UNIT 14

STRUCTURE AND MORPHOLOGY OF URBAN SETTLEMENT

Structure

14.1 INTRODUCTION

In the previous unit, we have already discussed structure and morphology of rural settlement. Urban Morphology simply means the layout of a city which is displayed through the physical map with land use zones. The word layout incorporates physical arrangements of residential houses, market centres, educational institutes, health centres, entertainment and recreation zones, the layout of streets, roads and transport lines along with open spaces. Thus, urban morphology refers to the physical expression of an urban centre on the earth's surface. However, it changes over time. Expansion of cities also changes urban morphology and incorporates urban sprawls and agglomerations. Since time immemorial city structure and morphology underwent rapid evolution with progress in the human civilizations. Earlier

cities were defence oriented; they usually evolved around a castle, manor house and were delineated by walls or moats. However, modern cities have different layouts. Both natural and man-made factors influence urban morphology. Natural factors like climate, topography and building materials play a significant role; similarly, man-made factors like trading points, market centres, defence and strategic points, fortification, transport lines and market centres also influence a city's layout. However, three types of models explain urban morphology systematically. Concentric zone models of Ernest Burgess and Parks, Sector Model of Hoyt and Davis, Multiple Nuclei model of Harris and Ulman explain changes of urban morphology with spatial expansion.

In this unit, we will learn about definition of urban morphology in the section 14.2. In the Section 14.3 we will discuss the growth and evolution of various schools in urban morphology. In the Section 14.4, 14.5 and 14.6 a detailed description about the contribution of the Chicago School is presented in the form of Concentric Zone Model, Sector Model, and Multiple Nuclei Model. In the Section 14.7 a comparative analysis of the above mentioned three models are presented. In the final section i.e., 14.8 we will study dynamics of urban morphology.

an attempt has been made to describe the social characteristics and segregation within Indian villages.

Expected Learning Outcomes

After studying this unit, you should be able to:

- Define urban morphology;
- Describe the growth and evolution of various schools in urban morphology;
- Explain the contribution of the Chicago School and its theories; and
- Analyse theories on urban morphology along with their relevance, weaknesses and applicability in the real world.

14.2 DEFINITION OF URBAN MORPHOLOGY

Urban morphology is the study of human settlements. This term ‘morphology’ was first used by German poet Johan Wolfgang von Goethe in the 18th century and later it was extensively used in bioscience. Morphology is the study of shape, form, external structure and its arrangement methods (Cortes, 2004).

Scope of Urban Morphology

It incorporates the process of the formation of human settlement and its transformation. Urban morphology includes the study of a city's physical layout and its changes over time or the spatial transformation of a city. Urban morphology is also called the study of urban tissues, which includes neighbourhood morphology (arrangement and distribution of buildings and open spaces). Pattern and ordering of buildings and spaces, functions of these spaces and their changes over time are included under the scope of urban morphology. This field has immense importance in urban planning,

architecture, and infrastructure development. Recently, socio-cultural aspects and their influences on the city's landscape have also been incorporated in urban morphology.

14.3 SCHOOLS OF URBAN MORPHOLOGY

The study of urban morphology developed distinctly under the following schools of thought:

1) **British schools:** British school is also known as the Conzenian School because it revolves around the writings of M.R.G. Conzen. The scholars of Conzenian school focuse on three components for analysis- a) town plan- It again has three components-street system, block-plans, and plots or street-buildings aggregations. The Conzenian School of thought founded by M R G Conzen flourished in the 19th century based on German scholar Schulter's two papers on the ground plan of towns and the wider aspect of settlement geography (1899). Apart from Schulter's work, the dissertations he supervised at the University of Halle produced several colourful maps of German cities displaying building arrangements and street networks. These works influenced Conzen. He and his colleagues produced micro-scale maps of British cities displaying streets, plots, and block plans of buildings. These maps identified building fabric, land use within a city or town and the process of spatial urban development through spatial transformation of cities. The spatial transformation since the mediaeval period was captured. Another important contribution of this school is the fringe belt and burgage cycle concept. The fringe belt is the area outside the city limit or periphery or city wall; this area is characterised by irregularity of plots and the existence of rural and urban land use side by side. Fringe belts usually have many open spaces. (Louis, one of the mentors of Conzen used the term Fringe Belt and mapped the fringe belt of Berlin City in 1936.) The Burgage cycle means '*the progressive filling-in with buildings of the Backland burgages and terminating in the clearing of buildings and period of urban follow before the initiation of a redevelopment cycle'*. Conzen prepared morphological maps of British towns like Alnwick, Newcastle, and Ludlow. (Whitehand, J.W.R., 2001)
2) **Italian school** developed in the 1950s under the leadership of architect Saverio Muratori. He introduced the typology of houses in a city. The typology of houses has a close connection with the history and culture of the city dwellers. His works were mainly on Rome and Venice. Later other architects also contributed to this field. However, Italian school gives emphasis mainly on urban architecture but ignores other aspects.
3) **French school** also focused initially on architectural models; they are guided by the Versailles School of architecture. However, Henry Lefebvre's idea of the Right to the City concept influenced the urban geographers of the late 1970s; and socio-political and economic dimensions of urban space are incorporated in the French School.
4) **Chicago school** produced three enduring models of urban morphology. The first one is concentric zone theory which provides an ecological explanation of city-space. E W Burgess propounded the Concentric Zone

model in his book the City Growth (1925); it was followed by the sector theory of urban structure propounded by Hoyt in 1933 and 1939; and lastly, the multiple nuclei theory of Harris and Ulman (1945).

5) **Los Angeles school** of urban morphology focuses on the morphology of postmodern or post-Fordist cities. However, this school has several thinkers with several theories which are largely influenced by Marxist urban theories. The main contribution of this school is a multi-centred metropolitan region.

Table 14.1: Contribution of different Schools in the Study of Urban Morphology

Name of the School	Scholars	Main Contribution
British School	M R G Conzen; J W R Whitehand	The developed city layout maps or land use maps of Alnwick, and other British towns. The word townscape is used to define a city's landscape Fringe Belt and Burgage Cycle concept
Italian School	Saverio Muratori	Architecture based development- mainly typology of houses are studied
French School		Started with architecture, but later incorporated socio-political factors in urban studies.
Chicago School	E W Burgess, Hoyt, C. Harris and E. Ulman (1920-1945)	Gave three enduring theories on urban morphology- concentric zone theory, sector model and multiple nuclei theory
Los Angeles School		Urban morphology of global cities and world cities. They developed as the critics of the Chicago school.

SAQ I

Match the following

Name of the School	Scholars
a) British School	i) E W Burgess
b) Italian School	ii) M R G Conzen
c) Chicago School	iii) Saverio Muratori

14.4 CONCENTRIC ZONE MODEL

E. W Burgess published his book '*The growth of the city: an introduction to a research project*' in 1925, this theory was written in a chapter entitled 'The City'. It was one of the earliest theoretical models that explained urban structure or morphology. Urban land use can be divided into five concentric

zones; with the CBD or the Central Business District as its core and commuter zone or residential suburb as its outermost peripheries.

I. **The Central Business District (CBD)** or the Loop forms the innermost circle. This is the most accessible part of the city, where all commercial activities like trade, business, departmental stores, banks, offices and all tertiary activities are found. This part is mostly non-residential. In New York, CBD or Loop is also known as the Down Town. He claimed that daily half a million people enter and leave the Chicago Loop.

II. **The Zone of Transition** is surrounded by the CBD with old fashioned private houses which are gradually taken over as offices. This area also has some light industrial or manufacturing units. Migrant workers are attracted to this area due to easy access to the CBD. Poor people and labourers live here in old and dilapidated buildings. These people cannot afford to commute long distances.

III. **The Zone of Working Men's House-** Here working-class families reside. In Chicago, this area was characterized by two-storied buildings, in which house owners live in the lower story and the upper story is rented out. Tenants are mostly engaged either in the light manufacturing industry or any commercial activities at the CBD. It is the residential zone of the middle-income group.

IV. **The Zone of Better Residence**- It is a high-class residential zone. Here single-family dwellings are found. Dwellers are mainly engaged in the banking sector, commercial institutions and managerial positions. This zone has houses with vast open spaces or gardens.

V. **Commuter Zone**- It is the outermost periphery of the city. High-class residences developed here along the Rapid Travel Line. Houses have wide spaces. Rural land use is also found along with urban land use. Automobiles expanded the city limit and rich people can afford to travel long distances.

Burgess's theory stated that all the economic and commercial activities are localized in the city centre. This zone remained surrounded by different class residential zones. Poor people like to live near the CBD because they cannot afford to commute longer distances. Rich people live in the outer periphery. The land rent increases towards the periphery. This concept is called **Bid Rent Curve**.

However, Berry and Horton criticised this theory as crude and unrefined; and too simplistic. Other critics of Burgess's Concentric Zone theory are ***M. Alihan, M.R. Davie, Walter Firey*** and ***R.E. Dickinson***.

14.4.1 Shortcomings of the Concentric Zone Model

This theory is only applicable to American cities, where poor people live in the city core and rich people live in the suburbs. However, with the development of rapid travels like tube rail etc. this model lost its applicability. Poor people could afford to live away from the CBD.

Burgess assumed a city is developed on an isotropic plain. He did not consider physical barriers and relief features like riverfront, mountains or

lakes. He did not even consider urban gentrification and the regeneration of the urban core. Expensive properties can be found in the city core.

Urban politics and globalization create polycentric cities in reality. So, concentric zones do not exist in the real world. This theory is too hypothetical. Burgess also accepted that river or transport lines can change concentric zones into elongated sectors. So, the concept of the Sector Model found its ground.

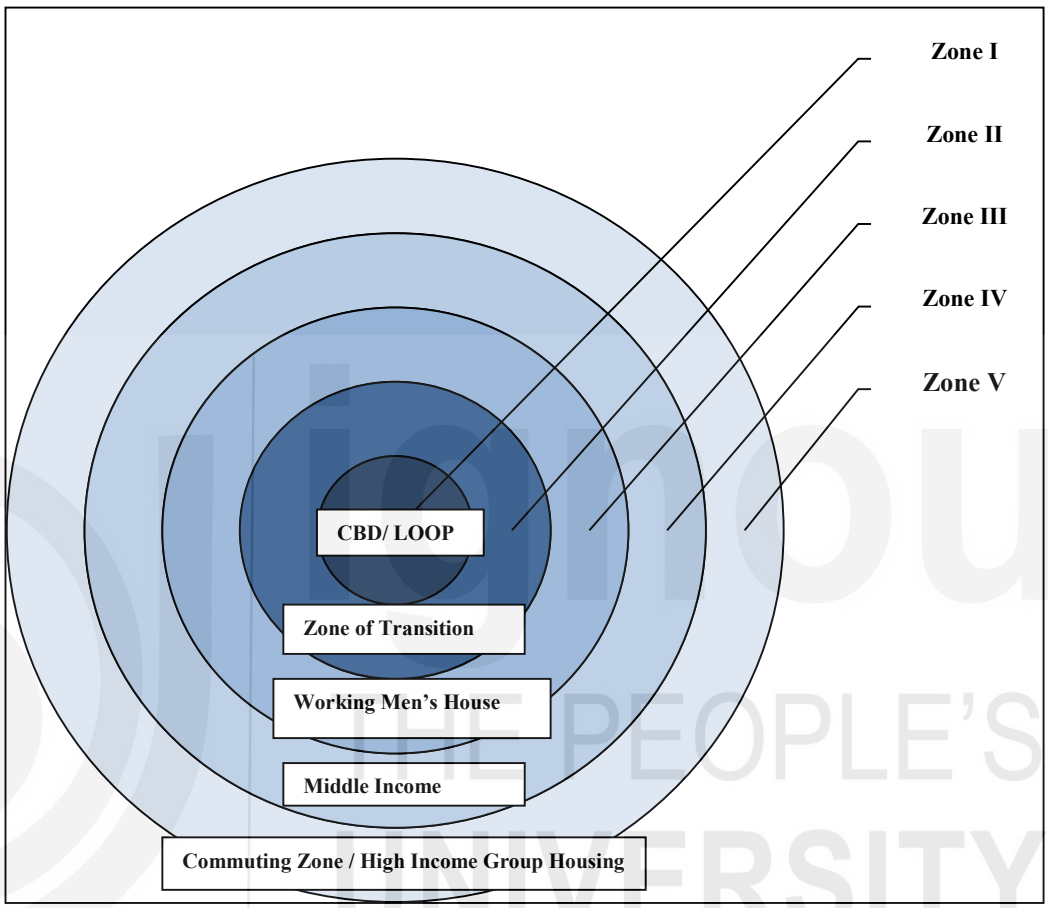

Fig. 14.1: Concentric Zone Theory.

(Sources: This diagram was found in Park, R. E.; Burgess, E. W, eds. (1925). The City (1st ed.). Chicago, IL: University of Chicago Press.)

The City: Suggestions for Investigation of Human Behavior in the Urban Environment, THE HERITAGE OF SOCIOLOGY, A Series Edited by Morris Janowitz, 1967, The University of Chicago Press, Chicago and London

14.4.2 Modification and Relevance of the Theory

Relevance of The Theory- This theory was the first comprehensive attempt at explaining city structure. Though E W Burgess's simplistic concentric zone theory received huge criticisms, the theory had some relevance as well. Burgess claimed that no systematic study has been made so far on urban expansion as a process. Mere demographic data like sex ratio, density and population growth cannot capture the expansion process fully. In Europe and America, cities expand beyond the political limit and create a **'Metropolitan Area'** (p 49, Chapter II, The City).

He also modified his theory by accepting that urban regeneration and the growth of satellite towns may change the simplistic concentric zone pattern. **Satellite loops** or the CBD of the Satellite towns also attract economic activities. But these satellite loops and sub-business areas are dominated by the main city loop (Chicago Loop in his theory). He also envisioned that immigration can create immigrant colonies in the satellite towns or suburbs.

Burgess also identified within his defined zones. Those pockets are inhabited by particular communities- Black Belt (African-American colonies), Little Sicily (based on ethnicity) and immigrant areas of Lawndale, the western suburb of Chicago had a Jewish **ghetto**. He also identified a low rent district within Chicago where artistic Bohemians live, it is a mixed locality, known as ***Hobohemia (Hobo means mixed),*** the term was originally taken from Nels Anderson's book (Nels Anderson, 1923, The Hobo). The zone of deterioration encircling the CBD is called slums.

He also modified the concentric zones along with the transportation system. In 1860, the main transport line was horse car lines and in 1890, horsecar lines were replaced by trolley car lines. In 1925, electric suburban lines revolutionized America's transport system. It reduced per capita transport costs and time to travel. Transport lines increased the land value of the Loop more than suburban areas. The highest land value is found in Madison Streets. Introduction of rapid transport lines doubled or quadrupled satellite loops. This process is known as **the organization and disorganization** process.

SAQ 2

Define the following

a) Bid Rent Curve
b) *Hobohemia*

14.5 SECTOR MODEL

Homer Hoyt, a well-known economist propounded the Sector Model theory in 1939. He tried to overcome E W Burgess's Concentric Zone theory. His model is based on a) residential rent pattern, and b) transport system. His empirical study was based on 34 American cities. He prepared city maps and showed that high-class residential areas are found in more than one sector. He also studied Latin American cities. He identified that in Guatemala, Puerto Rico and Buenos Aires cities single-family dwellings are found in one side of the city; but in New York, they are found in scattered clusters in the metropolitan areas. The CBD is found at the city core, it is a concentric zone, but residential areas developed in a sector form along the transport line.

Salient Features of Sector Model

The main features of this sector model are-

1. A city develops is a series of sectors, not in concentric rings
2. Different areas attract different types of activities

3. As the city grows, the activities within CBD grow outward in a wedge shape
4. Hoyt modified concentric zones along transport lines
5. Most of the major cities evolve around transport lines (railroad, trolley lines) and thus, radiate outwards along the transport line.
6. In this theory, transport lines were given special emphasis, but no emphasis was given on out of town development, or physical relief features. It did not consider possession of private cars.

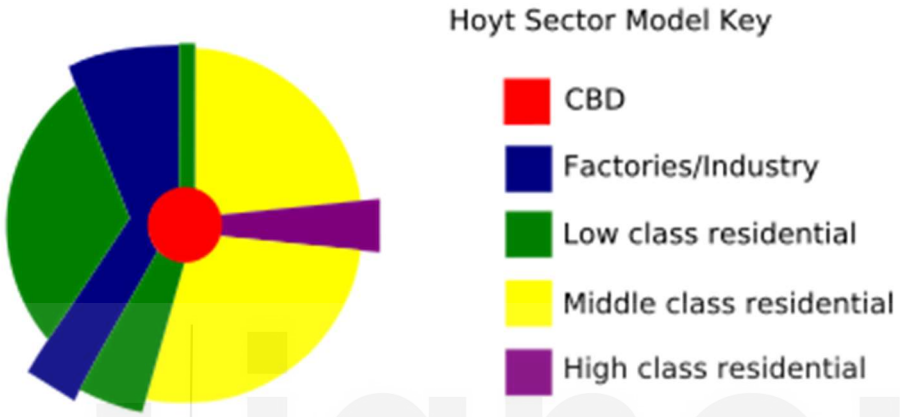

Fig. 14.2: Sector Model Diagram

Short Coming

Berry and Horton (1970) criticised this theory as well. Here only housing characterises, land rent and transport lines got attention, but other factors like urban politics, culture etc. are overlooked.

SAQ 3

a) Name the two basis on which sector model was developed.

b) State the shortcomings of sector model.

14.6 MULTIPLE NUCLEI MODEL

The earlier theories largely overlooked the growth of multiple urban centres and CBD; but in 1945, Chauncy. D. Harris and Edward Ulman propounded that a city has multiple growth centres or nuclei (*The Nature of the City article was published in The Annals of the American Academy of Political and Social Science, in the year 1945*). They argued that cities are paradoxes and each city is unique.

The internal structure of a city depends on the peculiarity of its sites. In a flood-prone plain, well-drained elevated areas will attract high-class residences. Poor quality flat land attracts heavy industry, due to cheap land value and easy transportation. Nodal points or where the transport lines converge offers the highest land value, and it is called the CBD, where all business activities are centred. Adjacent to the CBD, wholesale trade and light manufacturing units develop, along with low-class residential areas.

In this theory, CBD is not the only urban centre, it is the financial district where business and commercial activities are located. The city may have smaller CBDs or multiple nuclei. Automobiles led to the dispersion of cities.

Other nodes or nuclei may develop around an airport, port, university, park and neighbourhood business centres. For example, Airport attracts hotels, apartments and shopping malls. Earlier these nuclei were separate settlements, but due to the expansion of the city, these centres joined together. However, old specialization continued.

There is no clear CBD in this theory. Distance decay theory and profit maximization theory are still applicable to this theory. According to Distance decay theory, land value and population density decline with distance from the central place. Profit maximization theory says that a particular activity will locate itself where maximum profit can be achieved. This theory also assumes that transport cost is uniform.

Salient Features of the Theory

1. **Central Business District or CBD** is the financial district of a city. The older or main CBD has traditional financial activities like banks, real estate and insurance companies. Smaller CBDs have specialised services. They reduce the pull of older CBD.
2. **Wholesale and light manufacturing units** have clothes, furniture, electronic goods manufacturing units.
3. **Residential Districts** or pockets are divided based on housing characterises and land value.
   a) **Low-Class residential zones** are found near the industrial corridors. Poor people cannot afford to commute longer distances.
   b) **The middle-class residential area** is located away from the congested industrial corridors. Dwellers have better affordability to access a rapid transport system.
   c) **High-class residential areas** are found at the edge of the city within green and clean landscapes. Michigan Avenue is a High-class residential area within Chicago.
   d) **Residential suburbs** are located on the outskirts of the city. Here single-family dwellings on a small plot of land are found.
4. **Outlying Business Districts** are located near the middle class and high-class residential zones. These districts offer specialised services like airports, malls, colleges, universities etc. which need space.
5. **Heavy manufacturing industry district**- This district is located near the transport nodes, due to easy accessibility.
6. **Industrial suburbs** are located at the outskirts of the city, near the rail station or water corridor.

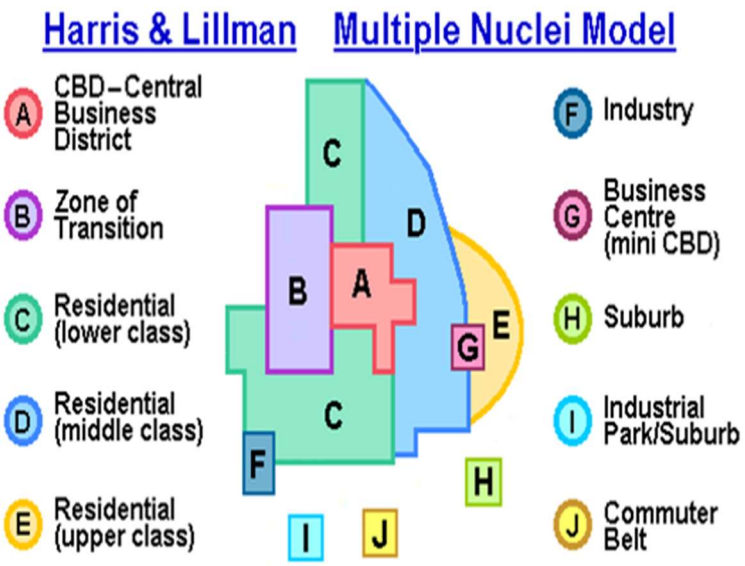

Fig. 14.3: Multiple Nuclei Model.

(Source: Harris, C. D., & Ullman, E. L. (1945). The Nature of Cities. The Annals of the American Academy of Political and Social Science, 242, 7–17. http://www.jstor.org/stable/1026055

Main Shortcomings of the Theory

1. This theory did not consider the height of the buildings.
2. There is no abrupt division between zones
3. Each zone displays heterogeneity.
4. Zones are overlapping
5. Government policy and physical relief were not considered.
6. Unaware of inertia force within the city
7. This theory does not apply to oriental cities

14.7 COMPARISON BETWEEN ODELS RELATED TO URBAN MORPHOLOGY

Till now you might have understood all the three models related to urban morphology along with their merits and shortcomings. In the below given table a comparative analysis of all the three models are presented. This would help you in developing a critical perspective about these models.

Table 14.1: Comparision of the Three Models of Urban Morphology

Name of the theory	Concentric zone	Sector Model	Multiple Nuclei
Propounded by	Ernest W Burgess, (1925-1929)	Homer Hoyt (1939)	Chuancy Harris, Edward Ulman (1945)
City Structure	The city has five concentric zones Central Business District as its core	Cities expand along with transport routes (mainly rail routes).	Cities may begin with one CBD, but later multiple CBDs develop

	Zone of Transition Inner suburb or lower class residential zone Outer Suburb or high-class residential zone Commuter zone or high-class residential zone or outskirts	Sectors developed along transport lines. He proposed 6 zones- CBD, Zone of transition, lower-class residential, middle-class residential and upper-class residential zones and industries. Large industrial estates developed near rail routes away from the main city	It has 9 sectors- CBD Wholesale & light manufacturing Outlying business district Low class residential Middle class residential High class residential Residential suburb Heavy manufacturing Industrial suburb
Applied city	Chicago	Chicago	Chicago
Criticism	This theory is applied only to the US cities where the inner city is the poor and the outer city is richer. However, cities outside the US do not have it. Clear-cut zones are not found in the city; gentrification, urban development creates new urban centres. Low and high-class housing estates exist side by side.	Physical features, urban development are not considered here. The only rail route is considered.	This theory believes that cities develop on a homogenous flat surface. Physical barriers like hills, rivers are not taken into consideration. Cultural factors are not taken into account. Even distribution of resources, transport costs, and residential areas are not possible.

SAQ 4

a) Name the two theories which were taken into consideration while developing Multiple Nuclei Model.

b) Three Models of Urban Morphology was applied on which city.

14.8 DYNAMICS OF URBAN MORPHOLOGY

Till now we have discussed three models of urban morphology along with their strengths and weekenesses. You might have also realized that urban morphology of a city is not static. Major land-use patterns found within a city are discuss as follows.

14.8.1 Central Business District (CBD)

CBD is located at the city core. This zone has the highest land value and concentration of banks, insurances, stock markets and commodity exchange. Residential land use is almost nil or very minimum. In the USA, this area is also called Down Town. E. W. Burgess called CBD a loop.

14.8.2 Retail, Wholesale and Commercial Area

Before the Second World War, wholesale and retail trade was closely linked to the downtown. But, from 1960-70s onwards warehouses, industries and wholesale trade centres started moving towards the outer periphery for reducing air pollution in the city.

14.8.3 Industrial Areas

In the 19th century, industrial areas were close to the CBD. This area was further divided into light manufacturing areas (furniture, clothes, and electronic goods) and heavy industries. Due to pollution and high land rent, in the late twentieth century, industrial areas moved outside the city limit away from the residential areas.

14.8.4 Residential Areas

This is the most important part of a city. Depending on housing rent, residential areas can be divided into low-class residential areas, middle-class residential areas and high-class residential areas and the residences of the rich. 19th-century scholars like Burgess, Harris, Ulman and Hoyt assumed that the working class could not afford to live away from the factories and CBD. So, they preferred to stay near the CBD, in congested localities with dilapidated buildings or rows of rooms. Working-class residential areas are characterized by old and dilapidated buildings, one-roomed dwellings, high density of population and congestion. Middle-class people prefer to live away from the CBD, but near the rapid transport lines (trolley cars, electric suburban rail).

This zone is characterized by two-storied buildings, where landlords live on the ground floor and the tenants live on the first floor. High-income group people live further away from the congested city. Single-family dwelling units are found here. Commuters' zone or outskirts of the city is preferred by extremely rich people, who can afford to have private cars. Here rural-urban land use is found, along with picturesque houses with gardens and open surroundings.

14.8.5 Urban Villages

Commuter zone is followed by rural-urban fringe area. This area is characterized by rural land use (agricultural farms, livestock farms) as well as urban land use. This is a transition zone. Due to the expansion of the city, villagers changed their occupations. Agricultural farms are replacing with industrial parks, high-class residences, amusement parks and so on. Urban villages have a) mixed land use zone, b) medium density housing, c) access to rapid public transit. According to Ramachandran (1989), urban villages have slum-like existence. Delhi has many urban villages (For example- Munirka Village in South Delhi).

14.8.6 Slums

The Encyclopaedia Britannica has defined slums as the residential areas that are physically and socially deteriorated and in which satisfactory family life is impossible. Poor housing is a major index of slum conditions. Poor housing means dwellings that have inadequate light, air, toilet and bathing facilities; that is badly in need of repair, damp and improperly heated; that do not afford opportunities for family privacy, that are subject to fire hazards and that overcrowd the land leaving no space for recreational use. The word 'slum' has been derived from the Irish word 'Slome', meaning a bleak or destitute place.

Slums are also known as 'Shanty town' in Ireland, 'Favela' in Brazil, 'Rancho' in Venezuela, 'Barriadas' in Peru, 'Villas Misarias' in Argentina, 'Barong Barong' in the Philippines, 'Kevettits' in Mayanmar, 'Gecekondu' in Turkey, 'Ghetto' and 'Skid Rows' in North America, although each of them may have a somewhat different meaning. Skid row refers to an urban area with a high homeless population and the name is derived from the Skid Row of Los Angeles. 'Favela' refers to the settlements of African slaves in Brazil and the word 'Ghetto' originally denotes Jewish colonies in Venice and in the USA the word 'Ghetto' refers to African settlements. Similarly, 'Shanty Town' denotes Irish settlements in North America. Despite different meanings and racial connotations, all these words describe slum-like settlements where poor immigrants are forced to live without basic amenities and services. Apart from all these terminologies the word 'Squatter settlements' also refer to slums and it is popularly used as an alternative to 'slum'. In India ‘slums’ are often known as ‘Bustees’ or ‘Jhuggi Jhopri’ colonies.

Squatter- The Oxford English Dictionary describes a 'squatter' as a person who settles on new land, i.e. especially public land without title, a person who takes unauthorised possession of unoccupied premises. Therefore, a residential area occupied by squatters becomes a squatter settlement.

14.8.7 Census Definition of Slum in India

Registrar General of India has adopted the following definition. For Census of India 2001, the slum areas broadly constituted:

i. All specified areas in a town or city are notified as 'slum' by state/ local government and UT Administration under any Act including the 'Slum Act'.

ii. All areas are recognised as slums by the State/ Local government and UT Administration. Housing and slum boards which may have not been formally notified as slum under any act.

iii. A compact area of at least 300 populations or about 60-70 households of poorly built congested tenements, in unhygienic environments usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities.

The Census of India 2011 categorized three types of slums a) Notified slums are recognized as a slum by the State or UT government by the Slum Act and are governed by a Slum Board., b) Recognized slums are recognized as slums by the State and local government, but no slum board is found, and c) Identified Slum, these slums are identified during census enumeration but not recognized officially. A compact area of at least 300 population or about 60-70 households of poorly built congested tenements, in the unhygienic environment usually with inadequate infrastructure and lacking in proper sanitary and drinking water facilities is identified as a slum by the Census of India.

SAQ 5

Match the following

Name	**Country**
a) Gecekondu	i) Ireland
b) Kevettits	ii) Turkey
c) Favela	iii) Mayanmar
d) Shanty town	iv) Brazil

14.9 SUMMARY

The discourse of urban morphology remained dominated by architects for a long time. However, the propagators of the British School first developed land use maps of cities. Scholars of the Chicago School propounded three theories on urban morphology that tried to explain city structure universally. E W Burgess in 1925 tried systematically explain the process of urban expansion. His Concentric Zone Model explains urban morphology in a very simplistic way. Homogenous plain, uniform distribution of resources, profit maximization and bid rent curve are the basic assumptions that paved the way for Concentric Zone and its successive theories. E. W. Burgess faced tremendous criticism. Hoyt in 1939 propounded sector model theory to counter the Concentric Zone theory. Again in 1945, Harris and Ulman propounded multiple nuclei theory which explained cities with more than one growth centre. However, all these theories were based on economic parameters. The introduction of the new and fastest mode of transport changed urban morphology, and these three theories perfectly captured that. During the time of E W Burgess, trolley lines and horse car lines were the most popular transport; Hoyt witnessed the introduction of electric suburban trains that increased mobility of the commuters. Harris and Ulman witnessed the automobile revolution that provided autonomy to the rich people to live away from the congested city centres. Thus, complexities within city layout

increased and the older theories lost importance. However, these three theories cannot be discarded completely. They have provided certain concepts of zoning within urban settlements and these zones are almost universal. All cities have one old CBD or core; industrial areas for light and heavy manufacturing units; wholesale and retail trade zone; residential areas of high class, middle class and working-class people. Expansion of cities transforms rural surroundings and creates fringe areas. Within the city, poor people live in slums where room rents are low, but congestion is high. Similarly, certain communities, especially the immigrants prefer to live in a homogeneous cluster known as the ghettos. Urban morphology is a dynamic concept. City layout changes with time and innovation of fastest transportation as well as technologies. Urban politics and social factors also influence urban morphology, but these aspects were largely overlooked by Chicago scholars.

14.10 TERMINAL QUESTIONS

1. Discuss in brief contributions of various scholls on urban morphology.
2. Describe Concentric Zone Theory by Burgess and highlight its relevance.
3. Explain salient features of Sector Model Theory.
4. Discuss salient features of Multiple Nuclei Theory.
5. Critically evaluate dynamics of urban morphology.

14.11 ANSWERS

Self-Assessment Questions (SAQ)

1. a) ii; b) iii; c) i
2. a) It refers to the increasing land rent owards the periphery of the city.

   b) It is a mixed locality where artistic Bohemians live.
3. a) Residential rent pattern, and transport system.

   b) In this model, only housing characterises, land rent and transport lines got attention, but other factors like urban politics, culture etc. are overlooked.
4. a) Distance decay theory and profit maximization theory

   b) Chicago
5. a) - ii; b) - iii; c) - iv; d) - i

Terminal Questions

1. Refer to section 14.3.
2. Refer to section 14.4.
3. Refer to section 14.5.
4. Refer to section 14.6
5. Refer to section 14.8

14.12 REFERENCES AND FURTHER READING

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