

Chapter 13

Urban Patterns

Key Issues

1. Why do services cluster downtown?
2. Where are people distributed within urban areas?
3. Why do inner cities face distinctive challenges?
4. Why do suburbs face distinctive challenges?

(406)

This chapter looks at where people and activities are distributed within urban spaces. We all experience the interplay between *globalization* and *local diversity* of urban settlements. Many downtowns have a collection of high-rise buildings, towers, and landmarks that are identifiable even to people who have never visited them. On the other hand, suburban houses, streets, schools, and shopping centers look very much alike from one American city to another. In *regions* of MDCs, people are increasingly likely to live in suburbs. People wish to spread across the landscape to avoid urban problems, but at the same time they want convenient *connections* to the city's jobs, shops, culture, and recreation. Although different internal structures characterize urban areas in the United States and elsewhere, the problems arising from current spatial trends are similar. Geographers describe where different types of people live and try to explain the reasons for the observed patterns.

Key Issue 1. Why Do Services Cluster Downtown?

- **CBD land uses**
- **Competition for land in the CBD**
- **CBDs outside North America**

Downtown is the best-known and the most visually distinctive area of most cities. The downtowns of most North American cities have different features than those in the rest of the world.

CBD Land Uses

Downtown is known to geographers by the more precise term **central business district (CBD)**. The CBD is compact, but contains a large percentage of the shops, offices, and public institutions.

(407)

The center is the easiest part of the city to reach from the rest of the region and is the focal point of the region's transportation network.

Retail Services in the CBD

In the past, three types of retail services clustered in the CBD, because they require accessibility to everyone in the region — retailers with a high threshold, those with a long range, and those that serve people who work in the CBD.

Retail Services with a High Threshold. High-threshold shops, such as department stores, traditionally preferred a CBD location to be accessible to many people. Rents were highest there because this location had the highest accessibility for the most customers. In recent years, many high threshold shops such as large department stores have closed their downtown branches. The customers for downtown department stores now consist of downtown office workers, inner-city residents, and tourists.

Retail Services with a High Range. High-range retailers are often specialists, with customers who patronize them infrequently. Like those with high thresholds, high-range retailers have moved with department stores to suburban locations. These retailers survive in some CBDs if they combine retailing with recreational activities. New shopping areas that attract high-range retailers have been built in several North American CBDs. These downtown malls attract suburban shoppers as well as out-of-town tourists because in addition to shops, they offer unique recreation and entertainment experiences.

Retail Services Serving Downtown Workers. A third type of retail activity in the center serves the many people who work in the center and shop during lunch or working hours. (408) These businesses sell office supplies, computers, and clothing, or offer shoe repair, rapid photocopying, dry cleaning, and soon. In contrast to the other two types of retailers, shops that appeal to nearby office workers are expanding in the CBD, in part because the number of downtown office workers has increased and in part because downtown offices require more services.

Business Services in the CBD

Offices cluster in the center for accessibility. Despite the diffusion of modern telecommunications, many professionals still exchange information with colleagues primarily through face-to-face contact. Offices are centrally located to facilitate rapid communication of fast-breaking news through spatial proximity. A central location also helps businesses that employ workers from a variety of neighborhoods. Firms that need highly specialized employees are more likely to find them in the central area, perhaps currently working for another company downtown.

Competition for Land in the CBD

The center's accessibility produces extreme competition for the limited sites available. As a result, land values are very high in the CBD, and it is too expensive for some activities.

High Land Costs

Tokyo's CBD probably contains Earth's most expensive land. Tokyo's high prices result from a severe shortage of buildable land. Buildings in most areas are legally restricted to less than 10 meters in height (normally three stories) for fear of earthquakes. Two distinctive characteristics of the central city follow from the high land cost. First, land is used more intensively in the center. Second, some activities are excluded because of the high cost of space.

Intensive Land Use. The intensive demand for space has given the CBD a three-dimensional character, pushing it vertically. A vast underground network exists beneath most central cities. The typical "underground city" includes multistory parking garages, loading docks and utility lines. Subways run beneath the streets of larger central cities.

(409)

Cities such as Minneapolis, Montreal, and Toronto have built extensive pedestrian passages and shops beneath the center. These underground areas segregate pedestrians from motor vehicles and shield them from harsh winter weather.

Skyscrapers. Demand for space in the CBD has also made high-rise structures economically feasible. Suburban houses, shopping malls, and factories look much the same from one city to another, but each city has a unique downtown skyline resulting from its high-rise buildings. The first skyscrapers were built in Chicago in the 1880s, made possible by two inventions: the elevator and iron-frame building construction. The first high-rises caused great inconvenience to neighboring structures because they blocked light and air movement. Artificial lighting, ventilation, central heating, and air-conditioning have helped solve these problems. Skyscrapers

are an interesting example of “vertical geography.” The nature of an activity influences which floor it occupies in a typical high-rise.

Activities Excluded from the CBD

High rents and land shortage discourage two principal activities in the CBD: industrial and residential.

Lack of Industry in the CBD. Modern factories require a large parcel of land to spread operations among one-story buildings. Suitable land is generally available in suburbs. Port cities have transformed their waterfronts from industry to commercial and recreational activities. CBD waterfronts have become major tourist attractions in a number of North American cities, including Boston, Toronto, Baltimore, and San Francisco, as well as in European cities such as Barcelona and London.

Lack of Residents in CBDs. Many people used to live downtown. Poorer people jammed into tiny overcrowded apartments, and richer people built mansions downtown. In the twentieth century most residents abandoned downtown living because of a combination of pull and push factors. They were pulled to suburbs that offered larger homes with private yards and modern schools. (410) And they were pushed from CBDs by high rents that business and retail services were willing to pay and from the dirt, crime, congestion, and poverty that they experienced living downtown. In the twenty-first century the population of many U.S. CBDs has increased. Downtown living is especially attractive to people without school-age children.

CBDs Outside North America

CBDs outside North America are less dominated by commercial considerations. European cities display a legacy of low-rise structures and narrow streets, built as long ago as medieval times. Some European cities have tried to preserve their historic core by limiting high-rise buildings and the number of cars. More people live downtown in cities outside North America. Although constructing large new buildings is difficult, many shops and offices still wish to be in the center of European cities. The alternative to new construction is renovation of older buildings, which is more expensive, and as a result rents are much higher in the center of European cities than in U.S. cities of comparable size.

Key Issue 2. Where Are People Distributed within Urban Areas?

- **Models of urban structure**
- **Applying the models outside North America**

People are not distributed randomly within an urban area. Geographers describe where people with particular characteristics are likely to live within an urban area, and they offer explanations for why these patterns occur.

Models of Urban Structure

Sociologists, economists, and geographers have developed three models to help explain where different types of people tend to live in an urban area: the concentric zone, sector, and multiple nuclei models. The three models describing the internal social structure of cities were all developed in Chicago, a city on a prairie. Except for Lake Michigan to the east, few physical features have interrupted the region’s growth.

Concentric Zone Model

The concentric zone model was the first to explain the distribution of different social groups within

urban areas. It was created in 1923 by sociologist E.W. Burgess. According to the **concentric zone model**, a city grows outward from a central area in a series of concentric rings.

1. CBD: The innermost ring, where nonresidential activities are concentrated.
2. A zone in transition, which contains industry and poorer quality housing. Immigrants to the city first live in this zone.
3. A zone of working-class homes, which contains modest older houses occupied by stable, working-class families.
(411)
4. A zone of better residences, which contains newer and more spacious houses for middle-class families.
5. A commuters' zone, beyond the continuous built-up area of the city.

Sector Model

A second theory of urban structure, the **sector model**, was developed in 1939 by land economist Homer Hoyt. According to Hoyt, the city develops in a series of sectors, not rings. Certain areas of the city are more attractive for various activities, originally because of an environmental factor or even by mere chance. As a city grows, activities expand outward in a wedge, or sector, from the center. The best housing is therefore found in a corridor extending from downtown to the outer edge of the city. Industrial and retailing activities develop in other sectors, usually along good transportation lines. To some extent, the sector model is a refinement of the concentric zone model rather than a radical restatement. (412) Hoyt and Burgess both claimed that social patterns in Chicago supported their model.

Multiple Nuclei Model

Geographers C. D. Harris and E. L. Ullman developed the multiple nuclei model in 1945. According to the **multiple nuclei model**, a city is a complex structure that includes more than one center around which activities revolve. Examples of these nodes include a port, neighborhood business center, university, airport, and park. The theory also states that some activities are attracted to particular nodes while others try to avoid them. For example, a university node may attract well-educated residents, pizzerias, and bookstores, whereas an airport may attract hotels and warehouses.

Geographic Applications of the Models

The three models help us understand where people with different social characteristics tend to live within an urban area. Effective use of the models depends on the availability of data at the scale of individual neighborhoods. Urban areas in the United States are divided into **census tracts**, which contain approximately 5,000 residents and correspond where possible to neighborhood boundaries. Every decade, the U.S. Bureau of the Census publishes data summarizing the characteristics of the residents living in each tract.

Social Area Analysis. The spatial distribution of any of these social characteristics can be plotted on a map of the community's census tracts. Social scientists can compare the distributions of characteristics and create an overall picture of where various types of people tend to live. This kind of study is known as **social area analysis**.

Critics point out that the models are too simple and fail to consider the variety of reasons that lead people to select particular residential locations. Because the three models are all based on conditions that existed between the two world wars, critics also question their relevance to contemporary urban patterns. But if the models are combined rather than considered independently, they help geographers explain where different types of people live in a city. The models say that most people prefer to live near others having similar characteristics.

(413)

Putting the three models together, we can identify, for example, the neighborhood in which a high-income, Asian-American owner-occupant is most likely to live.

Applying the Models Outside North America

American urban areas differ from those elsewhere in the world. Social groups in other countries may not have the same reasons for selecting particular neighborhoods.

European Cities

In contrast to most U.S. cities, wealthy Europeans still live in the inner rings of the upper class sector, not just in the suburbs. A central location provides proximity to the region's best shops, restaurants, cafes, and cultural facilities. As in the United States, wealthier people in European cities cluster along a sector extending out from the CBD. In the past, low-income people also lived in the center of European cities. Social segregation was vertical: Wealthier people lived on the first or second floors, while poorer people occupied the dark, dank basements, or they climbed many flights of stairs to reach the attics.

(414) Today, low-income people are less likely to live in European inner-city neighborhoods. Poor-quality housing has been renovated for wealthy people, or demolished. Building and zoning codes prohibit anyone from living in basements, and upper floors are attractive to wealthy individuals once elevators are installed.

People with lower incomes have been relegated to the outskirts of European cities. Many residents of these dreary suburbs are persons of color or recent immigrants from Africa or Asia who face discrimination and prejudice by "native" Europeans. European officials encouraged the construction of high-density suburbs to help preserve the countryside from development and to avoid the inefficient sprawl that characterizes American suburbs.

Less Developed Countries

In LDCs, as in Europe, the poor are accommodated in the suburbs, whereas the rich live near the center of cities, as well as in a sector extending from the center. The similarity between European and LDC cities is not a coincidence. Most cities in less developed countries have passed through three stages of development — pre-European colonization, the European Colonial period, and postcolonial independence.

Precolonial Cities. Few cities existed in Africa, Asia, and Latin America before the Europeans established colonies. Most people lived in rural settlements.

Cities were often laid out surrounding a religious core, such as a mosque in Muslim regions. Government buildings and the homes of wealthy families surrounded the mosque and bazaar. Families with less wealth and lower status located farther from the core, and recent migrants to the city lived on the edge. Commercial activities were arranged in a concentric and hierarchical pattern:

- Higher-status businesses directly related to religious practices were located closest to the mosque.
- In the next ring were secular businesses.
- Food products were sold in the next ring, and then came blacksmiths, basket makers, and potters.
- A quarter would be reserved for Jews, a second for Christians, and a third for foreigners

In Mexico, the Aztecs founded Mexico City — which they called Tenochtitlán — on a hill known as Chapultepec. Forced by other people to leave the hill, they migrated a few kilometers south.

Then in 1325 they moved to a marshy island in Lake Texcoco. (415) Over the next two centuries, the Aztecs conquered the neighboring peoples and extended their control through much of present day Mexico.

Colonial Cities. When Europeans gained control of Africa, Asia, and Latin America, they expanded existing cities to provide colonial services as well as housing for Europeans who settled in the colony. Colonial cities were either left to one side or demolished because they were totally at variance with European ideas.

Colonial cities followed standardized plans. All Spanish cities in Latin America, for example, were built according to the Laws of the Indies, drafted in 1573. Cities were to be constructed on a gridiron street plan centered on a church and central plaza and neighborhoods centered around smaller plazas with parish churches or monasteries. (416) After the Spanish conquered Tenochtitlán, they destroyed the city, and dispersed or killed most of the inhabitants. The city, renamed Mexico City, was rebuilt around a main square, called the Zócalo, in the center of the island, on the site of the Aztecs' sacred precinct. The Spanish reconstructed the streets in a grid pattern extending from the Zócalo. In other examples, Fès (Fez), Morocco, now consists of two separate and distinct towns — one that existed before the French gained control and one built by the French colonialists. On the other hand, the French Colonial city of Saigon, Vietnam (now Ho Chi Minh City), was built by completely demolishing the existing city without leaving a trace.

Cities Since Independence. Following independence, cities have become the focal points of change in LDCs. Millions of people have migrated to the cities in search of work. Geographers Ernest Griffin and Larry Ford show that in Latin American cities, wealthy people push out from the center in a well-defined elite residential sector on either side of a narrow spine that contains offices, shops, and amenities, and services like water and electricity. In Mexico City, Emperor Maximilian (1864–1867) designed a 14-lane, tree-lined boulevard patterned after the Champs-Élysées in Paris. The boulevard (now known as the Paseo de la Reforma) extended 3 kilometers southwest from the center to Chapultepec. The Reforma between downtown and Chapultepec became the spine of an elite sector. Physical factors influenced the movement of wealthy people toward the west along the Reforma. Because elevation was higher than elsewhere in the city, sewage flowed eastward and northward away from Chapultepec. In 1903, most of Lake Texcoco was drained by a gigantic canal and tunnel project. However, the lake bed was a less desirable residential location than the west side, because prevailing winds from the northeast stirred up dust storms from the dried-up lake bed. As Mexico City's population grew rapidly during the twentieth century, the social patterns inherited from the nineteenth century were reinforced.

Squatter Settlements. The LDCs are unable to house the rapidly growing number of poor people. A large percentage of poor immigrants to urban areas in LDCs live in **squatter settlements**. The United Nations estimated that 175 million people worldwide lived in squatter settlements in 2003. Squatter settlements have few services, because neither the city nor the

residents can afford them. Electricity service may be stolen by running a wire from the nearest power line.

(418)

In the absence of bus service or available private cars, a resident may have to walk two hours to reach a place of employment. At first, squatters do little more than camp on the land or sleep in the street. Families then erect primitive shelters with scavenged materials.

Key Issue 3. Why Do Inner Cities Have Distinctive Challenges?

- **Inner-city physical issues**
- **Inner-city social issues**
- **Inner-city economic issues**

Most of the land in urban settlements is devoted to housing.

(419)

Inner cities in the United States contain concentrations of low-income people with a variety of physical, social, and economic problems very different from those faced by suburban residents.

Inner-City Physical Issues

The major physical problem faced by inner-city neighborhoods is the poor condition of the housing, most of which was built before 1940.

Process of Deterioration

As the number of low-income residents increase in the city, the territory they occupy expands. Middle-class families move out of a neighborhood to newer housing farther from the center and sell or rent their houses to lower-income families.

Filtering. Large houses built by wealthy families in the nineteenth century are subdivided by absentee landlords into smaller dwellings for low-income families. This process is known as **filtering**. Landlords stop maintaining houses when the rent they collect becomes less than the maintenance cost. The building soon deteriorates and grows unfit for occupancy. At this point in the filtering process, the owner may abandon the property because the rents that can be collected are less than the cost of taxes and upkeep. Governments that aggressively go after landlords to repair deteriorated properties may in fact hasten abandonment, because landlords will not spend money on repairs that they are unable to recoup in rents. Inner-city neighborhoods that housed perhaps 100,000 a century ago contain less than 10,000 inhabitants today. Schools and shops close because they are no longer needed with rapidly declining populations. Through the filtering process, many poor families have moved to less deteriorated houses farther from the center.

Redlining. Some banks engage in **redlining** — drawing lines on a map to identify areas in which they will refuse to loan money. Although redlining is illegal, enforcement of laws against it is frequently difficult. The Community Reinvestment Act requires banks to demonstrate that inner-city neighborhoods within its service area receive a fair share of its loans.

Urban Renewal

North American and European cities have demolished much of their substandard inner-city housing through **urban renewal** programs. The land is then turned over to private developers or to public agencies to construct new buildings or services. Urban renewal has been criticized for destroying the social cohesion of older neighborhoods and reducing the supply of low-cost housing.

Public Housing. In the United States, **public housing** is reserved for low-income households, who must pay 30 percent of their income for rent. In the U.S., public housing accounts for only 1 percent of all dwellings, compared to 14 percent in the United Kingdom. Elsewhere in Western Europe, governments typically subsidize construction cost and rent for a large percentage of the privately built housing.

Most of the high-rise public-housing projects built in the United States and Europe during the 1950s and early 1960s are now considered unsatisfactory environments for families with children. Some observers claim that the high-rise buildings caused the problem, because too

many low-income families are concentrated into a high-density environment. Public-housing authorities have demolished high-rise public-housing projects in recent years in U.S. and European cities. The U.S. government has stopped funding new public housing. In Britain, the supply of public housing has also declined because the government has forced local authorities to sell some of the dwellings to the residents.

Renovated Housing. In some cases, nonprofit organizations renovate housing and sell or rent them to low-income people. But more often, the renovated housing attracts middle-class people. Most cities have at least one substantially renovated inner-city neighborhood where middle-class people live. In a few cases, inner-city neighborhoods never deteriorated, because the community's social elite maintained them as enclaves of expensive property. The process by which middle-class people move into deteriorated inner-city neighborhoods and renovate the housing is known as **gentrification**. Gentrified inner-city neighborhoods also attract middle-class individuals who work downtown.

(421)

In cities where gentrification is especially strong, ethnic patterns are being altered.

Cities encourage the process by providing low-cost loans and tax breaks. Public expenditures for renovation have been criticized as subsidies for the middle class at the expense of poor people, who are forced to move because the rents are suddenly too high for them. Cities try to reduce the hardship on poor families forced to move. U.S. law requires that they be reimbursed both for moving expenses and for rent increases over a four-year period. Western European countries have similar laws. Cities are also renovating old houses specifically for lower-income families.

Inner-City Social Issues

Beyond the pockets of gentrified neighborhoods, inner cities contain primarily low-income people who face a variety of social problems. Inner-city residents constitute a permanent underclass who live in a culture of poverty.

Underclass

Inner-city residents frequently are referred to as a permanent **underclass** because they are trapped in an unending cycle of economic and social problems.

The future is especially bleak for the underclass because they are increasingly unable to compete for jobs. The gap between skills demanded by employers and the training possessed by inner-city residents is widening.

Inner-city residents do not even have access to the remaining low-skilled jobs, such as custodians and fast-food servers, because they are increasingly in the distant suburbs.

Some members of the underclass are homeless. Accurate counts are impossible to obtain, but an estimated one to two million Americans sleep in doorways, on heated street grates, and in bus and subway stations.

(422)

Single men constitute two-fifths of the homeless. Homelessness is also a serious problem in LDCs

Culture of Poverty

Inner-city residents are trapped as permanent underclass because they live in a culture of poverty. Unwed mothers give birth to three-fourths of the babies in U.S. inner-city neighborhoods, and

three-fourths of children in the inner city live with only one parent. Because of inadequate child-care services, single mothers may be forced to choose between working to generate income and staying at home to take care of the children. In principle, government officials would like to see more fathers living with their wives and children, but they provide little incentive for them to do so. If the husband moves back home, his wife may lose welfare benefits, leaving the couple financially worse off together than apart. Although drug use is a problem in both the suburbs and rural areas, rates of use in recent years have increased most rapidly in the inner cities. Violence erupts when two gangs fight over the boundaries between their drug distribution areas. Many neighborhoods in the United States are segregated by ethnicity. Even small cities display strong social distinctions among neighborhoods. A family seeking a new residence usually considers only a handful of districts, where the residents' social and financial characteristics match their own.

Inner-City Economic Issues

The concentration of low-income residents in inner-city neighborhoods of central cities has produced financial problems. The severe recession in recent years has aggravated those problems. Low-income inner-city residents require public services, but they can pay very little of the taxes to support those services. A city has two choices to close the gap between the cost of services and the funding available from taxes:

- **Reduce Services.** Aside from the hardship imposed on individuals laid off from work, cutbacks in public services also encourage middle-class residents and industries to move from the city.

(423)

- **Raise Tax Revenues.** Spending public money to increase the downtown tax base can take scarce funds away from projects in inner city neighborhoods, such as subsidized housing and playgrounds.

During the mid-twentieth century, inner-city fiscal problems were alleviated by increasing contributions from the federal government. Federal aid has declined by two-thirds since the 1980s. To offset a portion of these lost federal funds, some state governments increased financial assistance to cities.

Impact of the Recession

One of the principal causes of the severe recession that began in 2008 was a collapse in the housing market, primarily in the inner city. Despite having poor credit histories, first-time home buyers were approved for mortgages without background checks. These were known as subprime mortgages. In the first year of the recession, 10 percent of all Americans with mortgages were behind in their payments or already in foreclosure. In many cases, the amount of the mortgages exceeded the value of the house once prices had fallen.

Annexation

For many cities, economic problems are exacerbated by their inability to annex peripheral land. **Annexation** is the process of legally adding land area to a city.

Normally, land can be annexed into a city only if a majority of residents in the affected area vote in favor of doing so. Peripheral residents generally desired annexation in the nineteenth century, because the city offered better services. Today, however, cities are less likely to annex peripheral land because the residents prefer to organize their own services rather than pay city taxes for them. As a result, today's cities are surrounded by a collection of suburban jurisdictions. Some of these peripheral jurisdictions were small, isolated towns. Others are

newly created communities whose residents wish to live close to the large city but not be legally part of it.

(424)

Key Issue 4. Why Do Suburbs Face Distinctive Challenges?

- **Urban expansion**
- **The peripheral model**
- **Suburban segregation**
- **Transportation and suburbanization**

In 1950, only 20 percent of Americans lived in suburbs compared to 40 percent in cities and 40 percent in small towns and rural areas. In 2000, after half a century of rapid suburban growth, 50 percent of Americans lived in suburbs, compared to only 30 percent in cities and 20 percent in small towns and rural areas.

Urban Expansion

Until recently in the U.S., as cities grew, they expanded by adding peripheral land. Now cities are surrounded by a collection of suburban jurisdictions whose residents prefer to remain legally independent of the large city.

Annexation

The process of legally adding land area to a city is **annexation**. Normally, land can be annexed into a city only if a majority of residents in the affected area vote in favor of doing so. Peripheral residents generally desired annexation in the nineteenth century, because the city offered better services. Today, however, cities are less likely to annex peripheral land because the residents prefer to organize their own services rather than pay city taxes for them. Some of these peripheral jurisdictions were small, isolated towns. Others are newly created communities whose residents wish to live close to the large city but not be legally part of it.

Defining Urban Settlements

Instead of annexing peripheral areas, cities now are surrounded by suburbs. As a result, several definitions have been created to characterize cities and their suburbs:

- **City:** a legal entity
- **Urbanized area:** a continuously built-up area
- **Metropolitan area:** a functional area

The City. The term *city* defines an urban settlement that has been legally incorporated into an independent, self-governing unit. In the United States, a city that is surrounded by suburbs is sometimes called a **central city**.

Urbanized Area. An **urbanized area** consists of a central city plus its contiguous built-up suburbs where population density exceeds 1,000 persons per square mile (400 persons per square kilometer).

(425)

Approximately 70 percent of the U.S. population lives in urban areas, including about 30 percent in central cities and 40 percent in surrounding jurisdictions. Working with urbanized areas is difficult because few statistics are available about them. Urbanized areas do not correspond to government boundaries.

Metropolitan Statistical Area. The concept of urbanized area also has limited applicability because it does not accurately reflect the full influence that an urban settlement has in