXX) enables us to draw some general conclusions about variations in the poverty rate among different racial groups. In doing so, we note that White citizens earn more than the other races in all the regions, except between Whites and Asians, since Asian Americans have a similar income to White Americans. Regarding the segregation between White and Black citizens, it's evident that Black citizens earn less than White citizens in all the regions. Furthermore, the inequality between White and Black citizens is more significant in areas with a high-density population of both races.

The 2020 *State of Poverty and Disadvantage in New York City* report, compiled by the Columbia Population Research Centre, reports that Black and Latino New Yorkers are twice as likely to live in poverty as White New Yorkers. The report estimates that 22 per cent of Black New Yorkers, 25 per cent of Latinos and 12 per cent of Whites lived in poverty. When those in poverty and those classified as low income are combined, 63 per cent of Latino Americans are classified as either living in poverty or low income compared to 54 per cent for Black Americans and 34 per cent for white Americans. It also notes that more than half of Whites are higher income, compared to 23 per cent of Black New Yorkers and 18 per cent of Latinos (see Figure 9.4.7).



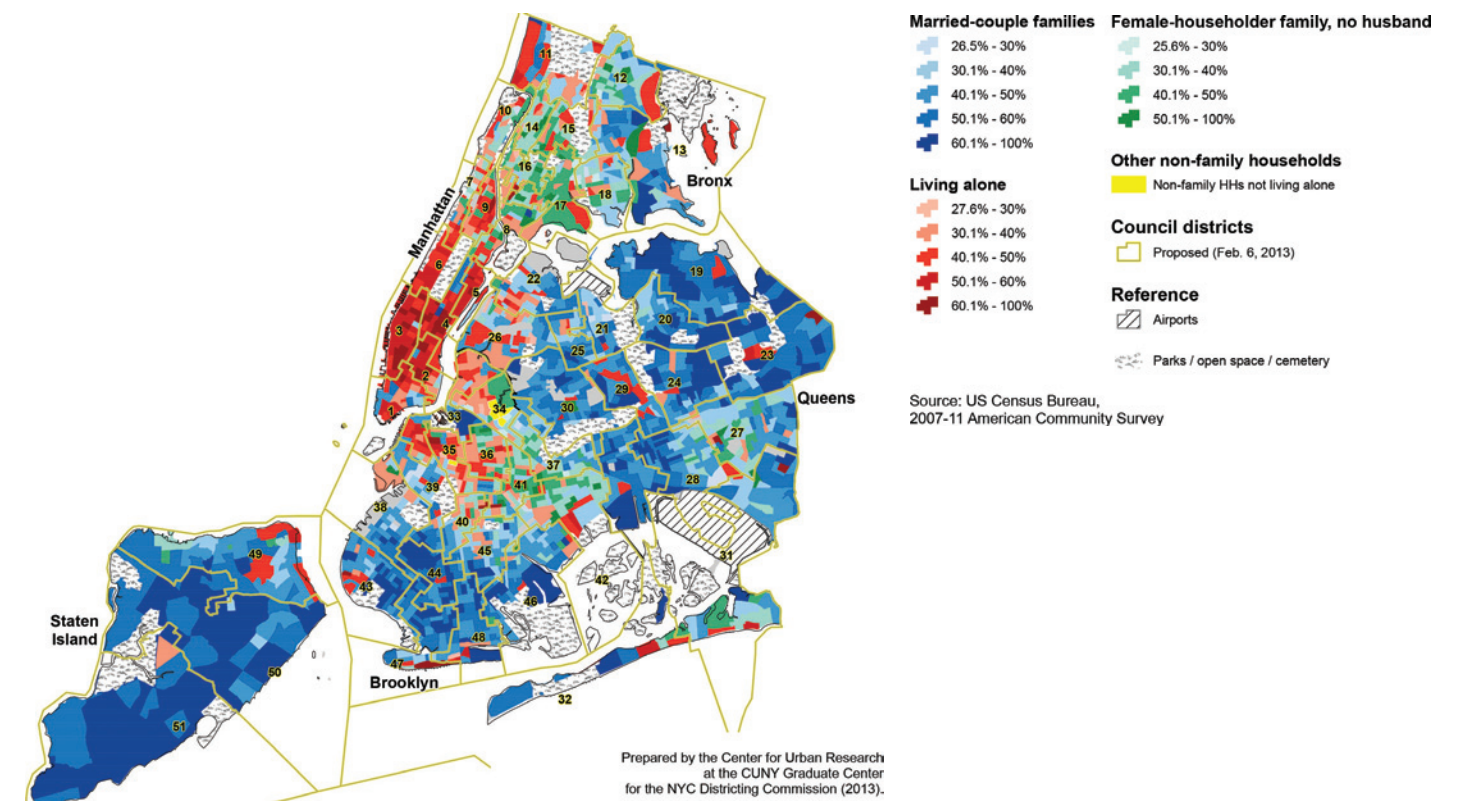
9.4.6 Percentage of New Yorkers living in poverty, by census tract, 2020



Source: Annual Poverty Tracker survey data; second and third panels.
Note: These results are based on three-year moving averages.

9.4.7 Distribution of income relative to the poverty line in New York City by selected race and ethnicity, 2019 (that is, before the COVID-19 pandemic)

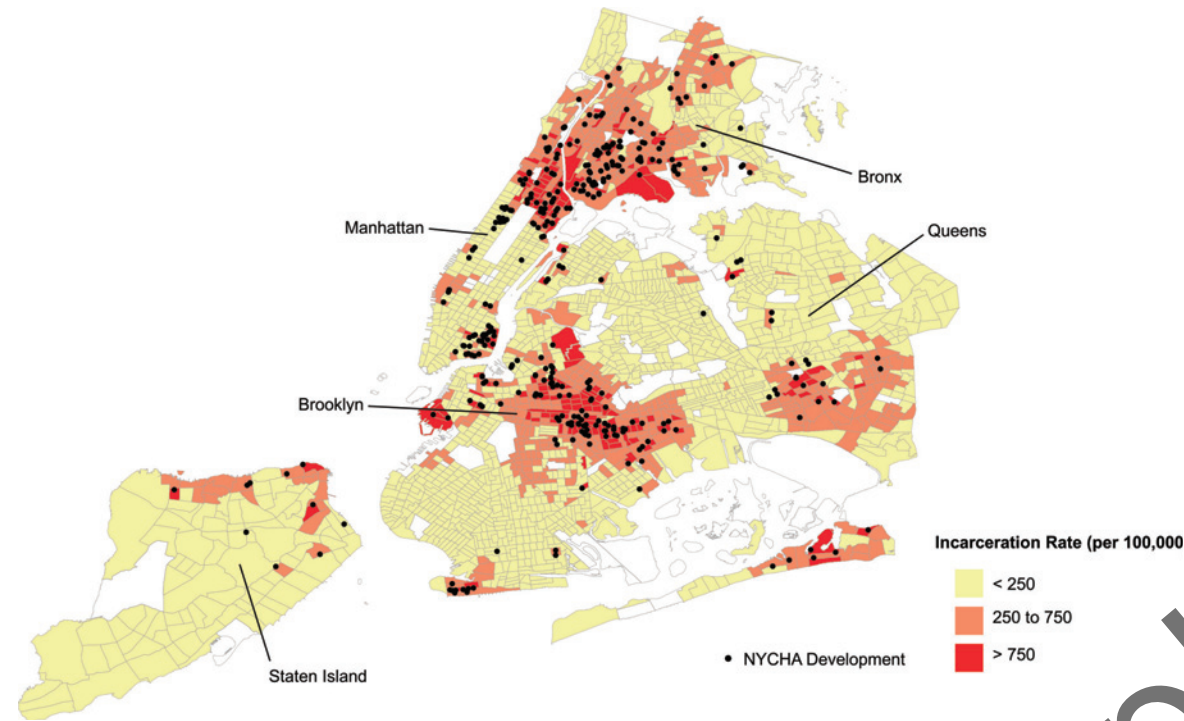
Figure 9.4.8 provides several interesting insights into the social patterns evident in New York City. The maps show that married-couple households are typically found in suburban Staten Island, southern Brooklyn and eastern Queens. Those living alone are most often found in Manhattan and those areas of Brooklyn closest to Manhattan. Of particular interest is the relationship between female-household family, no husband and the neighbourhoods with the highest poverty rates as shown in Figure 9.4.6. This highlights the feminisation of poverty. Women, compared to men, have a higher incidence of poverty. Often this is a consequence of relationship breakdown and women disproportionately bearing the costs of childrearing. We can also conclude that there is a relationship between living alone households and higher incomes earned by those in the creative and information sectors of economic activity.



9.4.8 Predominant household type by census tract

Incarceration rates

Figure 9.4.9 illustrates the relationship between poverty and those held in prison or incarcerated. The Lower East Side, northern Manhattan, the Bronx, northern Brooklyn and the poorer parts of Queens have relatively high incarceration rates. Geographers have noted a relationship between incarceration rates and the location of public housing developments. The rate of incarceration in these neighbourhoods is far above the rates in census tracts without public housing, even though in many instances crime rates may be similar. Geographers attribute the ‘public-housing-to-prison-pipeline’ to the excessive surveillance and policing of the socio-economically disadvantaged and predominantly Black and Latino American residents of New York City Housing Authority (NYCHA) developments.



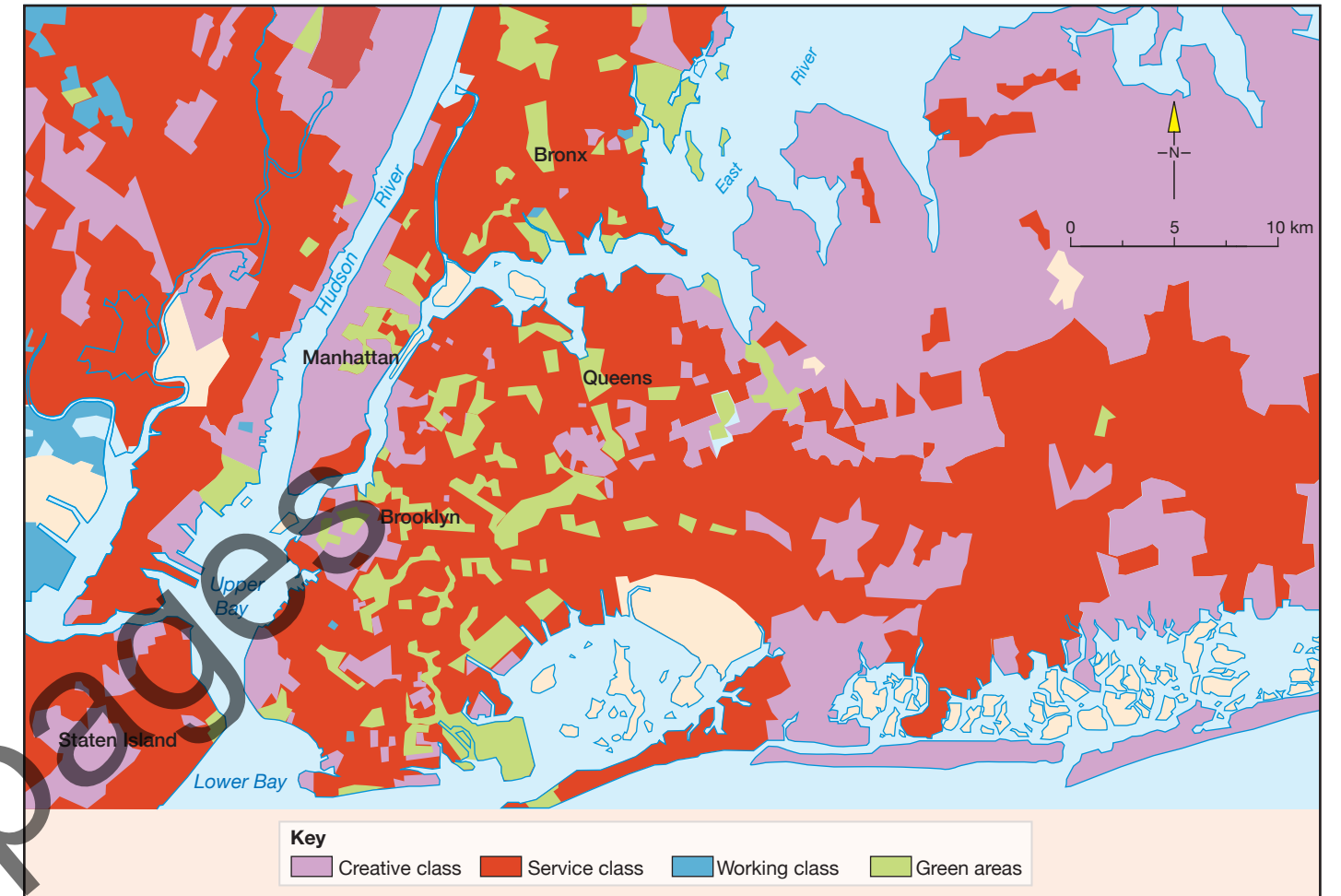
9.4.9 Incarceration rates per census tract, New York City, 2022. The black dots represent public housing (or NYCHA developments).

Social class

Another way of looking at the spatial pattern of inequality is through the lens of class. Social class is an enduring feature of American life and is reflected in almost every element of its culture. American cities, for example, are becoming increasingly divided along class lines. This results in people having quite different lived experiences within the same city.

Across America, residential segregation is on the rise. The polarisation between rich and poor neighbourhoods is increasing. The share of middle-income neighbourhoods is declining. In a study conducted by the Pew Research Centre, a Washington DC-based think tank, geographers analysed this trend as it affects New York by plotting and mapping the residential locations of three specific classes: the shrinking middle class of blue-collar workers in manufacturing, transportation and maintenance; the rising numbers of highly paid knowledge, professional and creative workers in the creative class; and the even larger and faster-growing ranks of lower-paid, lower-skill service workers. The changes occurring are a result of economic change, including the emergence of the new (information-based) economy, the growth of the service sector and the impacts of new technologies on the nature of work.

New York City is one of America’s most economically polarised cities in the USA. Figure 9.4.10 shows the spatial pattern of the type of work that residents do. That is, their socio-economic class. In other words, it shows the geography of class for the whole New York metropolitan area. The creative class lives in the areas that are shaded purple, the red areas are primarily service class, and the blue areas are working class.



9.4.10 Map showing the distribution of socio-economic classes in the New York metropolitan area

The creative class, which includes workers in science and technology, business and management, arts, culture, media and entertainment, law and the healthcare professions, make up 35.8 per cent of the metropolitan area’s workforce. For the most part, these are highly-skilled, highly-educated people in high-paying positions. The average income from wages or salaries for this class was US\$87 625 at the time of the 2020 census.

In the case of New York City, the creative class is highly concentrated in Manhattan, from the southern tip of the Financial District through TriBeCa, SoHo, Greenwich Village, Chelsea, Midtown, and the Upper East and West Sides. Further afield, there are also concentrations of creative class employees in outer metropolitan areas—the commuter zone.

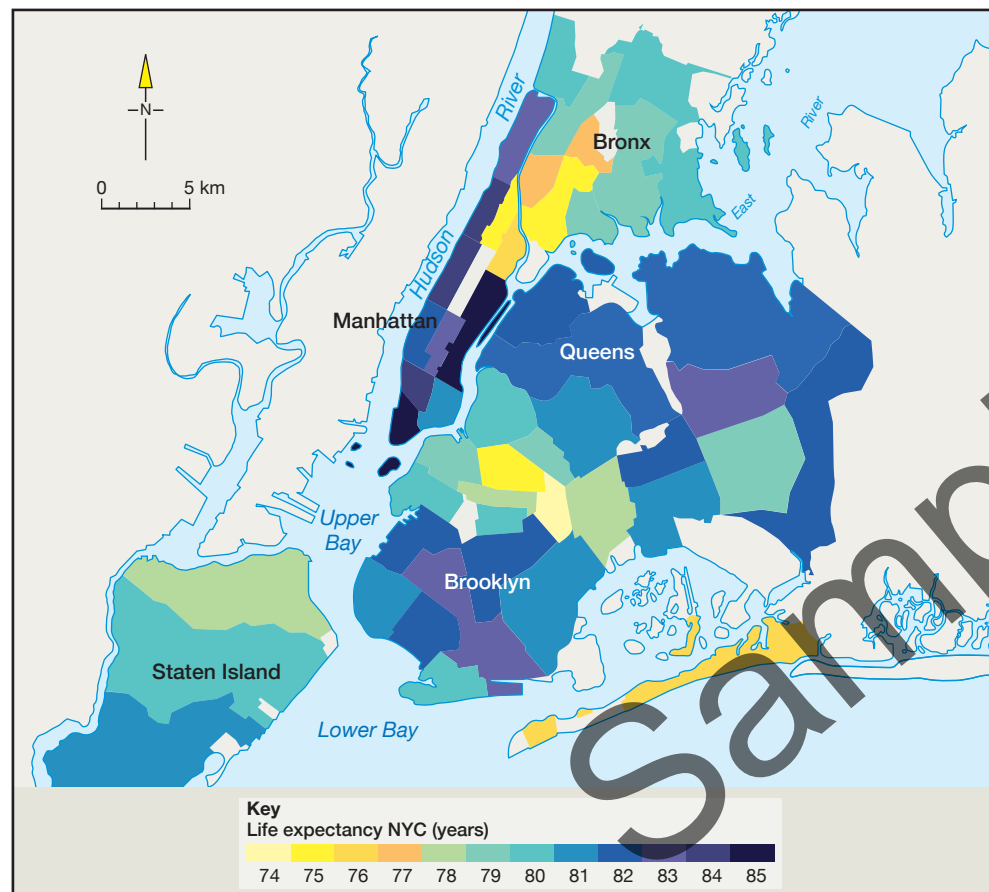
The service class, which includes the low-wage, low-skill workers who hold routine service jobs in food service and preparation, personal services, retail sales, clerical and administrative positions, represent the largest group of workers. They make up 48.1 per cent of the metropolitan area’s workforce and include some of the fastest-growing areas of employment. The average wage/salary for this group in 2020 was US\$34 241, just 39 per cent of what was received by those in the creative class. The service class has, over time, been pushed further outward, with a small concentration found on the Lower East Side, and then north in Harlem, Morningside Heights, Washington Heights and Inwood. Most, however, live in the Bronx, Brooklyn and Queens, with others living in the counties of the larger metropolitan area.

Both the creative class (purple areas) and service class (red areas) cover a much larger area than working-class areas (blue areas). The creative class is located closer to the city centre, while lower-paid service-class neighbourhoods are found in Brooklyn, the Bronx and Queens, and the greater metropolitan area of Long Island, as well as coastal and northwest New Jersey.

Significantly, the working class have all but disappeared from the geography of New York City. The working class includes those who work in factory jobs or work in transportation and construction. These now comprise just 16 per cent of the region's workers. On average they earned US\$43 723 in wages and salaries in 2020, which is higher than the average of service workers.

Life expectancy

Life expectancy in New York City varies across the city's neighbourhoods (see Figure 9.4.11). In TriBeCa, Murray Hill and the Upper East Side, the average resident lives until 85—on par with places in the world with the highest life expectancy, such as Japan. In Brownsville, Brooklyn, life expectancy is 74, closer to that of many developing countries, such as Brazil. Brownsville has the largest concentration of public housing of any neighbourhood in the city. Residents there die from most major diseases at much higher rates than the city average. There is clearly a correlation between socio-economic status and life expectancy. The wealthy live longer lives than the poor. This was most recently apparent during the COVID-19 pandemic. The poorest neighbourhoods had the highest death rates from the virus.



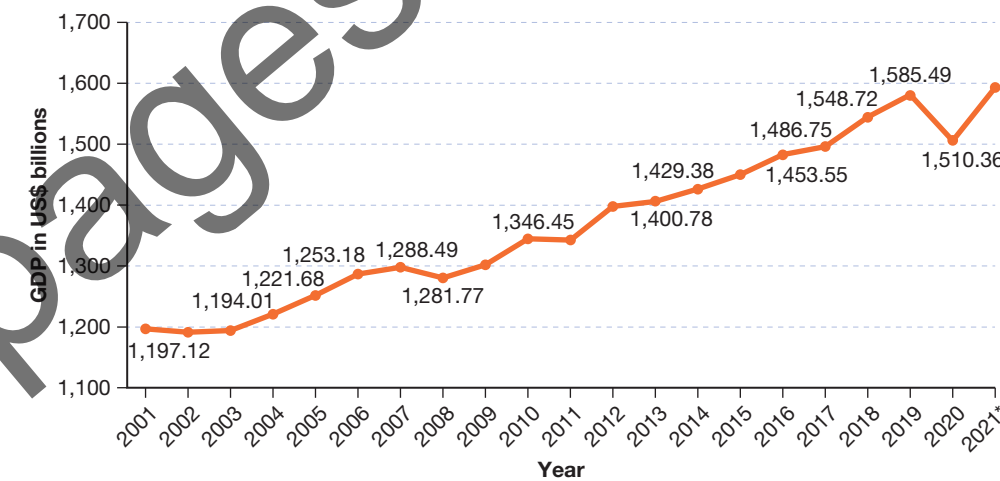
9.4.11 Life expectancy in New York City is closely related to socio-economic status

Economic patterns

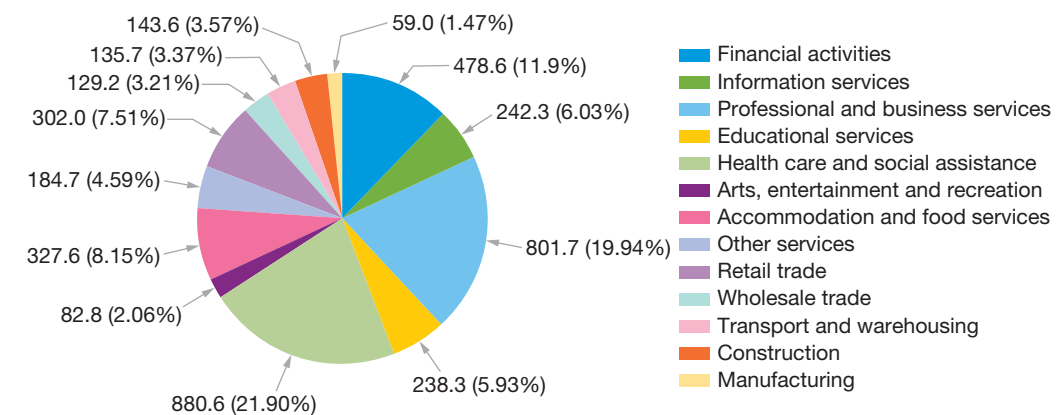
Today, finance, health care and the life sciences, sophisticated technologies and biotechnology, real estate and insurance form the basis of New York City's economy. The city is also a national and global centre for the mass media, journalism and publishing, and a leading centre for the performing arts and the creative industries including digital media, advertising, fashion, design and architecture (see Figures 9.4.12 and 9.4.14). Figure 9.4.13 shows the trend in GDP of the New York metropolitan area from 2002 to 2021. After a downturn caused by the COVID-19 pandemic, the city's GDP reached US\$1.6 trillion in 2021.



9.4.12 New York City is a global centre of business and commerce, and a national centre for banking and finance, retailing, trade, transportation, tourism, real estate, new media, traditional media, advertising, legal services, accounting, insurance, theatre, fashion and the arts.



9.4.13 GDP of New York metropolitan area 2001–2021



Source: New York City

9.4.14 New York City private employment by sector, December 2022

Financial sector

New York City is the world's financial capital. It is home to many of the world's biggest banks, credit rating agencies, insurance companies, hedge funds and many more. The city's securities industry (generically known as Wall Street) accounts for more than 180 000 jobs and is the largest player in the financial sector. Employees in the securities industry earn an average salary (including bonuses) of more than US\$400 000. One in ten New York City workers are employed in financial sector.

Health care

Research and the provision of medical services are the elements of New York City's healthcare industry. In 2022, the sector employed 861 000 people across 70 hospitals and numerous medical research centres.

Information technology sector

New York City's high-tech, information technology industries include those based on the internet and telecommunications. It includes digital media, software development, biotechnology and game design. Initially, the sector was focused on Silicon Alley—a concentration of high-tech companies centred around southern Manhattan's Flatiron district. It has subsequently spread throughout the metropolitan area. The biotechnology sector has grown quickly, based on the city's strength in academic scientific research backed by funding from private and commercial sources. Biotechnology utilises biological systems and living organisms to develop or create different products and services such as biofuels, genetically modified crops, skincare products and detergent enzymes.



9.4.15 Tourism is one of New York City's biggest industries.

Tourism

Just prior to the COVID-19 pandemic, New York City hosted around 66.6 million tourists annually, 13.5 million of which were international tourists (see Figure 9.4.15). Post-pandemic, tourist numbers recovered slowly. By 2021, total visitor numbers reached 32.9 million, with only 2.7 million international visitors. In 2022, international visitor numbers reached 56.7 million, 9.4 million of which were international arrivals.

The pandemic hit the sector hard. Employment in the sector declined by 89 000 jobs (31.4%) to 194 200 in 2020—down from a record 283 200 jobs in 2019. Tourism indirectly supported 376 800 jobs in 2019. Overall, tourism accounts for 7.2 percent of total private sector employment. The industry supports a higher share of workers who are self-employed (14.4%), and its wages are relatively low at US\$32 000 annually. It is also dominated by minorities (66%), and immigrants (44.7%). Hotels employ over 50 000 workers and full-service restaurants employ over 33 000.

In 2019, tourists contributed US\$47.9 billion to the city's economy—US\$13.5 billion on accommodation, US\$10.5 billion on food and beverages, US\$9.3 billion retail, US\$5.6 billion on arts, culture and entertainment and US\$8.5 billion on local transport.

The highest concentration of hotels is found in Midtown, Manhattan. The city's principal tourist attractions are also found in Manhattan.

Creative sector

The key components of the creative sector and their share of the sector's employment is shown in Figure 9.4.16. The largest is film and television, followed by advertising and publishing. In total, the sector employs more than 300 000 people. An astonishing 12 per cent of all creative industry jobs in the United States are located within the five boroughs of New York City. In total, the sector accounts for 13 per cent of the city's total economic output. That's more than US\$110 billion (nearly one in every eight dollars generated). The creative industries are largely located in Manhattan.

Did you know?

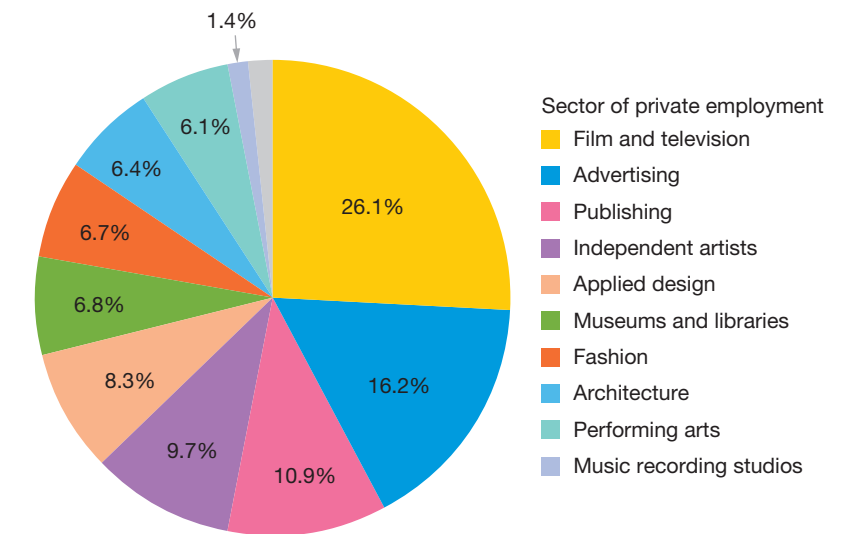
Tourism is a vital cog in New York City's economy. The industry supports more than 280 000 jobs in hotels, restaurants, museums and theatres.

Did you know?

Tourism contributes US\$48 billion to the city's economy. International travellers have the biggest impact because they spend more than three times as much on average as the typical domestic tourist does.

Manufacturing

Manufacturers in New York City employ approximately 1.5 per cent of the city's workforce and generate more than US\$75 billion in economic activity. Garments, chemicals, metal products, processed foods and furniture are some of the goods still manufactured in New York City. Of these, the food-processing industry is the most stable. This US\$5 billion industry employs nearly 20 000 workers, many of them immigrants who speak little English. The nature of economic change and its impact on manufacturing is explored in greater detail in Unit 9.5.



9.4.16 New York City creative sector employment by industry, pre-pandemic

Activities

Acquiring and processing geographical information

- 1 Compare the demographic and social data for Manhattan with the other New York City boroughs. What does this reveal about the character and economy of Manhattan?
- 2 Compare Manhattan's social indicators with those of the Bronx. What does this data reveal about inequalities in New York city?
- 3 Give an example of how social indicators can obscure anomalies with boroughs.
- 4 Define absolute and relative poverty. What percentage of New Yorkers live in poverty and near poverty? What accounts for this level of poverty?
- 5 Summarise the spatial variation found in the rate of poverty experienced across New York City's five boroughs.
- 6 Using data, describe the relationship between race and poverty in New York City.
- 7 Describe the spatial distribution of the following household types: married couple households, living alone households and female-family household, no husband. Explain what is meant by the term feminisation of poverty.
- 8 Explain the concept of social class as defined by the Pew Research Centre. What changes have contributed to the growth of the creative class and the shrinking of the working class? Who makes up the creative class?
- 9 Describe the spatial distribution of the service, creative and working classes?
- 10 Describe and account for the relationship between poverty and life expectancy, and poverty and incarceration rates in New York City.
- 11 Identify the sectors of economic activity that form the basis of New York City's economy.
- 12 Outline the importance of tourism to New York City's economy.
- 13 Identify the main manufacturing industries remaining in New York City.

Applying and communicating geographical understanding

- 14 Study Figure 9.4.1. Briefly describe and account for the demographic characteristics of each of New York city's five boroughs. How does each compare with the city as a whole?
- 15 Study Figure 9.4.6. With the aid of Figure 9.1.4 (page XXX), describe the spatial pattern of poverty shown on the map.
- 16 Study Figure 9.4.7. Using data from the graph, describe the race-based variations in income relative to the poverty line in New York City.
- 17 Study Figure 9.4.8. Identify and describe the spatial distribution of:
 - a married-couple families
 - b female-household family, no husband (single mothers)
 - c living alone (single-person households).
- 18 Study Figures 9.4.6 and 9.4.9. Describe, and suggest reasons for, the relationship between poverty and incarceration.
- 19 Study Figure 9.4.10. Describe the spatial distribution of the creative class, service class and working class.
- 20 Study Figures 9.4.6 and 9.4.11. Describe, and suggest reasons for, the relationship between poverty and life expectancy.
- 22 Study Figure 9.4.13. Using data from the graph, describe the trend in New York City's GDP between 2001 and 2021.
- 23 Study Figure 9.4.14. Using data from the graph, describe the employment structure of New York City. What does this data tell us about the city's economy?
- 24 Study Figure 9.4.16. Identify the three biggest components of creative employment that together account for more than 50 per cent of employment in the sector.

UNIT 9.5

Economic restructuring and its impact on New York City

Economic restructuring—a significant and enduring change in the nature and structure of an economy—has had a lasting impact on the morphology of western cities. New York City is no exception. The process of economic restructuring, which had its origins in the 1970s, is most apparent in the change occurring to the employment structure of urban areas. Typically, this involves a shift away from manufacturing to service-based economic activities. It would, over time, have profound implications for the productive capacities and competitiveness of cities and regions, the demographics of cities, income distributions and social hierarchies. The process of economic restructuring continues to this day, driven to a large extent by advances in communications and information technologies.

Economic shocks

Major economic nodes such as New York City are subject to economic shocks, both those that occur suddenly and those that take place gradually over time. The 2008 Global Financial Crisis (GFC), for example, caused rapid and significant unemployment in the financial and service sectors within New York City. The COVID-19 pandemic also had an economy-wide impact. Unemployment increased from 4.1 per cent in 2019 to 12.5 per cent in 2020. Hardest hit were those without college degrees (16.5%). The rate for those with degrees was just half that rate (8.4%). Unemployment in the 16–24 age group reached 20.4 per cent compared to 12.9 per cent in the 25–54 years age group.

At the start of the pandemic, from February to April 2020, employment in New York City fell by 21 percent (971 800 jobs). As the nation's initial epicentre of the COVID-19 pandemic, the city experienced more significant employment disruption compared to other places in the United States. Three hundred thousand jobs were lost in the leisure and hospitality sector, as hotels, restaurants and bars were forced to close and tourist arrivals collapsed. Retail trade lost 115 000 positions as shops closed.

The post-COVID recovery saw employment rebound by 199 200 (to 4 million) in the year to December 2022. The areas of increased employment provide an insight into the nature of the city's economy. Gains occurred in educational and health services (+63 300), leisure and hospitality (+47 900), professional and business services (+42 800), other services (+13 100), financial activities (+10 800), information (+9300), trade, transportation and utilities (+5300), natural resources, mining and construction (+4200), and manufacturing (+2500).

Long-term economic restructuring

Economic restructuring, however, has a longer-term impact on employment and the morphology of cities. From 2000 to 2020, New York City's metropolitan area lost 310 000 manufacturing jobs. The hardest hit industries were apparel manufacturing, textile mills, chemical manufacturing, paper manufacturing, transport equipment manufacturing, machinery manufacturing, computer and electronic product manufacturing, and printing and related support services. Despite the impacts of economic restructuring, New York City remains a major manufacturing centre. There are still more than 155 550 manufacturing jobs and more than 2888 manufacturing-based plants in the city. Most of these are small businesses, on average employing just 21 people. While Manhattan remains the leading manufacturing borough, Brooklyn ranks second, with 1356 manufacturers employing 33 630 workers.

Changes in the spatial pattern of land use

The decline in labour-intensive manufacturing and the rise of knowledge and service-based industries (the defining feature of economic restructuring), resulted

in the wholesale abandonment of industrial land and related infrastructure. Some 3000 commercial and industrial complexes stand vacant, and thousands of sites need decontamination. To date, the US Environmental Protection Agency has spent almost US\$2 billion decontaminating former industrial sites. The costs involved in site remediation highlight the high economic costs incurred by the process of economic restructuring. It does, however, provide an opportunity to address some of the city's greatest challenges, including the provision of new housing and the need to accommodate emerging industries. Many of the brownfield sites resulting from the closure of industrial plants are used for mixed-use urban renewal projects. These typically include new housing projects, commercial space and new community facilities (see Figure 9.5.1).



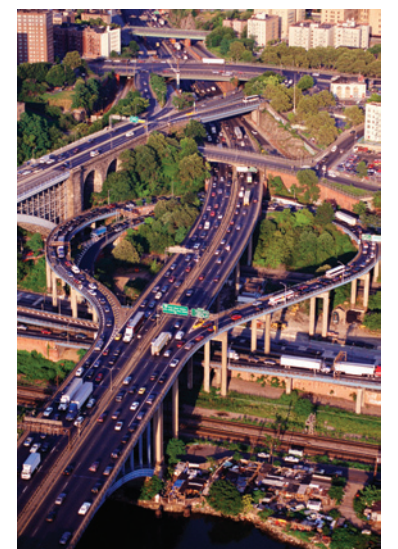
9.5.1 The abandoned and partially demolished Domino Sugar factory in 2014 (left). A computer-generated visualisation of the urban renewal project planned for the site (right). The historic core of the factory is retained in the 10-year project that will yield 2300 apartments, over 46 000 square metres of commercial space and a new school.

Globalisation was not the only driver of economic restructuring. The emergence of new types of capital-intensive industrial activity generated a demand for greenfield industrial sites away from the congested sites of the five New York City boroughs. New industrial estates were built away from the city centre, often at accessible points on the metropolitan area's freeway network. Greenfield sites in the outer metropolitan area proved popular with emerging industries. In addition to accessibility, sites were larger and the land cheaper.

Changes in the spatial pattern of socio-economic class

Like that observed in Australia's large cities, the decline of the older, inner-city industrial areas was accompanied by urban decay—abandoned and/or neglected infrastructure, decaying housing stock and a loss of **amenity**. Reinforcing the tendency of industry to relocate, was the development of New York City's freeway system. In many instances, this involved large-scale demolition of existing urban structures including homes. This had the effect of fragmenting communities, promoting the process of **suburbanisation** and development of urban sprawl (see Figure 9.5.2).

The process of suburbanisation would, in turn, play an important role in the relocation of activity to the periphery of the metropolitan area. Suburbanisation was driven by both push and pull factors. Rising levels of crime, and the general decay and loss of amenity of established neighbourhoods acted as push factors. The perceived attractions of low-density suburban living, combined with the availability of federal government-backed mortgages, proved to be effective pull factors, especially for white, middle-class families. In a process often referred to as 'white flight', the middle classes abandoned their crowded inner-city homes and moved to the spacious family-orientated suburbs. Immigrants, taking advantage of the now underutilised (and cheap) housing in industrial neighbourhoods, took their place. Many found it difficult to find work as factories closed. As a result, such neighbourhoods became home to significant numbers of unemployed, unskilled or semi-skilled migrants.



9.5.2 The Cross Bronx Expressway, from where it feeds into West River Drive and the George Washington Bridge



9.5.3 New Jersey container terminal

Unlike Australia, where state governments fund essential services such as schools, primary health care and emergency services, in the United States these are typically funded by local government authorities. As the profile of those living in the old industrial areas changed, the revenue base declined. As it did, the quality of the services declined, as did the quality of the neighbourhood's infrastructure. A cycle of economic and social decline was the inevitable result.

The impact of changes in shipping

Like all the world's great port cities, the introduction of containerisation and the technological advances in shipping and cargo handling, led to the large-scale obsolescence of the city's existing port facilities and associated transport infrastructure. Containerisation required a large area of harbourside land, something in short supply in New York City. A vast new container terminal complex was built in New Jersey, taking much of New York City's imports and exports (Figure 9.5.3).

The impacts of economic restructuring

Economic restructuring has had a range of economic, social and environmental impacts on New York City.

Economic impacts

The economic impacts of economic restructuring were profound. Hundreds of thousands of jobs were lost and whole neighbourhoods fell on hard times. The city's debt climbed as its revenues fell. The services provided to communities were cut and there was declining investment in new housing and urban infrastructure. Urban blight and the loss of amenity, especially in the former industrial areas of Brooklyn and the Bronx, was widespread.

Social impacts

Adverse social impacts accompanied the economic decline being experienced, especially in the older industrial neighbourhoods. Vandalism further eroded the amenity of such areas and crime and social unrest increased. Abandoned industrial sites are still a feature of many such neighbourhoods.

The transition away from manufacturing to tertiary sector activities (finance, businesses services and the creative industries) and the expansion of the service sector that supports them (leisure and hospitality, retail trade, social assistance and construction) has been accompanied by a polarisation of incomes, as high-income professionals are often paid far more than service workers. The middle class has shrunk, as the jobs they once relied on have disappeared. The shift from a city of production to one of consumption has fuelled an increase in the number of low-paying service jobs which continue to attract immigrants, both legal and illegal, as well as investment.

The economic transition has also resulted in the increased attractiveness of inner-city living, reversing the suburbanisation trend of earlier decades. Spurred on by the shortage of rental accommodation, young, well-paid professionals, keen to live close to work in the Financial District or Midtown, have driven the process of gentrification evident in many established Manhattan neighbourhoods (see Figure 9.5.4). They have moved in and spruced up neighbourhoods such as Chelsea, SoHo and the Upper West Side. Increasingly,



9.5.4 Gentrification has transformed many inner New York City neighbourhoods.

this process has extended to accessible areas of Brooklyn and Queens. Where factories, warehouses and abandoned apartment buildings once stood, fashionable boutiques, restaurants, and media, entertainment and tourism functions have now replaced them. The redevelopment and gentrification of such neighbourhoods have increased real estate prices and changed the socio-economic character and amenity of many neighbourhoods, often at the expense of low-income residents who are displaced.

Environmental impacts

Economic restructuring also has environmental impacts. These include contaminated industrial sites, polluting both soil and water. Contaminants include heavy metals, organic solvents and other pollutants leftover from previous industrial land uses. Public exposure to environmental toxins can have a range of health impacts. They can also impact on natural ecosystems and wildlife. Remediating contaminated is expensive and often involves removing or incinerating soil at very high temperatures before the site can be reused.

SPOTLIGHT

Newtown Creek's industrial contamination

Newtown Creek, which divides Queens and Brooklyn, is one of the most polluted waterways in the United States (see Figure 9.5.5). Scientists working for ExxonMobil began sampling gases leaking from the soil around its old oil refinery in Greenpoint, Brooklyn, in the early 2000s. It was found that Exxon had let more than 64 million litres of petroleum products leak into the surrounding soil and Newtown Creek. They also found evidence of highly toxic and volatile organic compounds from three unrelated industries—dry cleaners, metalwork foundries and a lacquer factory.

An initial clean-up of the creek is expected to be completed by 2028. Full remediation of the creek is not expected to begin until 2032 at the earliest—22 years after it was first declared unsafe because of the detected high levels of copper, lead, dioxins, pesticides,

carcinogenic chemicals, petroleum by-products and other contaminants.



9.5.5 Newtown Creek, Brooklyn

Activities

Acquiring and processing geographical information

- 1 Define economic restructuring. When did it commence and what was its defining feature? What were its implications? Who was most affected?
- 2 Summarise the economic impacts of the COVID-19 pandemic.
- 3 Summarise the impacts of economic restructuring on New York City.
- 4 Summarise the impacts of the emergence of new types of capital-intensive industrial activity on the morphology of New York City.
- 5 Describe the consequences of suburbanisation on the morphology of New York City.
- 6 Explain why the process of urban decay was more pronounced in New York City compared to what occurred in Australia.
- 7 Summarise the impact of containerisation on the morphology of New York City.

- 8 Describe the social, economic and environmental impacts of economic restructuring.

Applying and communicating geographical understanding

- 9 Draw a diagram or create a flow chart that links the causes and impacts of the economic restructuring challenges in New York City.
- 10 Write an explanation outlining two planning strategies used to address the economic restructuring challenges in New York City.
- 11 Conduct a class discussion on the topic, 'To what extent do the impacts of economic restructuring in New York City mirror those in Australia's large cities?'
- 12 Using the internet, investigate a New York City-based brownfield site and its redevelopment potential. Outline the extent of the remediation required and the nature of any planned development.

UNIT 9.6

New York City's political, economic and cultural roles

Throughout much of the twentieth century, and the opening decades of the twenty-first century, New York City has exercised a remarkable influence over the economy, politics and culture of the United States, and indeed the world.

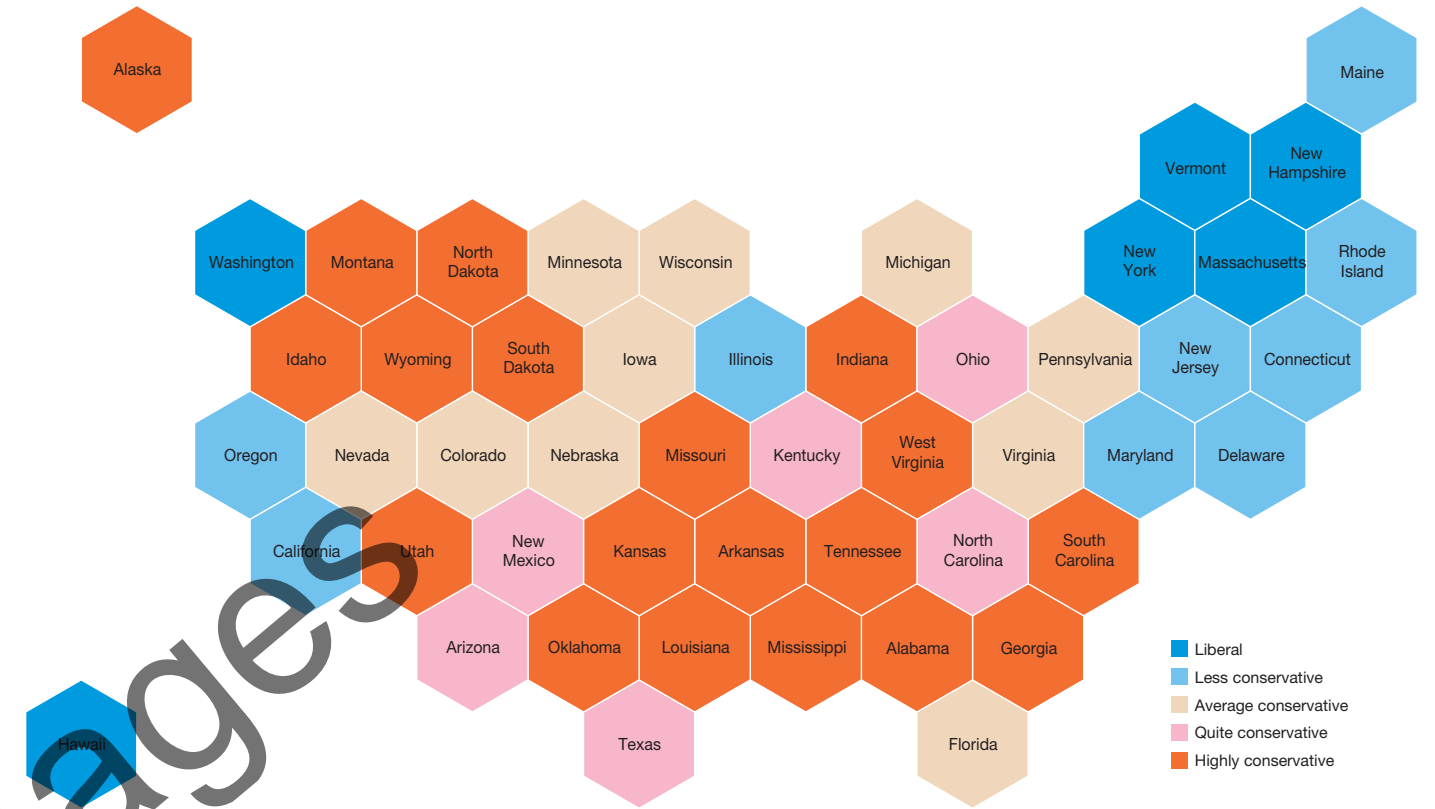
Political role

The political role of New York City can be examined at both the national and global scales. At the national scale, New York City's liberal tradition has influenced social norms across the country. Changing social attitudes and trends originating in New York City, together with liberal states of the west coast and northeast (see Figures 9.6.1 and 9.6.2), have an impact on attitudes across the country and ultimately the world. The New York City-based media and entertainment corporations (together with those of California) amplify these changes until they are accepted as the new norm. Invariably, some of these trends, including those relating to abortion, same-sex marriage, the death penalty and cannabis use, spark a political and social backlash from conservatives, the spatial outcome of which is an increasingly polarised American society—often referred to as red (conservative/Republican) states versus blue (liberal/Democrat) states.

Conservatives rail against progressive (**woke**) agendas and issues, especially those important to marginalised communities—social injustice, racial discrimination, gender and sexual orientation, affirmative action and misogyny. Today, elements of the conservative right in some Western countries employ the word *woke* to describe any progressive movement or ideology they disagree with. Likewise, radio shock jocks and right-wing media personalities (for example, those on Fox News in the United States and Sky News 'after dark' in Australia) use the term to disparage those pursuing any issue they object to. The dominance of Democrats in New York City politics, at all levels, is an outcome of the generally progressive worldview of the city's population (see page XXX).



9.6.1 Thousands attending the World Pride March for LGBTQ+ rights, New York City, 2019



9.6.2 The political-social positioning of American states, 2023

On an international scale, New York City's influence grew rapidly in the decades following World War II, when US power was at its peak. The elites and institutions based in New York City exercised enormous political, economic and cultural influence. Wall Street lawyers, bankers and intellectuals played a key role in shaping the policies of containment, collective security and liberal internationalism that the United States pursued in the international arena.

New York City-based institutions continue to play an important role in world affairs. In all, there are 2161 international and foreign affairs organisations based in the greater New York City metropolitan area. They include organisations and institutes dealing with development and relief, humanitarian issues, world peace and international security, human rights, international refugees and migration, foreign affairs, research, and public policy. The most significant of these is the United Nations. The UN General Assembly and Security Council meet in the UN Headquarters on the banks of the East River in Midtown Manhattan. UN General Assembly is the main policy-making organ of the organisation. Comprising all member states, it provides a unique forum for multilateral discussion of the full spectrum of international issues covered by the UN Charter. The General Assembly meets in regular sessions, from September to December, and resumes in January until all issues on the agenda are addressed. The UN Security Council is made up of fifteen members, of which five are permanent: China, France, Russia, the United Kingdom, and the United States. These were the victorious powers of World War II. Permanent members can veto (block) any substantive Security Council resolution, including the admission of new member states to the UN. The UN enjoys a special legal status in New York City. It is, for example, exempted from the jurisdiction of a range of local laws, mostly as the result of diplomatic negotiations.

Economic role

New York's power base of corporations, banks, insurance firms and its stock exchange have been key players in shaping how the global capitalist economy operates. Movements on the city's stock exchange invariably influence stock exchanges around the world,

including those in Australia. Decisions made by executives of New York City-based TNCs can impact the economies and politics of countries worldwide. Often, the governments of countries hosting TNCs are only informed of decisions after they are made.

New York City's dominant position in finance appears relatively secure and is perhaps reinforced by the rise of new communications technologies and by the internationalisation of capital markets. The city continues to shape the nature of the world's financial institutions and the thinking that underpins the capitalist system. New York City remains the centre of US foreign trade.

The economic influence of New York City is not, however, always positive. The share market crash of 1929, for example, led to the Great Depression. The Global Financial Crisis of 2007–2008 had its origins in excessive risk-taking by home lenders who targeted low-income borrowers, the majority of whom were members of minority groups. It led to the collapse of the New York City-based Lehman Brothers which, in turn, initiated a worldwide economic crisis.

SPOTLIGHT

The Great Depression (1929–1939)

The optimism of the Roaring Twenties (the name given to the period of general economic prosperity, social liberation and optimism of the 1920s, following the deprivations of World War I) was most apparent on the New York Stock Exchange. Share prices rose to unprecedented heights. The Dow Jones Industrial Average increased six-fold from August 1921 to September 1929. The boom was, however, to end in a devastating bust. On Black Monday, 28 October 1929, the Dow declined nearly 13 per cent. On the following day, Black Tuesday, the market dropped 12 per cent. By mid-November, the Dow had lost almost half of its value. The slide continued through to the summer of 1932, when the Dow closed at its lowest value of the twentieth century, 89 per cent below its peak. The Dow did not return to its pre-crash heights until November 1954.

As a result of the collapse, the US economy shrank by one-third in the four years from the beginning of the Great Depression. The country's GDP fell 29 per cent from 1929 to 1933 and the unemployment rate reached a peak of 25 per cent in 1933 (see Figure 9.6.3). Industrial production fell 46 per cent, consumer prices fell 25 per cent and some 7000 banks, nearly a third of the country's entire banking system, failed.

The economic shockwaves of the collapse spread throughout the world. In Australia, for example, the economy collapsed, and unemployment peaked at

32 per cent in 1932. National income declined by a third. The immediate effect was on individuals and families: children with not enough to eat; men, the traditional breadwinners, unemployed, humiliated and powerless; women struggling to hold families together. Suicide rates increased sharply. In the absence of unemployment benefits, which had not yet been introduced, charity groups became the only source of relief but were unable to feed the overwhelming numbers of hungry.



9.6.3 The unemployed queue for food outside a soup kitchen during the Great Depression

Cultural role

New York City has been the United States' premier cultural centre since the 1890s. But unlike other global cultural centres—London, Paris, and Tokyo—it is not also a political capital. Consequently, economic and cultural elites in New York do not have the same opportunities for daily interaction with the national political class as their counterparts in those other world cities. Nonetheless, its influence has been profound.

For more than a century those determined to succeed in the popular arts—song writing, theatre or journalism—considered New York City their ultimate destination. While would-be film stars or directors went to California, the site of most motion picture production, ambitious journalists, playwrights and songwriters looked to New York. As a result, New York City's pre-eminence as a cultural capital is reflected in the literary and social critiques of New York City intellectuals, as well as in the fine arts, performing arts and popular culture.

Endowed with some of the world's greatest art collections housed in the city's many galleries, it's not surprising that New York City would emerge as the centre of the global art market.

New York City also boasts some of the world's greatest performing arts companies and venues. These include the New York Philharmonic, the New York City Ballet, the Metropolitan Opera and the Juilliard School. All are housed in the Lincoln Center for Performing Arts in the Upper West Side neighbourhood (see Figure 9.6.4).

The cultural influence of the media cannot be underestimated. The New York Times and the Wall Street Journal emerged as international newspapers and together with the other New York City-based media organisations, including Fox News and NBC, they help shape public discourse and debate at a national and international scale.

In terms of popular culture, the city retains its global significance. The city is frequently the setting for novels, movies and television programs, and New York Fashion Week is one of the world's preeminent fashion events. Successful Broadway musicals and plays are replicated on stages worldwide.

The city is also the birthplace of numerous cultural movements and music genres. These include the Harlem Renaissance in literature and the visual arts, abstract expressionism in painting, and hip hop and rap from the Bronx. Disco and punk rock also originated in NYC. Jazz developed in New Orleans but was popularized in Harlem.

New York remains at the peak of America's urban system, and its status as a world city is secure. Yet it is also clear that in some areas New York City is not as dominant as it was in the mid-twentieth century. This is most evident in its declining status as a manufacturing centre.



9.6.4 The Metropolitan Opera House, part of New York City's Lincoln Center

Activities

Acquiring and processing geographical information

- 1 Summarise the ways in which New York City has influenced politics at the national scale. How has the city's media and entertainment industry amplified this influence and to what effect? What has been the response of conservatives?
- 2 Define the term woke. How has it been weaponised by the conservative right?
- 3 Explain why New York City is widely associated with progressive worldviews.
- 4 Outline New York City's global political role.
- 5 Describe New York City's global economic role. Explain why it is not always associated with positive outcomes.
- 6 Outline the nature and extent of New York City's cultural influence.

Applying and communicating geographical understanding

- 7 Study the box, Spotlight: The Great Depression (1929–1939). What role did New York City play in the onset of the Great Depression? Summarise the extent and consequences of the Wall Street collapse of 1929.
- 8 Using the internet, investigate New York City's role in the Global Economic Crisis (2007–2008). Write a brief report outlining your findings.
- 9 Using the internet, access the website of one the New York City cultural institutions mentioned in the text. Prepare a brief oral report outlining what is special about the institution, the cultural role it plays and whether its influence extends beyond the city.
- 10 Investigate an element of popular culture that originated in New York City. Share your findings with the rest of the class.

New York City's regional and global links

Given New York City's status as a world city, at the very pinnacle of the global hierarchy of such cities, it's not surprising that it is among the most connected places on Earth. Many of its linkages are explored in Unit 6. In this unit, we focus on New York City's regional links and its international links in aviation and world trade.

Regional links

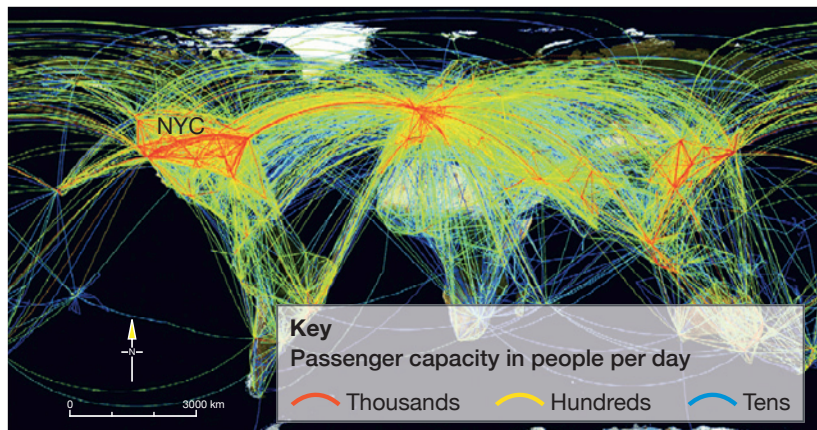
New York City's regional links extend well beyond the state of New York to include the Northeast megalopolis, which extends from Boston in the north to Washington DC in the south. The region is linked by the Northeast Corridor railway line, the busiest passenger rail line in the country, and a vast freeway system that plays an important role in the movement of people and goods within the region.

Beyond the five New York City boroughs, lies the much larger metropolitan area of New York. Much of this is regarded as the city's commuter zone. Manhattan is the main employment centre in the city, with 56 per cent of all jobs. Of these, 30 per cent of workers commute from within Manhattan, while a further 43 per cent commute from the other four boroughs. That leaves 27 per cent who commute from counties beyond the city's boundaries. The region's vast public transportation system carries 67 per cent of all workers to their place of employment.

Politically, the city is linked to the state in which it is located, the capital of which is Albany. Decisions made in the capital inevitably impact the city and its people. New York state stretches from Lake Ontario to the Atlantic Ocean at Long Island. The state's population is 19.84 million (2021). Given that New York City's 8.5 million people make up 43 per cent of the state's population, it's not surprising that their elected representatives exert a significant influence in the deliberations of the state legislature.

There are, of course, many social and educational links across the region. Take tertiary education, for example. Unlike most Australian school leavers, American high school graduates often elect to move away from home to attend their university of choice. Students often see this as a 'rite of passage', part of the transition to adulthood. The best-known tertiary institutions within the Northeast megalopolis are Harvard, Yale, Brown, Columbia, Cornell, Dartmouth, Princeton and the University of Pennsylvania. These are amongst the world's most prestigious places of learning.

There are also personal links New Yorkers have with friends and relatives throughout the region.



9.7.1 The global aviation network lines show direct links between airports, and the colour indicates passenger capacity in people per day (thousands [red], hundreds [yellow], tens [blue]).

International links

Airline links

Owned and operated by the Port Authority of New York and New Jersey, New York City's four major airports handle more than 120 million passenger movements each year. The network of airports operated by the Port Authority is the largest airport system in the United States, the second in the world in terms of passenger traffic and the first in the world in terms of total flight operations (see Figure 9.7.1).

JFK Airport (named after the thirty-fifth president of the United States, John Fitzgerald Kennedy) is the city's main international airport. The airport is the city's busiest, the thirteenth-busiest airport in the United States, and the

busiest international gateway in North America. More than 90 airlines, from more than 50 countries, operate flights to and from the airport, with nonstop or direct flights to destinations in all inhabited continents, except Australia. Even this will change in 2025, when Qantas commences its ultra-long haul, non-stop flights from Sydney and Melbourne to NYC.

The other airports serving the city are Newark Liberty International, New York Stewart International and LaGuardia. The latter two primarily accommodate airlines serving domestic (and limited international) destinations. All airports accommodate domestic flights. FedEx, the world's busiest cargo airline, uses Newark Airport as its regional hub.

Trade links

Having long been the busiest on US east coast, the port of New York–New Jersey handled a record 8.2 million TEUs (twenty-foot equivalent units—a standard-sized shipping container, the measurement used in the container industry) in the 10 months to October 2022 (see Figure 9.7.2). This made the port, and its vast container terminals, the largest such complex in the country, surpassing California's for the first time. The key to this development has been the Panama Canal expansion project, which doubled the capacity of the canal by adding a new lane of traffic. By adding the lane and increasing the width and depth of the lanes and locks, larger ships could carry twice as much cargo and twice as many vessels could travel through it. The greatly expanded capacity of the canal has significantly enhanced New York City's trading links with the Asia-Pacific region. Today, the port of New York–New Jersey is the world's eighteenth-busiest port.



9.7.2 New York-New Jersey container terminals and Newark Liberty International Airport

SPOTLIGHT

Transatlantic crossings

New York City was home to the transatlantic ocean liner during its golden age. See Figure 9.7.3). Popular from the end of the nineteenth century to the late 1960s, ocean liners carried passengers, including immigrants, across the Atlantic Ocean between Europe and North America. The advent of affordable air travel would ultimately make the ocean liner obsolete. Today, only one, Cunard's *Queen Mary 2*, undertakes the transatlantic crossing on a semi-regular basis. New York City does, however, continue to welcome cruise ships. Today, it is the sixth-busiest port in the United States and the sixteenth-busiest in the world for passenger travel.



9.7.3 Transatlantic liners berthed in New York City, 1961

Activities

Acquiring and processing geographical information

- 1 Summarise New York City's regional and international links, as outlined in this unit.

Applying and communicating geographical understanding

- 2 Access the Flightradar24 or FlightAware website. Observe the flights approaching or departing from New York City's airports. Where are they arriving from or heading to?

- 3 Identify and access a suitable marine tracking website such as ShipMap or MarineTraffic. Describe the global pattern of maritime movements, including those going to and from New York City.
- 4 Study the box, Spotlight: Transatlantic crossings. Investigate the golden age of transatlantic travel and the nature of the global cruise ship industry today. Write a short report in response to the question, 'How has the nature of travel on ocean-going passenger vessels changed since the late 1960s?'

UNIT 9.8

Living in New York City: Challenges and responses

Did you know?

New York City's housing stock includes nearly 1 million rent-regulated housing units, 175 000 public housing apartments, and many market-rate units that house millions of low- and middle-income New Yorkers.

Like all large cities, life in New York City has its challenges. These include access to affordable housing, congestion, ageing infrastructure and a shortage of open space (see Figure 9.8.1). Addressing these challenges is critical if people's quality of life is to be improved, spatial inequality reduced and sustainability enhanced.



9.8.1 Tenants protest about the shortage of affordable housing

Access to affordable housing

The shortage of affordable housing, rapidly increasing rents and high rates of homelessness are the key, interrelated, housing-related challenges facing New York City. Compounding the housing crisis is real estate speculation and funding cuts to federal housing programs that assist the most vulnerable households.

The NYCHA defines affordable housing as, 'housing that costs roughly one-third or less of a household's income and is regulated in such a way that the rent cannot increase drastically over time'. Such housing is especially important in New York City where 67.2 per cent of residents are renters, compared to 31 per cent in Australia. Fifty-three per cent of New Yorkers are described as being 'rent burdened'. Meaning that more than 30 per cent of their income is required to pay their rent.

Spatial pattern of renters

It is also evident that there are some important spatial variations in the percentage of people living in rented accommodation across the five boroughs and there is a relationship between a borough's percentage of renters and its median income. The Bronx has the highest proportion of renters (81.1%) and the lowest median income (US\$41 895). Manhattan's percentage of renters is 76.7 per cent and it has the highest median income at US\$85 066. Then comes Brooklyn (70.2%; US\$66 937), Queens (55.9%; US\$69 320) and Staten Island (34.3%; US\$82 166).

Median rents highlight the extent of the affordability challenge faced by New Yorkers. In late 2022, the shortage of housing helped send the typical median rent on new apartment leases in Manhattan to over US\$4100 a month (a 26% increase year-on-year). Median rents ranged from US\$2650 for entry-level apartments to US\$14 535 at the top end of the market.

Did you know?

The issue of affordable housing came to the fore in the period immediately after the lifting of COVID-19 pandemic emergency housing measures. These included restrictions on evictions and emergency rental assistance programs. Once they ended, thousands of landlords filed eviction notices due to tenants not paying back rent.

Median income and housing affordability

Not surprisingly, many New Yorkers depend on affordable housing initiatives. Eligibility for city-financed affordable housing is based on a measure known as the average median income (AMI), which is determined annually by the US Department of Housing and Urban Development. The AMI for the New York City region in 2022 was set at US\$93 400 for an individual and US\$120 100 for a three-person family. The AMI enables people to identify the income band they fall under each year, which determines the type and level of housing assistance they are eligible to receive. The five income bands and the corresponding percentage of the federally determined AMI are:

- extremely low income: 0–30 per cent
- very low income: 31–50 per cent
- low income: 51–80 per cent
- moderate income: 81–120 per cent
- middle income: 121–165 per cent

The Bronx has the highest need for government housing support (with its median income of US\$41 895, well below the AMI of US\$93 400). Access to affordable housing ultimately depends on whether there is enough housing stock available in a particular AMI band. Apartment buildings typically have a mix of band-specific accommodation units, but generally, there is a shortfall of units catering to people in the low-income brackets where the need is greatest.

NYCHA programs

The NYCHA provides public housing in the city. The authority aims to provide decent, affordable housing for low- and moderate-income New Yorkers. It also administers a citywide Section 8 Leased Housing Program. The authority provides a range of housing types including large-scale apartment buildings, which are commonly referred to as projects. (see Figure 9.8.2) The distribution of the authority's developments often results in large income disparities between the residents of projects and the surrounding neighbourhood.

In 2022, more than half a million New Yorkers lived in NYCHA's 335 public housing developments across the city's five boroughs. Another 235 000 received subsidised rental assistance in private homes through the NYCHA-administered Section 8 Leased Housing Program.

Constructing new affordable housing

Significantly, the construction of affordable housing lags behind population growth. As the city continues to grow, competition for housing only intensifies making it increasingly unaffordable, particularly for the most vulnerable residents—the elderly, those on low to moderate incomes, some immigrants and the 17.3 per cent of the population who live in poverty.

Affordable housing is also provided by the private sector. However, the barriers to the provision of such housing are many. Most centre on the complicated process developers must go through to gain building approvals.

In 2022, the governor of New York State and the mayor of New York City initiated an investigation into the issues hindering the development of new housing. The outcome was a series of changes to the real estate development process. These involved changes to the city's zoning rules and building, environmental and tax regulations. The objective of these changes is to provide 800 000 additional housing units by 2032. This, however, will prove difficult. In 2022 just 40 projects were approved by the city authorities—some 12 000 units, of which just 7000 were affordable. The scale of the undertaking is clear when considering that the target of 800 000 is 150 000 more housing units than was built over the last two decades in total.



9.8.2 Huge housing project apartment towers in upper Harlem

Other housing initiatives include:

- a mandatory inclusionary housing policy which requires developers whose properties are rezoned to ensure that a portion of the new housing is made permanently affordable
- the selective relaxation of zoning regulations, including those related to parking requirements and height limits), in exchange for affordable housing units
- the elimination of tax breaks for luxury apartment buildings
- increased efforts to protect tenants from harassment, unsafe living conditions and eviction
- providing legal aid to all New York City tenants engaged in renter disputes
- trialling modular construction techniques to determine whether they can significantly reduce construction time and cost
- promoting shared housing initiatives on private sites throughout the city. Shared housing, defined as any unit with two or more independently occupied rooms that share a kitchen or bathroom, can meet housing needs, promote income diversity and take advantage of construction cost savings
- unlocking the potential of vacant lots by encouraging the building of tiny homes and other infill housing on sites previously considered too small or irregular for development
- initiatives that transform basement apartments into safe, legal, affordable homes
- continuing to clean up brownfield sites suitable for housing developments.

Taken together, the city hopes to achieve a sustainable goal of 25 000 affordable housing units preserved or constructed each year—a rate it has never before achieved.

Rethinking the rental model

Some people question the very basis on which housing is provided for New Yorkers. They argue that landlords and housing corporations continue to place profits over people and that it's time to develop alternatives to this private, corporate ownership model. Housing owned by communities of tenants, rather than corporations, is one alternative. State and city authorities acquire or develop properties that can be owned and managed through community land trusts, occupied by tenants across the income spectrum.

Why does it matter? Access to decent, secure and affordable housing has a range of benefits. It leads to higher productivity and better health outcomes for people. Also, affordable housing frees up funds within family budgets to ensure they have food security and access to health care and educational opportunities, which are some of the keys to wellbeing. It is also an important contributor to the notion of the liveability of cities.

Homelessness

In 2022, 102 656 homeless New Yorkers slept in the New York City Department of Homeless Services shelter system. This included 29 653 homeless children. While most families entering shelters come from the city's poorest neighbourhoods, homeless families and single adults come from every New York City neighbourhood.

The primary cause of homelessness, particularly among families, is the lack of affordable housing. Surveys of homeless families have identified the following major immediate, triggering causes of homelessness: eviction, severely overcrowded housing, domestic violence, job loss and hazardous housing conditions. Compared to homeless families, homeless single adults have higher rates of serious mental illness, addiction disorders and other severe health problems.

Each night, thousands of unsheltered homeless people sleep on New York City streets, in the subway system and in other public spaces. While there is no accurate measurement of New York City's unsheltered homeless population, studies show that the large majority of unsheltered homeless are people living with mental illness or other severe health problems.

Black and Latino New Yorkers are disproportionately impacted by homelessness. Approximately 56 per cent of heads of household in shelters are Black, 32 per cent are Latino, 7 per cent are White, less than 1 per cent are Asian-American or Native American, and 4 per cent are of unknown race/ethnicity.

Helping the homeless

The Coalition for the Homeless, a New York City non-profit organisation, is America's oldest advocacy and direct service organisation helping homeless individuals and families. Each day, the coalition provides food, clothing, eviction prevention, crisis services, permanent housing, job training and special programs for youth to more than 3500 homeless men, women and children.

New York City Council's report *Our Homelessness Crisis* (2020) proposes a range of initiatives to address the challenge. These include:

- increasing the city rental assistance voucher amount to a fair market rate
- increasing access to affordable housing
- increasing the portfolio of supportive housing
- expanding housing options for homeless youth
- expanding mental health services
- rapid re-housing—an intervention designed to quickly connect people to housing and support services.

Activities

Acquiring and processing geographical information

- 1 Explain what is meant by affordable housing. What determines whether accommodation is considered affordable?
- 2 Outline the factors impacting on housing affordability in New York City.
- 3 Explain why affordable rental accommodation is so important in New York City.
- 4 What is the percentage of New Yorkers described as being rent burdened?
- 5 Explain why the issue of affordable housing come to the fore in the period following the COVID-19 pandemic.
- 6 Summarise the spatial variations in the proportion of people living in rental accommodation across the five New York City boroughs. What role does median income play in these variations?
- 7 Describe how access to affordable housing is determined.
- 8 Summarise the role of the NYCHA. How many New Yorkers depend on NYCHA housing?
- 9 Explain how the lag in housing construction makes housing increasingly unaffordable, especially for the disadvantaged.
- 10 Summarise the barriers to the provision of housing by the private sector. What has been the response of state and city authorities? Describe the scale of the housing challenge.
- 11 Summarise the initiatives designed to increase affordable housing in New York City. What alternative strategies have been proposed?

- 12 Summarise the benefits that flow from access to decent, secure and affordable housing.

- 13 What is the extent of homelessness in New York City? What are the primary causes of homelessness? What medical conditions are common among New York City's homeless population? List the groups disproportionately impacted by homelessness.

- 14 Summarise the initiatives used to address the homelessness issue.

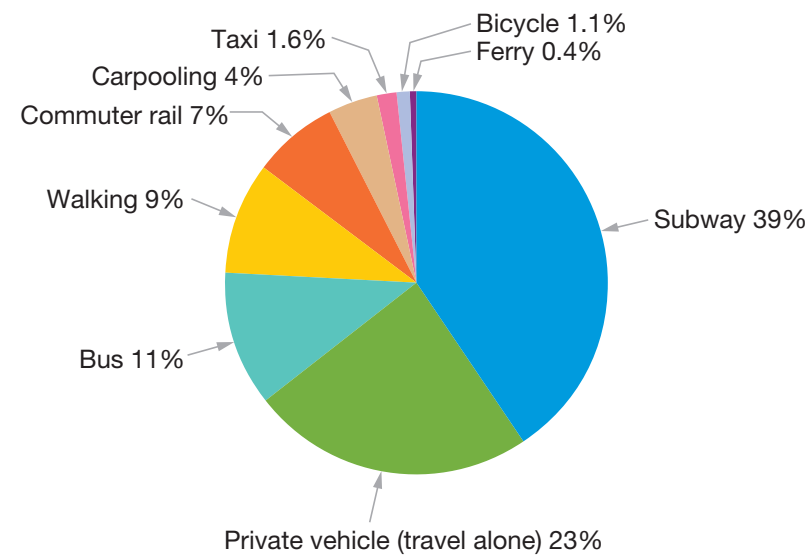
Applying and communicating geographical understanding

- 15 To further investigate the issue of affordable housing, access the OneNYC2050 Thriving Neighbourhoods strategic plan. Name the key element of this strategy. Summarise how it will address the issue of safe, secure and affordable housing.
- 16 Investigate the current state of the affordable housing challenge in New York City. Are the city's targets being achieved?
- 17 Investigate a major new development project in New York City. Outline the nature of the development. Does it include an affordable housing component?
- 18 Access New York City Council's *Our Homelessness Crisis* (2020) report. Investigate the state of homelessness in New York City, its drivers, and strategies for preventing homelessness. Present your findings as an extended written response.
- 19 Investigate a not-for-profit organisation assisting the homeless in New York City. Write a report outlining the strategies it is pursuing.

Transport infrastructure

Access to reliable, affordable and safe public transport is seen as central to the liveability and sustainability of New York City. The city's famous yellow cabs, extensive subway system and iconic bridges and tunnels have long been seen as the key to mobility in a city where rates of car ownership are low by American standards. Car ownership rates are lowest in Manhattan, where only 22% of households own a car, and only increase to significant rates in the outer neighbourhoods of Queens, Brooklyn and Staten Island. Overall, 55 per cent of New York City households rely on public transport because they don't own a vehicle.

The commute to work is the most significant of the movements within the city. An estimated 1.6 million commute to work each day. Figure 9.8.3 shows how this commute was undertaken in 2019, that is before the distortions caused by the COVID-19 pandemic. The average commuting time for New Yorkers is 41 minutes.



9.8.3 New York City commute by means of transport, 2019

The percentage of the population using public transport in New York City is well beyond that of other US cities where the use of private cars is far more extensive. Most other US cities are defined by low-density urban sprawl with high rates of car ownership. Los Angeles is probably the best-known such city. As a result, the environmental footprint of New Yorkers is lower than the average American. Due primarily to the relatively low rate of car ownership, New York City's greenhouse gas emissions are just 7.1 metric tonnes per person. New Yorkers are collectively responsible for one per cent of the nation's total greenhouse gas emissions while comprising 2.7 per cent of the nation's population. The sustainability of the city is, therefore, enhanced by the capacity of its public transport infrastructure.

Responsibility for the functioning of the city's extensive public transport infrastructure rests with the New York Department of Transportation (DOT), the Metropolitan Transportation Authority (MTA) and the New York City Transit (NYC Transit). The DOT is responsible for maintaining the city's streets and highways, footpaths, bridges and tunnels, street signs, traffic lights, lane markings and streetlights, and it operates the Staten Island Ferry service. NYC Transit operates the Staten Island Railway and New York City subway and bus systems, while the MTA is responsible for all public transportation in the New York City metropolitan area in the State of New York. The Port Authority of New York and New Jersey is responsible for much of the interstate transport infrastructure linking New York City with New Jersey and beyond, including bridges, tunnels, airports and seaports.

Transport-related challenges

The challenges associated with New York City's vast transport system include its ageing infrastructure and traffic congestion. This is because the city's subways, roads and bridges are among the oldest in the country and the most intensively used.

The New York City subway

The city's subway, in operation since 1904, is one of the world's oldest public transport systems. Most of the subway's infrastructure dates from before the 1930s, when the city's population was just 6.9 million. It was not built to cater for a population of 8.8 million. Let alone a projected population of 9.8 million in 2050.

With 28 routes or services, 472 stations and 399 kilometres of track, the subway's maintenance demands are enormous (see Figure 9.8.4). Many stations are dilapidated and in urgent need of upgrading. Some are subject to flooding in heavy rains and the whole system is infested with rats. The subway's signalling system is, in parts, more than 70 years old. As a result, services are often disrupted or delayed. Routine maintenance and cleaning are difficult because the system operates 24 hours a day, all year round.

In 2017, a state of emergency was declared after a series of derailments, track fires and overcrowding incidents. In response, the city announced a two-phase US\$9 billion action plan aimed at stabilising the subway system and preventing its continued decline. The first phase, costing US\$836 million, consisted of improvements in signal and track maintenance, carriage reliability, system safety and cleanliness, and customer communication. The second phase, costing US\$8 billion, will fix more widespread problems.



9.8.4 New York City's subway map

Traffic congestion

Traffic congestion is common throughout much of New York City. It is especially bad in Manhattan, where gridlock is common (see Figure 9.8.5). The sheer volume of traffic and the borough's narrow streets result in traffic jams, which are not only a source of inconvenience but also add to the costs of doing business. It also impacts the amenity of neighbourhoods. Delivery vehicles are a major cause of congestion—an issue made worse by the growth in online shopping and their tendency to disrupt the flow of traffic while making deliveries. Other sources of congestion are the vehicles transporting construction materials and the many tourist buses travelling around the city's many attractions. The cost of traffic congestion has been estimated to be US\$15 billion annually and an extra 1135 million litres of fuel.

Did you know?

In 2021, the subway delivered 1.31 billion passenger rides (or about 6.76 million rides a day), compared to the 150 000 in the year it opened (1904). The daily record for rides is 6.2 million, on 29 October 2015.

Did you know?

Only 40% of the subway's track is above ground.

Did you know?

Tourists place additional pressure on New York City's infrastructure. In 2019, before the COVID-19 pandemic slashed visitor numbers, New York City hosted 66.6 million visitors making it the most visited city in the Western Hemisphere.

Did you know?

In the most congested parts of Manhattan, traffic moves 23% slower than it did a decade ago. For the bridges and tunnels moving traffic to and from Manhattan, traffic has slowed even more markedly. The average speed of a car in Midtown is now just 7.5 km/hr.



9.8.5 Traffic jam, Times Square

While traffic congestion makes driving challenging, it also makes the streets more dangerous for pedestrians and cyclists. In 2021, there were over 228 000 motor vehicle accidents in New York City (around 625 accidents per day). Queens had 29.5 per cent of all accidents, followed by Brooklyn (28.8%), Manhattan (20%) and the Bronx (16.1%). Staten Island recorded 5.7 per cent of all accidents.

To reduce traffic congestion in Manhattan, city authorities have proposed introducing a congestion charge of up to US\$23 a day, which is estimated to reduce the number of cars entering Manhattan by 15–20 per cent. The charge would apply to all traffic entering an area between 60th Street in Midtown and Battery Park at the southern tip of the borough. If approved by the Federal Highway Administration, New York City would become the first large US city to follow London, which introduced a similar charge in 2003. Congestion pricing is described as good for the environment, good for public transport and good for New York and the region. An environmental assessment found the charge would not only reduce traffic congestion, it would also improve air quality. It would make buses more reliable and increase public transport use by 1–2 per cent. The toll would generate revenue of US\$1 to 1.5 billion a year and support US\$15 billion in debt-based financing for mass transit improvements.



9.8.6 Share car, New York City

Traffic congestion has also been addressed via the promotion of car-sharing initiatives (see Figure 9.8.6). Car sharing reduces the incentive for car ownership. If a car is needed, one simply rents a vehicle, often by the hour. GoGet is an Australian example of a carsharing initiative. Zipcar is one of the most popular carshare providers in New York City. Members pay a monthly fee to have access to an assortment of rental cars, and car use is billable by the minute, hour or day. Zipcar is a subsidiary of the Avis Budget hire car group. Other popular car-share providers are Silvercar, Car2Go and Real Car. All offer the convenience of car ownership without the ongoing cost involved and the challenge of securing a parking space. New York City's DOT has encouraged the growth of carsharing by providing designated parking spaces for use by recognised car-sharing organisations in municipal parking stations and on designated streets.

To address the accident rate, the city initiated the Vision Zero Action Plan focused on road safety. The plan aims to reduce collisions, serious injuries and fatalities associated with pedestrians and cyclists. Since its inception in 2014, the program has resulted in fewer road deaths each year by focusing on education, enforcement and engineering. The latter includes expanding bike lanes and implementing pedestrian priority areas.

Vision Zero Action Plan initially targeted intersections and road corridors based on pedestrians killed or seriously injured. By the end of the initial five-year plan, the DOT had addressed 90 per cent of priority intersections and 86 per cent of priority corridors with design and engineering interventions that contributed to a 36 per cent drop in pedestrian deaths at those locations.

In 2022, the city initiated a US\$900 million plan to further enhance pedestrian safety via the Speeding Ruins Lives, Slow Down campaign. The campaign targeted multi-lingual media so that the message reached a wide range of communities across the five boroughs, including minority communities that are disproportionately affected by traffic accidents. A multi-platform and multi-lingual advertising campaign was launched to target speeding and dangerous driving behaviours. Additionally, funding was provided to redesign 1000 intersections across the five boroughs. This included the installation of speed and red-light cameras, which have proved effective in reducing dangerous driving. Pedestrian intersection crossing times have also been modified to cater for older pedestrians. While those aged 65 years and older make up less than 15 per cent of the city's population, they represent 47 per cent of all annual pedestrian fatalities.

Roads, bridges and tunnels

New York City has about 30 500 kilometres of roads and highways. In Manhattan, 43 per cent are deemed substandard, in Staten Island it is 40 per cent, the Bronx 34 per cent, Queens 31 per cent and Brooklyn 28 per cent. Substandard roads impact travel times, costing businesses time and money. They can also damage vehicles.

Maintaining the city's underground utilities impacts road surfaces and is a major source of traffic congestion. Each day, more than 300 streets are dug up to conduct utility infrastructure inspections, maintenance and repair. While this work is essential to keep the city in functioning order, it forces New Yorkers to navigate streets undergoing a seemingly endless series of excavations.



9.8.7 Brooklyn Bridge, a famous New York City landmark, was opened in 1883.

Of the 162 bridges in New York City, 11 per cent are more than 100 years old (see Figure 9.8.7). Forty-seven bridges are rated 'structurally deficient' and 'fracture critical'. The latter category identifies bridges that engineers identify as having 'little structural redundancy'. In other words, they are prone to failure and/or collapse.

The Holland Tunnel, the oldest of the vehicular tunnels, was opened in 1927. The city's other major tunnels are the Lincoln Tunnel (1937), the Queens–Midtown Tunnel (1940) and the Brooklyn–Battery Tunnel (1950). All require expensive, ongoing maintenance. Tolls are used to offset at least part of the cost.

Addressing transport challenges

New York City's transportation challenges are addressed under the goal of efficient mobility in OneNYC 2050—the city's long-term strategic plan. The aim of efficient mobility is to 'enable reliable, safe and sustainable transportation options'. Specific initiatives include the modernisation of the city's mass transit networks, reducing congestion and emissions, and making sure that the city's streets are safe and accessible.

The modernisation of mass transit will involve massive, system-wide repairs and upgrades, to improve reliability. Other initiatives include optimizing streets for the efficient operation of buses, providing discounted MetroCards for low-income New Yorkers through the Fair Fares Program, increasing the accessibility of subway stations (75% remain inaccessible to people with limited mobility) and exploring options for the expansion of the subway.

Tackling congestion and emissions involves building a citywide network of electric vehicle charging stations, incentivising the adoption of low and zero-emissions vehicles, the use of new technologies to enforce road rules, the use of congestion pricing, expanding the use of bus and bike lanes and promoting car sharing.

Making sure that the city's streets are safe and accessible involves implementing the Vision Zero Action Plan, transforming dangerous arterial roads into Vision Zero Great Streets (that is, turning roads that currently divide neighbourhoods and hinder accessibility into safe and thriving community connectors), reducing fatalities and serious injuries involving fleets managed or regulated by city agencies, expanding and increasing the connectivity of the bike network and enhancing walkability and accessibility.

Activities

Acquiring and processing geographical information

- 1 Explain why access to reliable, affordable and safe public transport is considered important in terms of the liveability of New York City.
- 2 Summarise the environmental benefits derived from New York City's reliance on public transport.
- 3 List the authorities responsible for New York City's transport infrastructure.
- 4 Describe the transport related challenges faced by New York City. How do those faced by New York's subway highlight these challenges? What is being done to address these challenges?
- 5 Summarise the causes, impacts and costs of traffic congestion in New York City.
- 6 Summarise the strategies being used and proposed to address the issue of traffic congestion. What are their benefits, especially those related to pedestrian and cyclist safety, the environment, and the economy?
- 7 Describe the state of the city's road, bridge and tunnel infrastructure.

- 8 List the key elements of the OneNYC250 efficient mobility strategy.

Applying and communicating geographical understanding

- 9 Study Figure 9.8.5. Write a paragraph describing the principal modes of commuting in New York City. Suggest reasons for the dominance of the subway.
- 10 Study Figure 9.8.6. Which New York city boroughs are best serviced by the subway? How does the subway reinforce the economic dominance of Manhattan?
- 11 Conduct a class discussion on the topic, 'Subways or metro systems work best in high-density cities such as New York City, London and Paris, where stations are within easy walking distance of where most people live,' or, 'Is the Metro the best public transport system the best solution for a low-density city such as Sydney?'
- 12 Access the city's OneNYC250 efficient mobility strategy. Write a short report on the progress being made to improve the city's transport infrastructure.

Recreational spaces and facilities

In high-density cities such as New York City, access to recreational spaces is an important, lifestyle-related, consideration. People need space to exercise, relax, interact with others, or just be alone in the open air.

The New York City Department of Parks & Recreation is responsible for the city's parks and public recreational facilities. These consist of more than 12 141 hectares of land (14% of New York City). This includes more than 5000 individual spaces ranging from Coney Island Beach and Central Park to community gardens and Greenstreets. It operates more than 800 athletic fields and nearly 1000 playgrounds, 1800 basketball courts, 550 tennis courts, 65 public pools, 51 recreational facilities, 15 nature centres, 14 golf courses and 22.5 kilometres of beaches. It is New York City's principal provider of recreational and athletic facilities and programs.

The Greenstreets program converts paved, vacant traffic islands and median strips into green spaces filled with trees, shrubs and groundcover to capture stormwater. GrowNYC—the largest and most established environmental organisation in NYC—has built more than 150 community gardens in public housing developments, day care centres and senior centres. Communities use the gardens to grow fresh vegetables.

Under the OneNYC 2050 Thriving Neighbourhoods strategy, city authorities aim to enhance liveability and sustainability by providing all New Yorkers with access to neighbourhood open spaces. Under the Community Parks Initiative and Parks Without Borders, city authorities are working with communities to invest in dense and growing neighbourhoods. The Community Parks Initiative involves engaging with the communities who use the parks and then incorporating their ideas into their redesign. Parks Without Borders involves making parks more open (for example, by removing fencing), welcoming and beautiful, by improving entrances, edges and park-adjacent spaces. The aim is to make park entrances easier to find, the edges of the parks greener, add furnishing, programming and amenities, and improve sight lines to make parks safer. In addition to improving parks within the boroughs, the city is planning to complete the Manhattan Greenway, a 53-kilometre loop that will run around the edge of the island of Manhattan. In neighbourhoods with limited open space, authorities are promoting the development of pedestrian plazas and streets—places where people can meet and interact.

By investing in parks and recreation spaces in areas of highest need, city authorities are seeking to enhance liveability by increasing New Yorker's access to open spaces, cultural events and activities. The aim is to bring communities together, contribute to better health and foster cohesion and community development.

SPOTLIGHT

Little Island

Set on 132 huge tulip-shaped concrete pillars on the banks of the Hudson River, Little Island is New York City's newest park and tourist attraction (see Figure 9.8.8). Costing US\$260 million, the park straddles the site of Pier 54—the site where the survivors of the *Titanic* arrived in New York City and from where the ill-fated *Lusitania* departed before it was sunk by a German U-boat, 18 kilometres off the southern coast of Ireland on 7 May 2015, killing 1198 passengers and crew. There were 761 survivors.

Little Island is connected to Manhattan by walkways that will take visitors to and from the fashionable Meatpacking District. Little Island is part of the rejuvenation of the West Side. Once dominated by a bustling port, the area deteriorated into industrial eyesores and homeless camps before a revitalization program this century converted much of it into the Hudson River Park. The park, a component of the Manhattan Waterfront Greenway, stretches for 7.2 kilometres and covers 220 hectares, making it the second-largest park in Manhattan after Central Park.



9.8.8 New York City's newest park, Little Island

SPOTLIGHT

New York City's High Line

The High Line is a 2.33-kilometre elevated linear park, created on a former New York Central Railroad spur line on the west side of Manhattan (see Figure 9.8.9).

The High Line (see Figure 9.8.10) was built in 1934 as part of a massive infrastructure project called the West Side Improvement. It lifted freight train traffic 9–10 metres above the ground, removing dangerous trains from the streets of Manhattan's largest industrial district. The trains carried meat, produce and factory goods.

After the last train ran along the tracks in 1980, the High Line became just another piece of decaying urban infrastructure. The rails rusted and the ballast turned into a growing medium for weeds.

In the 1990s, the city's mayor was keen to tear down the High Line. It was seen as a blight on the rapidly gentrifying Chelsea neighbourhood with its trendy galleries, restaurants and loft living.

Almost 20 years after the last train travelled along its tracks, two residents of the High Line neighbourhood, Robert Hammond and Joshua David, both civic activists, recognised the line's potential. They started campaigning for the area's preservation and reuse. Eventually, their activism paid off. By 1999, they had founded Friends of the High Line, the non-profit body that now maintains and operates the High Line and its programs. Funds come from both public and private sources.

Ten years after the founding of Friends of the High Line, the first section, from Gansevoort to West 20th Street, opened to the public in 2009. By 2011, the second section opened, covering the city from West 20th to West 30th Street and finally in 2014, the Rail Yards, from West 30th to West 34th opened.

The High Line quickly became one of the city's most popular recreational facilities. It attracts over 8 million New Yorkers and tourists each year.

The development of the High Line illustrates how the provision of additional green space can accelerate the pace of gentrification and urban renewal. The opening of the High Line not only improved the amenity of adjacent neighbourhoods, but it also increased property prices and rents—in some instances driving out long-term residents. The High Line has also attracted the interest of developers. Land adjacent to the High Line now boasts one of the highest concentrations of architecturally designed buildings in the country.

The High Line's landscaping reduces storm-water runoff by up to 80 per cent and lessens the urban **heat island effect**. The trees provide shade and a habitat for many native insects and birds. The High Line forms part of a migratory corridor along the Hudson River for more than 300 bird species. The plants used are drought-tolerant and low-maintenance species. This reduces the need for pesticides and chemical fertilisers.



9.8.9 Historical photograph of the High Line



9.8.10 The High Line following its abandonment in 1980 (left). The High Line is now a popular recreational space and tourist attraction (right).

Activities

Acquiring and processing geographical information

- 1 List the range of recreational spaces and facilities available to New Yorkers. Why are they considered an important lifestyle consideration? Name the authority responsible for maintaining them.
- 2 Outline the contributions made by the Greenstreets program and GrowNYC.
- 3 Outline the key elements of the OneNYC2050 Thriving Neighbourhoods strategy.

Applying and communicating geographical understanding

- 4 Study the box, Spotlight: Little Island. Explain what the development suggests about the importance of open space in New York City.
- 5 Study the box, Spotlight: New York City's High Line. Summarise the origins of the High Line, its impact on adjacent neighbourhoods and its environmental benefits.

Digital infrastructure

Internet access is fundamental to economic inclusion and mobility, yet the unreasonably high cost of services and uneven access across the city excludes millions of New Yorkers. To address this, the city has committed to having universal broadband available across the five boroughs as soon as 2025. This involves incentivising new providers to bring broadband to parts of the city that are currently underserved. At present, only Lower Manhattan has robust fibre optic infrastructure—the basic building block of internet connectivity. In the rest of the city, options are limited. This makes it harder for new internet service providers or other businesses to expand in those areas.

Ecological footprint: Pollution and waste challenges

New York City's 8.8 million people generate an incredible amount of waste—almost 10 000 metric tonnes per day. Managing this waste is primarily the responsibility of the New York City Department of Sanitation. The department maintains the waste collection infrastructure and hires public and private contractors who remove the city's waste. Until the 1930s, the city dumped its solid waste into the ocean. Then, until 1990, it was burnt in the city's 11 incinerators and the resulting ash was dumped into landfills scattered across the five boroughs. Since the closure of the last municipal incinerator in 1990 and the last municipal landfill in 2001, all the city's solid waste has been transferred to incinerators well outside the city. The waste is placed in containers at one of the three marine transfer stations, the containers are then taken by barge to the Staten Island waste transfer station where the containers are transferred to trains for shipment to landfills and incinerators outside the city.

New York City began mandatory kerbside recycling in the late 1980s. The primary recycling facility is the Sunset Park Material Recovery Facility in Brooklyn.

New York City's sewerage system transports more than 1000 metric tonnes of solids, including faecal matter, per day to the city's 17 wastewater treatment plants. The waste is treated, and the solids are removed. The treated water is then released into the city's waterways. The remaining sludge is shipped to a water pollution control plant on Randalls Island where the remaining water is extracted. The remaining solids are then sealed in containers and shipped to landfill sites well beyond the city.

Climate change

While climate change is a global challenge, New York State and New York City, perhaps unsurprisingly given their progressive politics, are at the forefront of America's efforts to reduce its environmental footprint. Clean Path NY is one example. This US\$11 billion clean infrastructure project is made up of more than 20 wind and

solar generation projects (all located in New York State) and a new 280-kilometre, underground transmission line. When complete, it will provide more than 7.5 million megawatt-hours of emissions-free energy into New York City every year, reducing the emissions from New York's electric grid by an estimated 22 per cent. It will also remove 49 million metric tons of carbon dioxide from the atmosphere between now and 2040 and provide a 20–22 per cent reduction annually in air-borne pollutants, such as nitrogen oxides, sulphur oxides and particulate matter generated by the fossil-fuel powerplants it replaces. Cleaner air will yield billions of dollars in social benefits including a reduction in pollution-linked diseases and associated treatment costs.

More generally, New York State aims to achieve 70 per cent renewable energy by 2030, 100 per cent zero-emission electricity by 2040, a 40-per cent reduction from 1990 levels in state-wide greenhouse gas emissions by 2030, an 85-per cent reduction from 1990 levels by 2050, and net-zero emissions state-wide by 2050. To achieve this, the city has:

- committed billions of dollars to energy-efficiency measures in municipal buildings
- initiated a vehicle replacement strategy—the city also operates the largest electric municipal fleet in the nation, with more than 1750 electric vehicles (EVs), with more to come
- helped more than 5000 privately owned buildings complete energy retrofits under the Retrofit Accelerator and Community Retrofit NYC programs
- introduced property tax incentives to install solar energy.

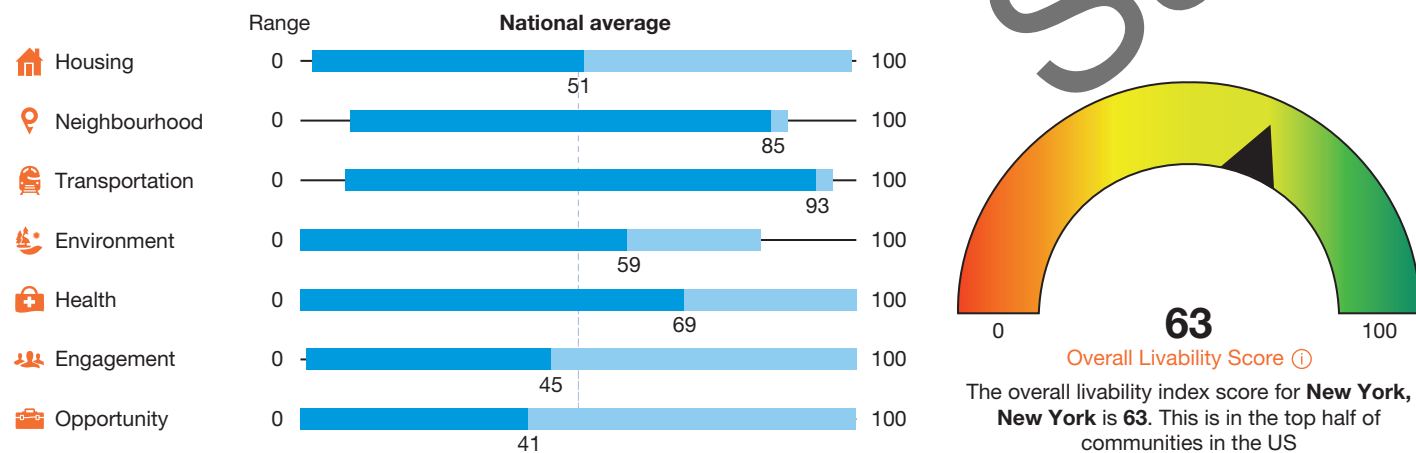
The private sector is also playing its part, investing billions in installing energy-efficiency measures in buildings across the city.

Liveability

The challenges and responses outlined above all impact on the liveability of New York City. Each year the AARP (American Association of Retired Persons) publishes a liveability index of American cities. The AARP is the nation's largest non-profit, nonpartisan organisation focusing on improving the liveability of communities.

The AARP gives New York City a liveability score of 63 out of 100, with the average for American cities being 50. The categories used to generate the score are housing, neighbourhood, transportation, environment, health, engagement and opportunity.

Figure 9.8.11 shows the range of scores received by New York City on each of the AARP's seven criteria and a comparison with the US median. For example, the city scores highest on access to transportation, neighbourhood amenity and health care. It scores below the American average in engagement and opportunity. The latter is impacted by the city's income inequality and its relatively low high school graduation rate. The engagement score is impacted by the low voter turnout at elections—perhaps inevitable in the absence of compulsory voting and the political dominance of the Democratic Party in the city.



9.8.11 New York City's scores compared with the median of all US neighbourhoods

Activities

Acquiring and processing geographical information

- 1 Describe the importance of digital infrastructure. How is the city seeking to enhance internet access?
- 2 Summarise the amount of waste generated by New York City's 8.8 million people and how it is disposed of.
- 3 Summarise how the Clean Path NY development will assist the city to reduce its environmental footprint. In what other ways is the city seeking to achieve its renewable energy targets?
- 4 Describe how the liveability of New York City compares with that of other American cities.

Applying and communicating geographical understanding

- 5 Investigate additional developments the state of New York or New York City is undertaking or planning to further reduce its greenhouse gas emissions. Share your findings with the class.
- 6 Study Figure 9.8.12. Using data from the graph, write a report comparing the liveability of New York City with the American median for the seven criteria used by the AARP. Access the AARP website to find the sub-criteria used within each of the seven criteria to add additional detail to your report.