

Borchert's Epochs of American Urbanization

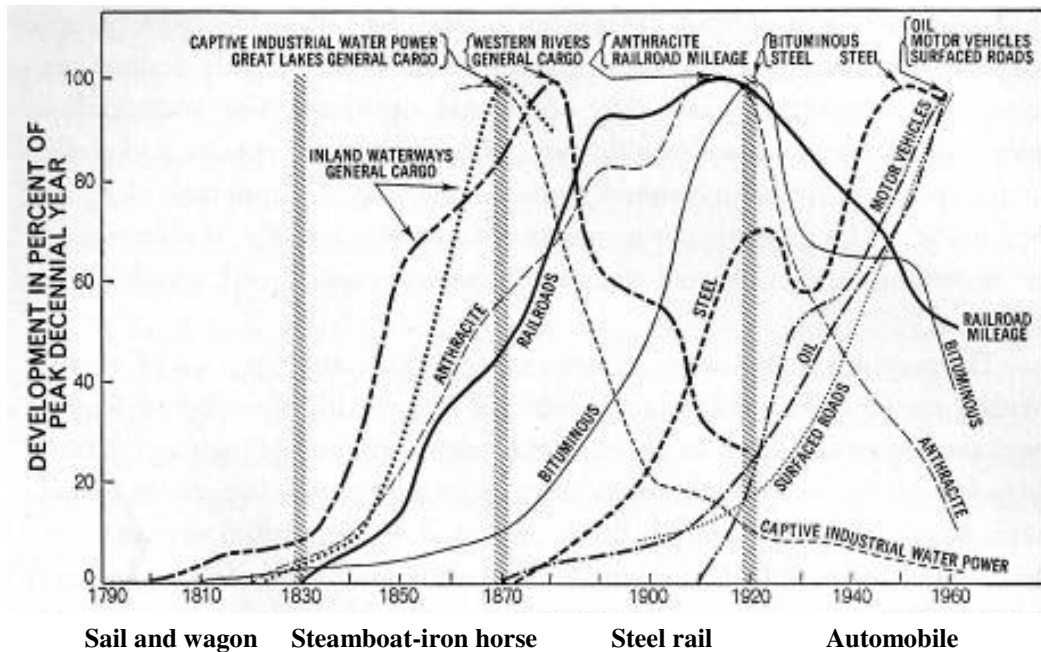
Geographers define cities as intersecting points of communication and transportation. Cities serve multiple social, political, economic and cultural purposes. Within each of those purposes cities assemble, process, store, and redistribute goods, people and ideas in many different ways.

The size and wealth of city depends upon two general factors:

1. The size and wealth of its *hinterland* (the area surrounding a city that supports it).
2. The degree to which the city is connected to all the other cities in the world.

The size of the hinterland and the degree of connectivity are both impacted by how well transportation and communication technology are working. At one time transportation and communication were essentially the same. Some physical object had to move for information to flow, delivery of mail for example. The wealth of the hinterland is a function of many things, but the population's level of technology is the most important factor.

With these definitions in mind, it is possible to develop a view of cities that is based on innovations and diffusions of technology. This is what was done by the geography of John R. Borchert during the 1960s. Borchert developed a view of the urbanization of the United States that is based on “epochs of technology” (epochs are significant times in history). As different types of technology develop, the urban landscape undergoes dramatic changes.



The first epoch is called the *sail and wagon epoch* because the predominant source of energy for shipping was wind power and wind power was used in a variety of mills. On land, the most efficient vehicle was the wagon. Wagons developed in Conestoga, Pennsylvania were among the most efficient in the world. This basic vehicle, which most Americans know as the "Covered Wagon," enabled farmers in the Lancaster area to shipping grain and other food stuffs to markets in Philadelphia and other growing seaboard cities. In many respects, this epoch extends back to antiquity. Travel on land was slow, so most urban places were ports on the sea coasts or interior water ways. Canals were built to improve access.

The second epoch, the *steamboat - iron horse epoch*, was the result of transferring machinery developed in the mining industry to both water and land transportation. The steam wagons were so heavy that special tracked roadways were built to support them and minimize friction. Steamboats made upstream travel efficient and profitable. During this period, the railroads were tributaries of ports. The graph shows the rapid increase of water travel and coal production. During this period, electricity freed communication from transportation.

The third epoch, the *long haul* or *steel-rail epoch*, dramatically improved land transportation and after a time nearly eliminated riverboat traffic. During this period, steam and electricity were applied to the manufacturing process which enabled factory owners to establish plants away from water power sites. As a result, many new manufacturing towns developed.

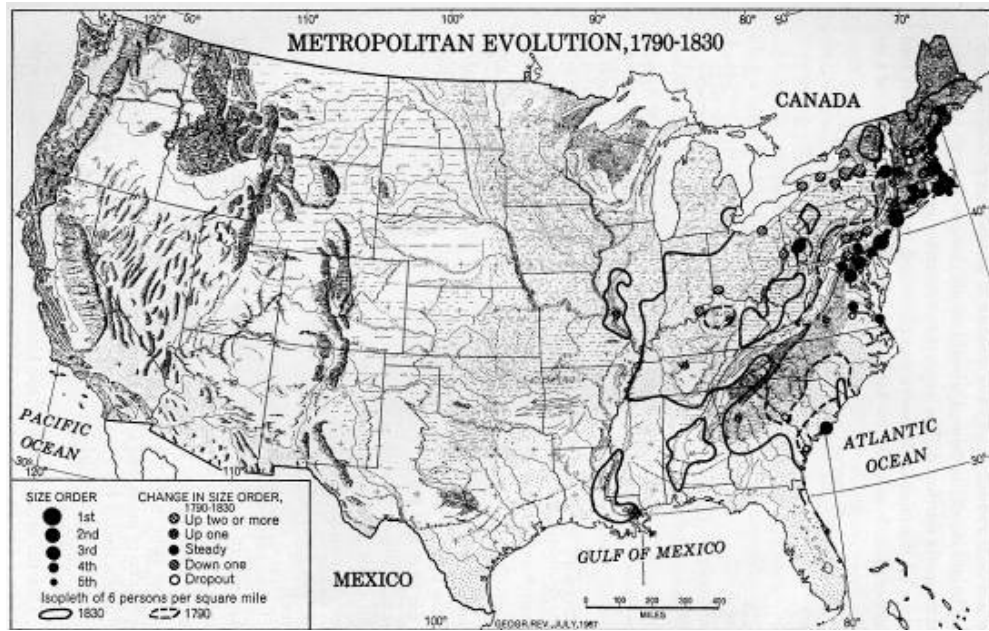
The fourth epoch, the *automobile epoch*, was/is very different. Now the dense network of roads makes it possible for cars and trucks to travel to just about every place in the country. This is described as "surface-like," a situation where movement is possible in any direction with equal ease. The advent of this epoch freed urbanization from the network of the railroad lines.

The key insight of Borchert's work is that it provides a lens for us to view the process of urbanization and enables us to make predictions about the future. Because urbanization is the result of innovations and their diffusion, we should be able to see the changes around us that will eventually shape the future of our cities. Thus, we should never be shocked by the future.

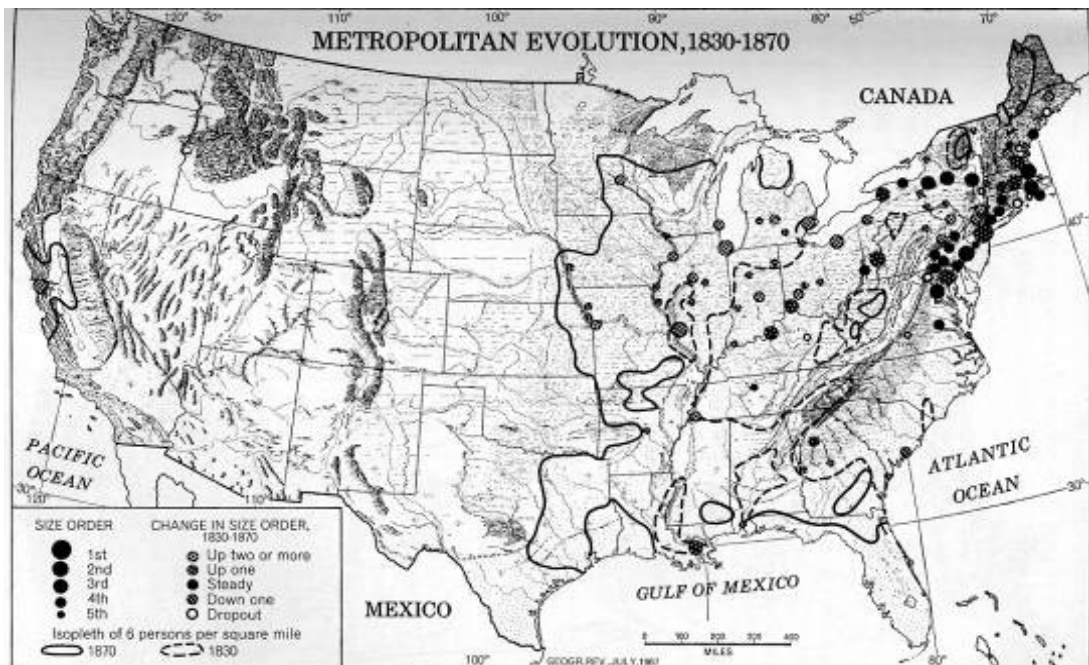
Borcherts' Maps of Urbanization

The following four maps of the US show us how the urban system in the United States developed in response to changing technology. The territorial expansion of the country was a necessary for the growth of the integrated system. Because the federal government did not allow states to interfere with inter-state commerce,

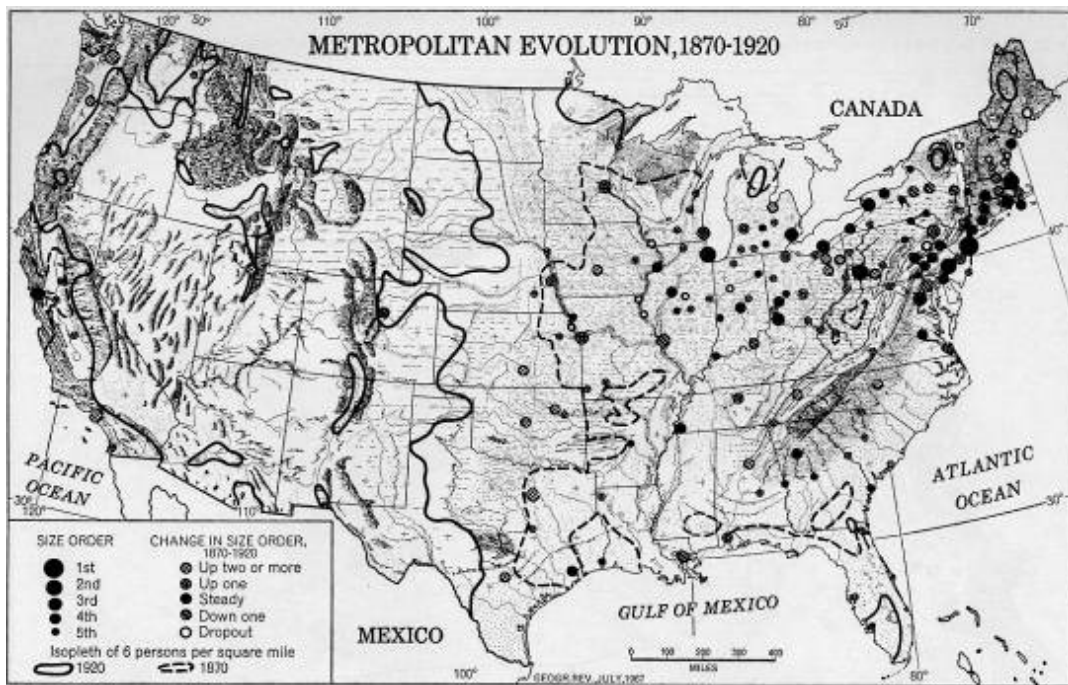
the system of markets and production sites could be linked without concern for politics. This situation was a large factor in the economic marginalization of state capitals.



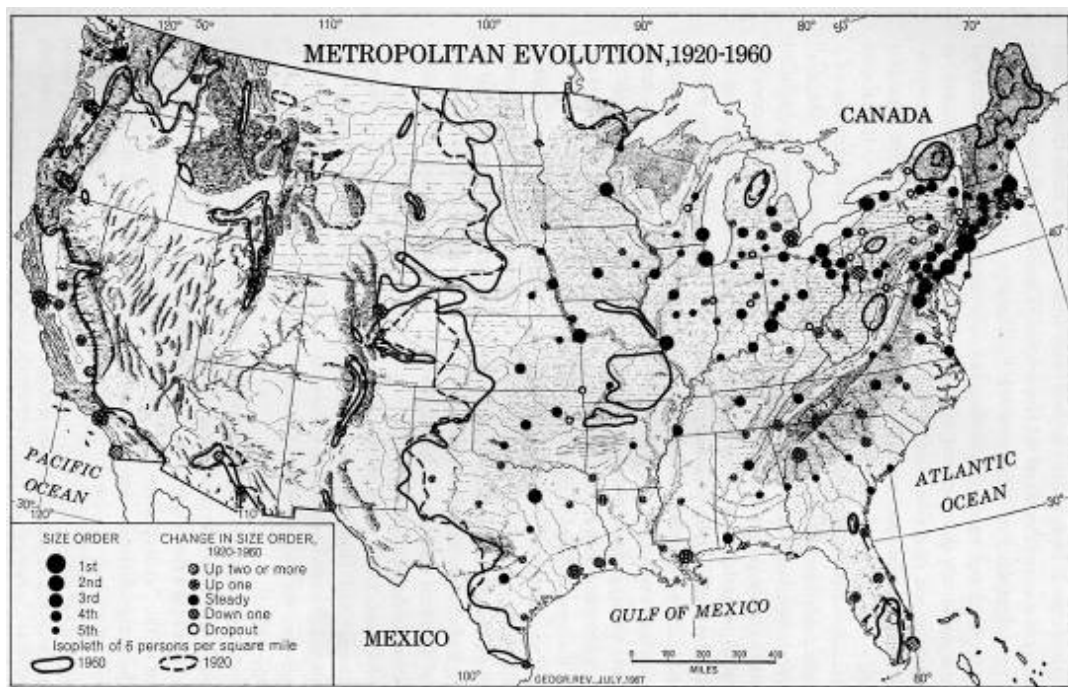
Map 1: At first cities were clustered within sixty miles of the Atlantic sea coast. Towns were either small ports or located at the crossroads of productive inland agricultural areas. Water power sites were also important.



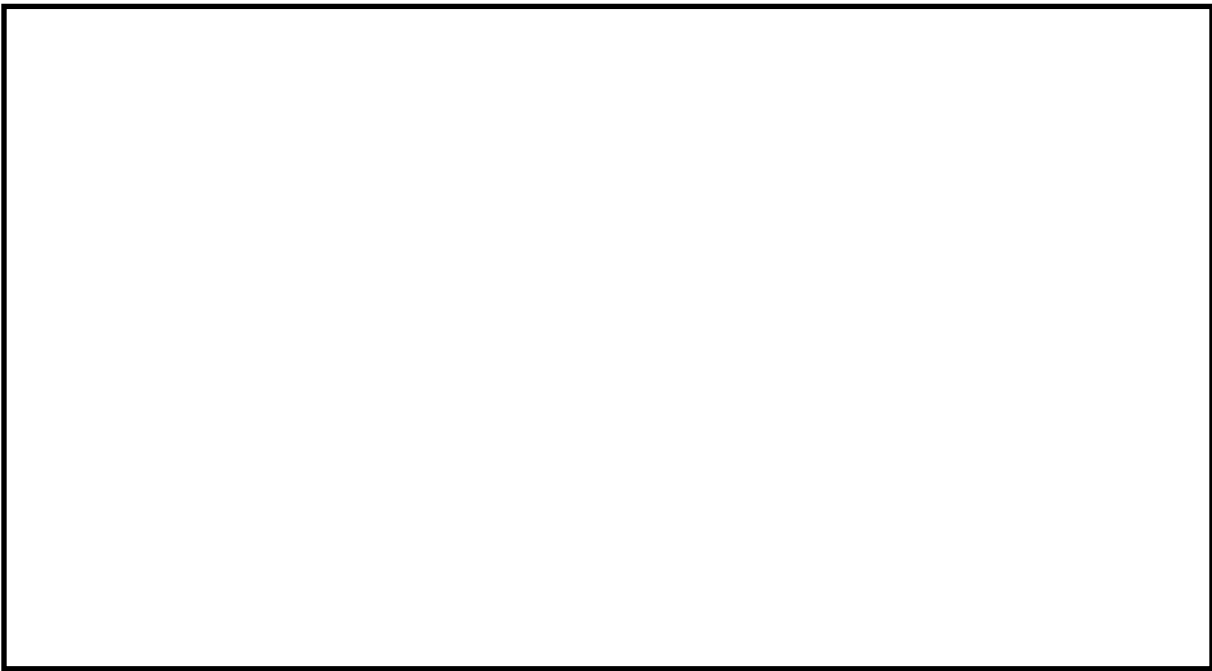
Map 2: The steamboats enabled large numbers of people to move to the frontier. At this scale, we can see that the frontier was largely urban and commercial. The vast system of the Mississippi and Great Lakes made continental transportation feasible. Therefore, cities soon developed in places where businessmen could take advantage of new resources and the multifaceted business of settling a new land.



Map 3: The pattern of the railroad era is continental, and the 48 contiguous states were stitched together into a core by the railroad. Industries and other commercial activities began to reach out from the national base and engage in major overseas ventures. The Midwestern and Northeastern cores were well established at the end of the period. The West Coast city system was linked to the east but was beginning to develop a character of its own.



Map 4: The Great Lakes automotive industry and the sun belt cities grew rapidly during the late 20th century; in addition, there was some retreat from the agricultural frontier.



Map 5: The fifth map has not been drawn. What do you think it would look like? What and where are the future centers of urban growth? Which cities will experience relative decline and drop out of the top five levels of the urban hierarchy? How important will new forms of communication such as the internet be over the next 30 to 40 years? This is fun part of urban geography!

For each of the epochs:

1. Summarize in 2 – 3 sentences.
2. What are the common characteristics that allow urbanization to take place in each of the epochs? Speculate why these characteristics are common.

For Map 5:

1. Complete the map and answer the questions.