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## **E-content**

by

**Prof. Usha Verma,**

**Professor and Head,**

**P.G. Department of Geography, Patna University**

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## **Theories of Urban Landuse**

### **Multiple Nuclei Theory by Harris and Ullman**

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The concentric and sector theories have the advantage of an essential simplicity, but actual pattern of land use are far more complex and varied than earlier models propounded by Burgess or Hoyt. The situations in most of the cities probably so complex that they can not be explained in such easily comprehended generalizations. Consequently, in 1945 a less rigid model capable of application to a variety of urban patterns was proposed by two geographers C.D. Harris and E. Ullman, known as 'Multiple Nuclei theory'. This theory suggests that landuse pattern in most of the large cities develops around a number of discrete centres or nuclei rather than a single centre as described in the concentric or sector models. The cities have an essentially cellular structure in which distinctive types of land use within an urban area have developed around certain growing points recognized as 'nuclei'. Number of nucleus depends on two factors (i) historical development and (ii) locational forces of any particular city.

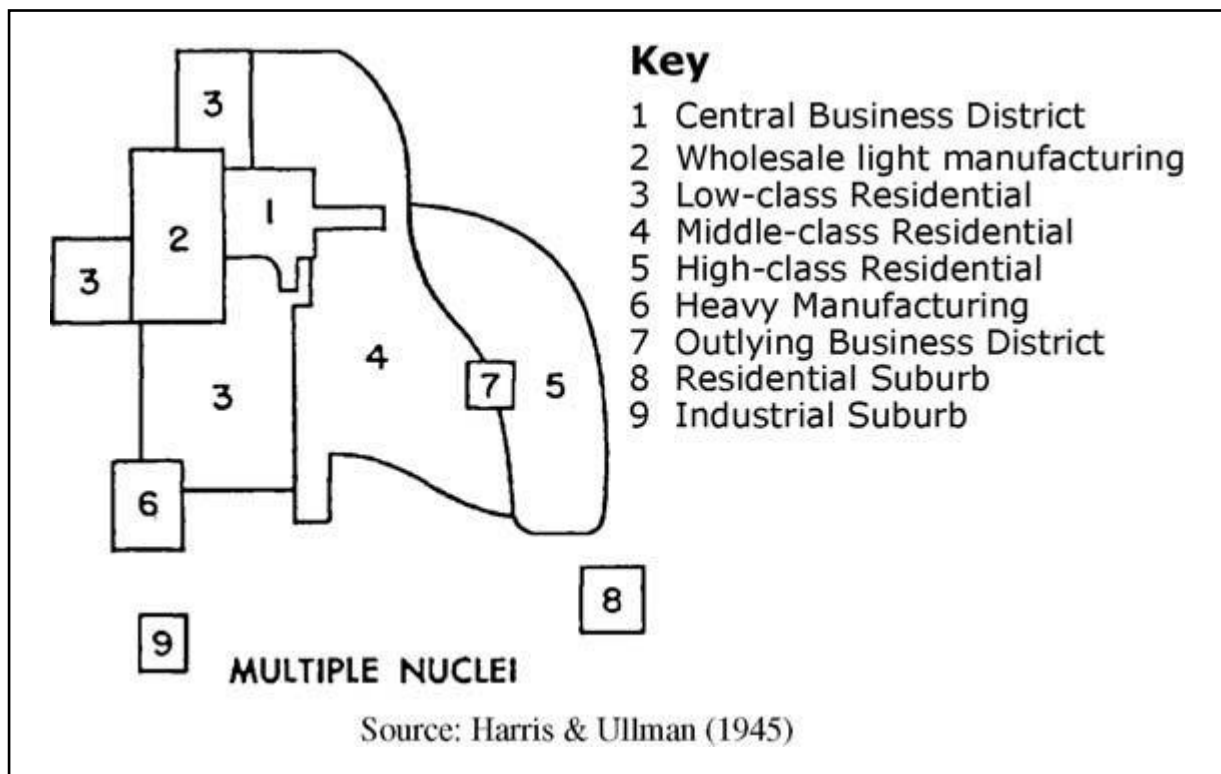
The multiple nuclei theory does not produce a simple model of urban structure applicable to all cities rather suggests a number of general principles which are relevant to the landuse pattern of most cities.

The grouping of specialist landuses around these nuclei has been determined by following factors-

1. Certain activities require specialized facilities e.g. CBD or retail district is located at the point of maximum intra city accessibility.

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2. Certain activities group together because they profit from cohesion or association. For example, in an industrial area several functions are located around the industrial nucleus e.g. retail trade area, zone of financial and office buildings due to the facility of transport and communication.
3. Certain activities are detrimental to one another and are not found in close juxtaposition. For example heavy industry and high class residential areas are rarely located in close proximity.
4. Certain activities are unable to afford the high rents of the most desirable sites e.g. the location of areas of cheaper housing or bulk storage facilities.



The basic concept of multiple nuclei theory is that the internal structure of the cities depends to a large extent on the peculiarities of their individual sites as well as by economic and social forces. For example a well drained wooded terrain often favours the development of a high class residential area. Similarly on a poor quality flat land heavy industry may

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be attracted because of cheap availability of large blocks of land, provided suitable transport facilities are available.

In multiple nuclei theory the history of individual cities is also considered as an important factor in shaping the form of internal structure of city. Harris and Ullman have cited the example of London in which the area of medieval city is characterized by the location of most important financial activities and the area around the palace of westminister providing centre for political administration.

An analysis of multiple nuclei model by Harris and Ullman suggests certain guiding principles. CBD is the focus of the city is the zone of most convenient access from all parts of the city. Here transportation lines converge and it is the point of highest landvalue. The wholesale and high-manufacturing district is located at inconvenient accessibility. Normally it is located near the focus of extracity transportation because it principally serves a tributary region with which it is attached. Therefore, this type of land use is located along railroad lines and also adjacent to CBD.

Adjacent to CBD and zone of wholesale and light manufacturing low class residential areas are located. High class residential area is located on well drained high land away from noise, smoke, odours of CBD, industrial or low class residential areas. The medium class or low class residential areas is located in between low class and high class residential areas. The zone of heavy industries if found near the present or former edge of the city because they require large tracts of land as well as good transportation facilities by rail, road or water ways. Beside Harris and Ullman suggested minor nuclei, industrial suburb, residential suburb and commuters zones all lying in outer zone or periphery of the city. With the growth of the city more such nucleus of the city grows along the periphery of the city. It is apparent that views of Harris and Ullman argued that during the historical growth process these influence would decide the emergence of separate areas which would not be in the form of concentric circles or sectors.

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At the present time there is a strong tendency to reject the idea of a simple model or theory to explain pattern of urban landuse. It is now widely acknowledged that all three theoretical elements concentric, sector and multiple nuclei may be found in any large city and that they are not mutually exclusive. Alternatively, it has been suggested that different processes operate at different periods in the city's growth. Firstly, early growth may be around the central area following concentric zone or may be growth through separate nuclei. Secondly, later growth along transportation routes creates a sector element. Finally adjustment of land use and land values, dependent on distance from the city centre as well as socio economic and site factors will give a complex pattern of urban landuse which can be explained by multiple nuclei theory.

In these urban centres there are job in offices, financial offices, commercial establishment and service units. The people who are engaged in minor jobs with less income prefer to settle near their work place. The distance between their work place and residence depends upon the mode of transportation.

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