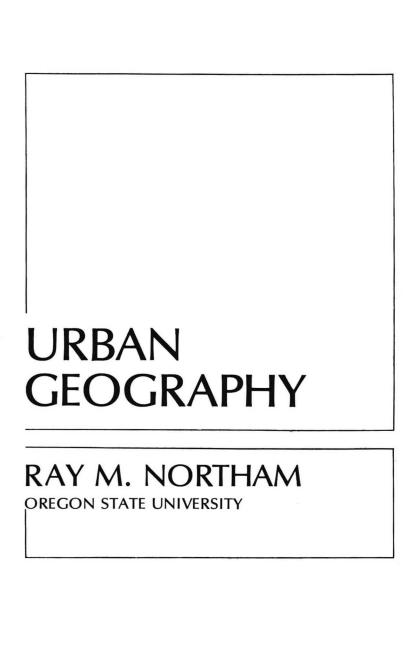
## URBAN GEOGRAPHY

RAY M. NORTHAM



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URBAN GEOGRAPHY

## preface

Even the most casual of observer is aware of the many population centers in the pattern of the world settlement today - hamlets, villages, towns, and cities. A person who knows history realizes the importance of these population centers in the course of world events, and a person who is interested in the political scene is aware of the impact of the world's cities on the political structure of different areas. A social worker realizes that many of the social problems of the past and present are most acute in cities, while a student of economics considers the urban center as a unique microcosm within which general economic concerns are reflected. The engineer believes that many of today's engineering challenges involve urban centers, and the practitioner of planning also views the city in terms of meeting challenges and problems that beset much of the world's population. Furthermore, many geographers are interested in the spatial aspects of the above mentioned concerns and the occupance of land area by cities. Thus, there is an unbounded, common interest in cities that transcends many disciplines and extends to the citizen, the observer, the academic, the student, and the technician. This widespread interest is understandable and warranted, since the largest portion of the population of many nations resides in cities, and significant parts of the population of most nations live in urban agglomerations (large or small). Although many people do not live in these centers, they depend on them and, therefore, have urban interests.

The people that live in urban centers total about one third of the world population. The centers provide them with living space, livelihoods, and goods and services. There are thousands of urban centers in various spatial settings and diverse cultures, and the centers are a complex, baffling, and not easily understood creation of man. No one can claim to have a complete knowledge or understanding of this creation, which evolved during several millennia. I, like others, do not profess to have an unusual understanding or insight of the urban phenomenon, but I do have helpful knowledge and understanding that is included here.

Although this book is my work, the effort was shared by many people. I must make a major acknowledgment to the many authors of books, professional articles, monographs, and reports that provided basic the facts and ideas incorporated here. I thank the publisher's editorial staff, especially Gary Brahms, for providing encouragement during the book's development. I also appreciate the comments of the manuscript's reviewers whose suggestions were of great value. I am grateful to Ruth Weller Thompson, Joyce Northam, Rosemary McLeod, and Judith Cichowicz who helped in preparation of illustrations. Without an understanding, patient wife and children, Joyce, Amy, and Paul, this book would have been much harder to write. To all of these people and to others unnamed, I sincerely say "Thank you."

Ray M. Northam

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#### 2 Introduction

city or among a number of cities for acquisition of goods and services by persons living in outlying areas is another topic of study in the spatial tradition.

Geographers may be interested in those aspects of a specific segment of the earth's surface that serve to give it distinct character and that provide a basis for differentiation of the selected area from other earth areas. Within this tradition of area studies, the surface segment may be of large size, in which case one is dealing with world regions, arid regions, polar regions, and the like. By changing the scale of inquiry, one might consider the city as the area of study and here too, would attempt to establish the characteristics of the city that provide its physical, economic, and/or social character and which make it identifiably different from other cities. Within this tradition, attention is focused more on the uniqueness of a given area than on similarities or relationships among areas.

Another of the traditions of geography, the man-land tradition, deals with the adjustment of man to the physical earth and, carried to an extreme, the shaping of human settlement and spatial behavior by the physical environment. This tradition can be extended to the study of cities, since urban settlements do adjust to a physical setting, although this can be modified to some degree, for example, rivers are bridged, slopes are leveled, and depressions are filled. Still, one cannot forget that cities, like other terrestrial phenomena, occupy land area and, therefore, the physical setting of the city would be a factor in understanding a specific city. At a more basic level, however, one might postulate a hypothetical earth surface as physically homogeneous as a tabletop, that is, there would be no variation in the physical characteristics. If people were placed on such a surface, would they not form cities or some such agglomeration, and would not these cities be arranged in some type of spatial pattern with each dominant in its own territory? The answer to the above question

likely is "yes," which tends to refute somewhat the influence of purely physical factors in city formation and spatial patterns of cities.

In any case, the geographers' interest in urban phenomena is varied, but tends to be mainly within the context of one or more of three of the four stated traditions of geography. Conceivably, geographic study of cities might be in the earth science tradition as well, but this is somewhat less likely.

One should realize fully that a given inquiry of an urban nature may not fall completely within one of the above traditions, but might have aspects of two or more of them. For example, how would one identify a study of land use in a given city? It would be concerned with a single area, the specific city, and thus would be in the area studies tradition. However, it also would be concerned with man's use of urban land and logically would be in the man-land tradition as well. In attempting to explain the land use pattern, the researcher might consider travel distances regularly traveled by the urban population, thus introducing a spatial dimension to the study. Also, if the study included sections on the relative locations of different land use zones or subareas within the city and attempted an explanation of the spatial pattern formed, it also would be dealing with spatial relationships and would be within the spatial tradition of geography.

### The Approaches of Urban Geographers

The urban geographer traditionally has been most interested in populated places on the earth's surface and the relationships that exist within such places and among these population centers that collectively constitute a spatial system of places. These relationships exist, not only within and among places, but also between a place and the people inhabiting that place, with these relationships also of interest to the urban geographer.

In Figure 1–1, the different thrusts of study of urban centers are depicted, with barbed lines indicating the nature of inquiry of different types. There is one channel of inquiry (A) involving relationships between a place and its population, another channel of study (B) concerned relationships among different places, a further channel (C) dealing with the study of relationships that exist between populations of more than one place, and still another channel of study (D) concerned with relationships existent in only one place or in the population of a single place. Examples might serve to clarify these different channels of inquiry within the context of urban geography.

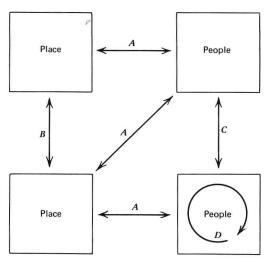


Figure 1-1 Thrusts of study in urban geography.

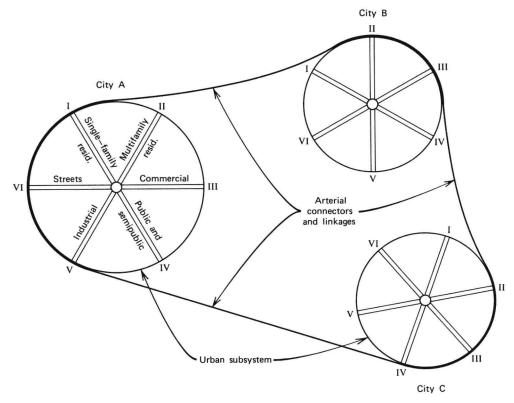
An example of type A studies could be one on the variations and patterns of population distribution in a city. An example of type B study would be one where the spacing and geometric patterns of urban settlements is the major concern or in which the spatial arrangement of places of similar types is highlighted. Type C studies might include one dealing with spatial aspects of the voting behavior of the populations of different urban centers, one concerned with different economic characteristics of the populations of several urban centers, or

one dealing with differences in demographic characteristics of the populations of a number of places. Examples of type D studies could include land use study of the single urban center, study of the commercial structure of the single city, or study of differences in residential neighborhoods within a chosen city. In general, the urban geographer is interested mainly in type A or type B channels of urban inquiry and, to a lesser degree, in type C and type D studies. It must be recognized, however, that many studies do not fit neatly into the above framework because a certain study may have aspects of several of the channels mentioned. which is true of the content of this book.

### The Approach of This Book

This book does not fit entirely into any one of the traditions or approaches of geography mentioned previously, and no attempt has been made to achieve this end. However, it deals more with two of the stated traditions than with others —the spatial tradition and the man-land tradition.

The fundamental approach of this book is one where a specific city is considered as an intraurban system which comprises a subsystem within a larger scale interurban system made up of a number of cities in a given region, with each type of system consisting of interrelated component elements. In the intraurban system, there are a number of different component elements comprising the city, such as a residential element, a commercial element, and an industrial element. Each of these elements has functional and spatial relationships with each of the others and a degree of mutual interdependence exists among them, with each of the component elements occupying space in the city. While each type of space use or activity in the individual city comprises a component element in the intraurban system, each city in a region constitutes a component element in the interurban system. Since there are interrelationships



**Figure 1-2** Diagrammatic representation of an urban system and included intraurban subsystems.

among the elements of an urban subsystem, there also are relationships (spatial, functional, and social) among the cities in the interurban system of a particular region. There are interconnections and degrees of interdependence among cities in a region, as there are among component elements in a city. The above situation might be likened to a system of interacting wheels of different sizes, with spokes of each of the wheels analogous to component elements of the city (Figure 1-2). Each spoke in the wheel represents a different type of space use or activity (residential or commercial, for instance), and each is instrumental in provision of structure, support, and cohesiveness to the entire entity, the urban subsystem. Although each spoke is an essential element of the wheel as each type of space use or activity is an essential element of the city, it is the population of the city that provides the driving force to activate the urban subsystem, as an engine might activate the wheel. The individual wheel, with its array of spokes, represents a given city and the interacting parts comprise the intraurban system. In turn, the entire arrangement of wheels, large and small, is analogous to an interurban system of cities in a specific region. Still using the example of wheels to represent cities, they interact by means of a belt system, with this component, in turn, analogous to avenues of transportation and communication among cities in the region.

In the above process, a regional system of cities which interact and which have interrelationships of the component entities making up the system is recognized. In turn, each of the entities making up the interurban system is comprised of component elements which interact and

are interrelated in a different manner. and these individual entities (the individual city) are considered as well.

### The Structure of This Book

The first part of this book deals with the clarification of terms classifications pertaining to cities, the bases and regions of city formation, the evolution of cities to their present form, general growth trends and patterns in the rise of urbanism in the world and in major world regions, stages in the urbanization process and present levels of urbanization, projected levels of urbanization to the year 2000, and degradation of the urban environment where about one-third of the world's people now live.

The next section of the book is concerned with cities as parts of spatial systems or interurban systems. The various concepts and hypotheses having to do with the spatial arrangement of cities are included, as are concepts dealing with the relationships between cities and the regions they serve. Further, concepts of hierarchies of cities are considered, including rank-size relationships and spatial hierarchies. This section recognizes that the individual city is but one component element in a system of cities and that the region served by the individual city is but one component element in a system of such regional units. Included in this part of the book is coverage of the regions served by cities—their delimitation, identification, and differences.

The section of the book that follows focuses on the elements comprising the intraurban system; the subsystem represented by the individual city. Since the spatial expression or manifestation of each of the functional component ele-

ments is a type of land use, this section includes coverage of land uses in the city, the manner in which they are identified and represented, patterns and concepts dealing with their spatial arrangement, and concepts having to do with patterns they exhibit. Since each land use is distinctly different from others, with each serving a different role in the operation of the whole city, each land use and associated activity in the city is explored in some depth. Transportation is an element of the urban subsystem somewhat different from others in that it serves as a means of activating the entire intraurban system, as well as being a land use component in its own right.

The remaining section of the book includes coverage of the areal expansion of cities or "urban sprawl," and the political organization of urban areas which is conducive to such uncontrolled expansion. Furthermore, this section contains coverage of different urban land policies in different parts of the world, as well as the nature of efforts made in the realm of urban planning. The latter includes coverage of the planning and development of "new towns" or self-contained, free-standing new communities.

In summary, the content of this book might be stated with a series of phrases: (1) establishment of a working background, (2) evolution and dispersal of urban centers, (3) recent world trends, patterns of urbanization, and future estimates, (4) spatial hierarchies and spatial systems, (5) functional elements of the city, and (6) current and future problems, policies, and programs. The purpose, overall, is to impart some appreciation for and knowledge of the above topics, with special concern for cities in the United States.

# urban terminology and classifications

In any body of organized knowledge, there is a certain vocabulary and classification that is developed or employed, and urban geography is no exception. This vocabulary aids in communication and understanding of the subject matter of the discipline. Some of the words and phrases that are commonly used in urban geography have originated within geography, while others have originated in other fields of study and have been adopted by geographers. Much of this terminology has

been utilized in this book and the purpose at this point is to clarify the meanings of frequently used terms, at least in a manner suitable to the content of this book. Many of the terms have no single meaning that is acceptable to all persons, but at least the definitions put forward have meaning to the content of this book, if not to others.

Also included in this chapter is coverage of some basic types of classifications used in urban study. These also involve definition of a type, but not of an isolated term. Here the definition is of a term that is used in conjunction with others and which has meaning when used in the perspective of a number of other terms.

The overall objective here is to present basic, often used terminology, but not to provide a glossary of all terms used in the book. It is more appropriate to clarify the meaning of terms used in a particular context at the time the pertinent material is presented. The same qualification applies to classifications as well.

### **General Terminology**

Urban. The sociologist, Nels Anderson, implies that urban or urbanism is a way of life of man or the condition of man characterized by certain attitudes, such as transiency, superficiality, and anonymity. This type of definition may suffice for recognition of differences in social types, but does not serve well as a working definition for geographers.

Geographers are more inclined toward a definition of "urban" that recognizes, not a mode of behavior, but a place of occupance. Certainly, man in a certain locational setting may adopt certain indentifiable behavior traits, but the geographer is more concerned with his locational setting than with his life style.

Most geographers would accept a definition of "urban" that would essentially state that urban is a locational set-

<sup>1</sup>Nels Anderson, *The Urban Community: A World Perspective*, Henry Holt and Co., New York, 1959.

ting in which (1) the density of settlement is considerably higher than that of the general population, (2) the people in that setting mainly are engaged in nonagricultural activities, not in economic activities normally placed in the primary economic sector, and (3) the locational setting serves as a cultural, administrative, and economic center for a region peripheral to the center in question. Urban, as used here, refers to the activities of a human agglomeration at a specific location or place.

City. The meaning of this word also is somewhat unclear, although it is very often used. The problem of definition is made more difficult by the use of the term "city" in different contexts. One meaning refers to a discrete area with a discrete population that has legal status and the margins of this discrete area, the "city limits," have legal definition and recognition. This legalistic definition is more of a formal one than a general definition, and is employed in much usage of the word "city."

Another, but more general, definition of "city" is one that holds the city to be a locale with a sizable agglomeration of people having the characteristics of an urban being. This definition may or may not incorporate the legal boundaries consistent with the legalistic meaning of the word. Often, the use of the word "city" is

a quite general one, such as in the term "city limits" when referring to the margin of the built-up area with population densities greater than those prevailing in rural areas.

An interesting concept dealing with the use of the term "city" has arisen in urban geography. One aspect of this concept concerns the case where urban settlement is confined to the area within the legal limits of the city and virtually all of this area is occupied by urban residents. Such cities are known as "truebounded" cities (Figure 2-1). Another situation exists where urban settlement occupies only a portion of the area included within the legal limits of the city which is termed the "over-bounded" city. Still another situation is one in which urban settlement has spread beyond the legal limits of the city-a situation very common to large urban centers. These cities are known as "underbounded" cities and are a very prevalent type, since legal limits of cities tend to be relatively static, while urban settlement is spatially dynamic.

Agglomerated Settlement. This is a term used in geography and other disciplines and infers a settlement form in which there is a density of population greater than those of rural areas. The agglomerated settlement consists of a cluster of population in which the people are not engaged in rural economic activities for

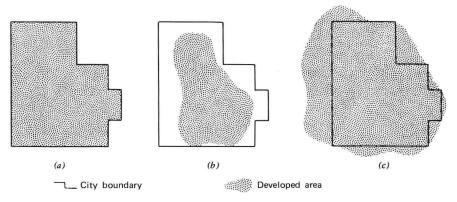


Figure 2-1 Types of "bounded" cities. (a) Truebounded. (b) Overbounded. (c) Underbounded.

#### 8 Urban Terminology and Classifications

the most part. The agglomerated settlement may or may not have legal status and fixed boundaries.

### Formalized Terminology

In addition to the general terminology discussed above, there is a body of terminology that is, at least in the United States, given a more explicit meaning by public agencies involved in the process of data accumulation and reporting. The following section deals with the major terms of this type.

Places: Incorporated, Unincorporated, and Urban. The Bureau of the Census uses the term "place" in reference to a concentration of population regardless of the existence of legally prescribed limits, powers, or functions. Thus, the term has a meaning essentially the same as that of "agglomerated settlement" mentioned earlier.

Of "places" identified by the Bureau of the Census, some are incorporated places and some are unincorporated places. Incorporated places are those legally chartered as cities, towns, villages, boroughs. They have established limits or boundaries which approximate the areas of high density settlement. Unincorporated places are those population concentrations that have no fixed corporate limits and do not have the legal powers of incorporated places (Table 2-1). Prior to 1970, an urban town or township was recognized, this being a minor civil division of a county with a population dense enough to be declared an urban town (as in New England) or an urban township (as in the American Midwest). Such units are now included as unincorporated places.

A variation of the use of the term "place" is the "urban place" as designated by the Bureau of the Census. An urban place is a concentration of population including 2500 people or more and may be an incorporated place or an unincorporated place. In general, an urban place is a subdivision of the minor civil division

**Table 2–1** "Places" Classified by the Bureau of the Census, 1970

Incorporated places	
Number	18,666
Percent of total places	89.9
Population (millions)	131.9
Unincorporated places	
Number	2,102
Percent of total places	10.0
Population (millions)	12.8

SOURCE: U.S. Bureau of the Census, Census of Population, 1970. *Number of Inhabitants*. Final Report PC(1) Al, United States Summary.

within which it is located such as a county. There are some instances, however, where the urban place is considered a minor civil division in its own right and is independent of any county organization. Such is the case of St. Louis, Missouri, Baltimore, Maryland, and a number of smaller cities in Virginia. In the United States in 1970, there were 6435 urban places, each with a population of over 2500.

Notice that, although a population of 2500 is the distinction on which urban places are recognized in the United States, other standards are used in other nations. In Denmark, an urban place is an agglomeration of 250 or more people. Greece. urban places municipalities and communes with agglomerations of 10,000 or more people, while Guatemala has considered places as urban if they have 2000 or more inhabitants, plus places with 1500 or more inhabitants if running water service is provided in the houses. These are only a few of the variety of ways in which urban places are defined in different countries; it is unusual to find two national definitions that are exactly the same.

But is there not a formal or organized way of distinguishing between large and small urban places? In the United States there is, and this takes the form of the "central city" which is a large urban place,