

# METROPOLITAN EVOLUTION, URBAN IMAGES, AND THE CONCENTRIC ZONE MODEL

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## URBAN ERAS AND THE CITYSCAPE

According to Edward Price, "Mention the name of a city and the mind of a listener who knows it will most likely identify it with a visual image, one of its landscape. The landscape provides an expression of the city's inner workings and its past."<sup>1</sup> Cultural differences, including great differences in technology and landscape tastes, can, of course, make for important variation in the cityscapes of the world, but considerable variations in the urban landscape can also be found in the cities of North America. John Borchert, in his article, "American Metropolitan Evolution," states that "the landscapes of any American city reflect countless decisions and actions from the time of settlement to the present. The results are apparent not only in differences in land use but in the kaleidoscopic variety of building facades, street patterns, and lot sizes. Early actions precluded or frustrated many other locational decisions. The metropolitan physical plant has accumulated through various historical epochs, and clearly those epochs were distinguishable one from the other by different ideas and technologies."<sup>2</sup>

Borchert, Price and others have seen the city as a stock concept; the physical landscape of one era greatly modifies man's adjustment to space in other eras. This problem of "adjusting to space," however, can be looked at from a cultural or behavioral point of view as well as an economic one. It is the cityscape which provides the clearest images and cognitive maps that people have of a city and these images and maps should be incorporated in our urban models along with the existing "economic man" theories.

## THE CONCENTRIC ZONE MODEL AND URBAN IMAGES

Many models have been developed in geography with varying degrees of complexity. One of the earliest and most widely used models in urban geography is the concentric zone model which was postulated by sociologists during the 1920's. Although this model is often criticized as being too simplistic, it does provide a basic framework for the organization of urban data and it has played an important part in the creation of consensus mental maps of the city ("inner city," "suburban ring," etc.). It is felt, however, that this model would be more useful for understanding the nature of the city by geographers if the sociological terminology usually used could be modified through the use of some landscape-image inputs. Geographers still talk about such things as "working class" and "suburban" zones even though the visual characteristics of these zones and probable inter-city variations in those visual characteristics are seldom adequately discussed. Urban geographers have largely ignored images and impressions of cities and have used such things as maps of social characteristics and graphs of density gradients to describe it, even though a certain density in one visual context may be quite different than the same density in another context and the difference may be due as much or more to era of growth as to socio-economic characteristics. The study of landscapes has been left to rural geographers.

One development that may lead to a new interest in landscape analysis on the part of urban geographers is the increased interest in urban spatial behavior. Geographers

are joining planners and psychologists in perception studies, in an attempt to understand some of the inputs people utilize in mentally structuring their environments. In planning, Kevin Lynch, Malcome Rivkin, Stephen Carr, and others have done much work in the area of structuring cities on the basis of impressions and remembered images gleaned from respondents through in-depth interviews. The structure of the city is not derived from actual land use but the things that people see, remember, and react to.<sup>3</sup>

In geography, Allan Pred's study of the black ghetto in Chicago gives some clues as to how cityscape analysis could be used as a starting point in studying the images that people have of places.<sup>4</sup> It would seem that cityscape analysis studies and mental map studies could be utilized in creating a basic, introductory landscape-image model of city structure comparable to the land use and socio-economic models now in use.

## ERAS OF GROWTH AND IMAGE MODELS

Although the results of perception studies dealing with the urban environment are still too scattered to be useful in the determination of a scientific image model of city structure, cityscape analysis can be used to give direction to the effort. The following section of this paper includes an extremely preliminary and sketchy attempt to demonstrate some possible relationships between cityscapes and city structure that might be useful in providing some insight into how cities might be structured on the basis of visual impressions and image-dominated (as opposed to say pathway-dominated) mental maps. More precisely, an attempt is made to relate Borchert's contention that cityscapes vary with era of growth to a landscape-image version of the concentric zone model.

Borchert hypothesizes four major epochs of urban growth, each of which may or may not have affected a particular city, depending on its date of foundation. They are: Sail-Wagon, 1790-1830; Steamboat-Iron Horse, 1830-1870; Railroad-Heavy Industry, 1870-1920; and Auto-Amenity, 1920-1960. There are exceptions to these growth factor eras, of course, since, for example, Atlantic City grew large as an amenity center before the amenity era. In general, however, the eras are realistic.

Some cities, such as Cincinnati, have experienced city status during all of these eras, while others, such as San Diego, have really attained city status only during the last era. Despite urban renewal and freeway construction, many aspects of the cityscapes of these two cities still vary and it is possible and perhaps probable that their images vary as well. Neither of these cities were shaped by the same era as Chicago, the city which served as the prototype for the early models of city structure, namely the Railroad-Industrial era.

We can classify cities on the basis of their era of greatest importance and landscape formation and relate this classification system to possible consensus images that could occur if proper studies were carried out. An example of a "proper study" would be something on the order of "A Walk Around the Block," "The City as a Trip," or "The View from the Road," as carried out by Kevin Lynch and others.<sup>5</sup> What do people remember on a trip through a city and how do they use what they remember in structuring their images of that city? Students visiting Cleveland, for example, used terms like "railroad yards, port facilities, brick tenements, and steel mills" when describing their impressions of the city and, although no detailed study was carried out, it is likely that those image components would have played an important part in their mental maps of the city.<sup>6</sup> Descriptions of San Diego, on the other hand, usually include some mention of "one story, small, single-family houses, neon-signed commercial strips with huge parking lots," etc.<sup>7</sup> Admittedly, there is very little hard data here upon which to build a landscape-image model of city structure, but Borchert's eras can provide a skeleton.

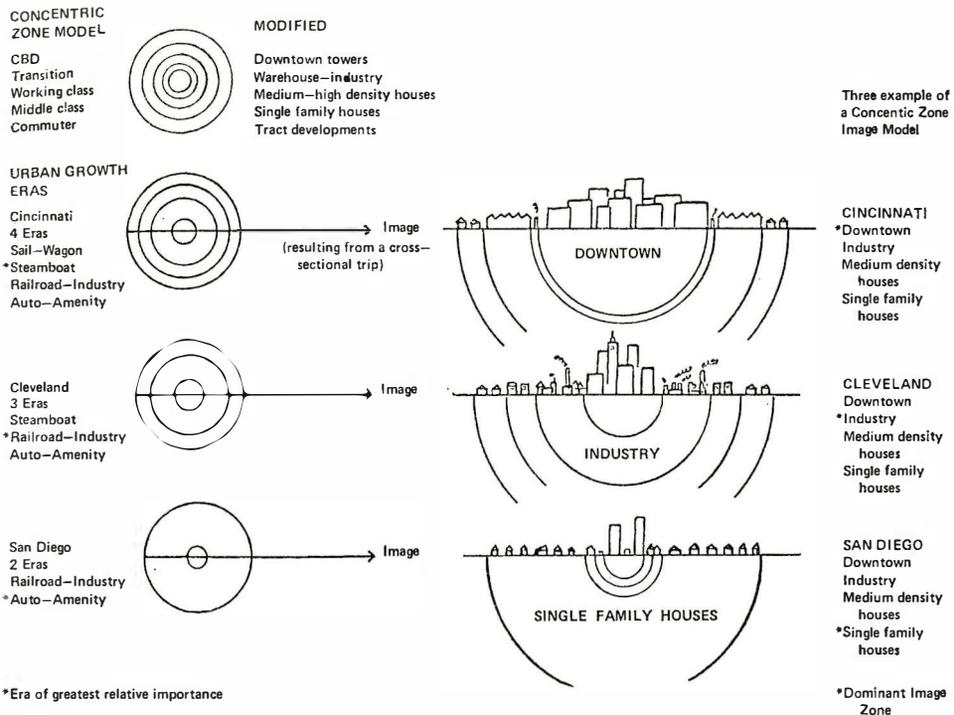


Figure 1. Image Inputs and the Concentric Model

Central Cincinnati was laid out largely during the steamboat era when intra-city transportation systems were primitive if not non-existent, and industry was still small-scale. Large, multi-story, multiple-purpose buildings were packed tightly into the urban core. Small factories, stores, warehouses, offices residences and hotels co-existed in the relatively undifferentiated (visually) buildings. Even today, Cincinnati has a fairly strong downtown with restaurants, theaters, a stadium, and plans for second-level sidewalks. Central Cleveland was formed during the Railroad-Industrial era (as was Chicago) and has a downtown which is small in area but packed with 1920-style skyscrapers and 1930-style malls. In the evening, however, the downtown is dead and highly-visible heavy industry nearly surrounds it. Downtown San Diego reflects the auto-age. Although large skyscrapers are being built, they exist in a sea of parking lots and other low-intensity land uses and single-family homes with yards only a few blocks from the center. The largest stores are all in the suburban shopping centers.

The result of this kind of macro-analysis is a concentric zone model in which the most important or noticeable landscape zone is identified, ideally on the basis of era of major landscape formation (Fig. 1).

## CONCLUSION

The purpose of this paper is to bring together the ideas of creating generalizations or “models” to explain and teach principles of city structure and the work that is being done to discover how people view and remember cities. If some method can be found to provide images to go along with the existing models, then the teaching of city structure and organization will be a much more productive effort, for students remember visual characteristics of cities long after they have forgotten such things as maps of land use intensity. The “image-model” city classification system represents a preliminary step in that direction.

## REFERENCES

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- <sup>2</sup>John Borchert, "American Metropolitan Evolution," *Geographical Review*, Vol. 57 (1967), pp. 301-332.
- <sup>3</sup>See, for example, Kevin Lynch, *The Image of the City* (Cambridge: M.I.T. Press, 1960), and Stephen Carr and Dale Schissler, "The City as a Trip: Perceptual Selection and Memory in the View from the Road," *Environment and Behavior*, Vol. 1 (1969), pp. 7-36.
- <sup>4</sup>Allen Pred, "Business Thoroughfares as Expressions of Urban Negro Culture," *Economic Geography*, Vol. 39 (1963), pp. 217-233.
- <sup>5</sup>See, for example, Donald Appleyard and Kevin Lynch, *The View from the Road* (Cambridge: M.I.T. Press, 1964).
- <sup>6</sup>Interview with Cleveland planners, 1969.
- <sup>7</sup>Larry R. Ford, "Democratic Featurism in the American Urban Landscape," unpublished paper (1971), mimeographed.