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GEOGRAPHICAL PATTERNS OF CITY GROWTH

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Order Out of Chaos

Random Growth. The modern city is not shaped by either plan or tradition. It has grown at random. The center of the modern city has no symbolic meaning. Neither the temple, nor the factory, nor the office building are moved purposely into prominent position. At its fringes, the modern city is not confined by fortifications. The modern city sprawls haplessly into its own hinterland.

There are those who claim that the modern city has grown "naturally" because it has grown without plan.¹ That the city has grown according to something like a "natural law" is suggested by the fact that it follows a more or less regular pattern. We are not confronted with a jumble of public and private construction, differently arranged in every city. As a matter of fact, the experienced traveler will easily find his way around from the business district to the slums, from the slums to the bright light district, and from the bright light district to the parkland of fashionable urban residences in any city that he comes to.

The sociologist is interested in the regularities of city patterns that have grown without premeditated purpose and yet re-

¹"The city is discovered to be an organization displaying certain typical processes of growth. Knowledge of these processes makes possible prediction of the direction, rate, and nature of its growth. That is, the city is found to be an artifact, but a natural phenomenon." Harvery W. Zorbaugh, "The Natural Areas of the City," in The Urban Community.

Ernest W. Burgess, editor. Chicago: The University of Chicago Press, 1926, pp. 220-21.

peat themselves from one urban community to another. As a scientist, he is interested in generalization. It may look to him as though some guidance had been provided to place a more or less similar stamp upon all our modern urban communities.

Competition for Land. The cities of the industrialization process grew without plan, but under fairly similar conditions of economic competition. An attitude of laissez-faire prevailed. In principle, all builders had an equal chance to build on whatever land they were able to claim. They all had to make their claims, however, on the real estate market in terms of purchasing power; and the most desirable land went to the highest bidder.

Desirability of location and effective demands for land use were very much the same wherever modern cities grew. Desirability of location raised the land values in certain parts of the city. Here, only those land uses could survive economically which were backed by purchasing power sufficiently large to win out in competition on the real estate market. Similar clients came to cluster on similar tracts of land. Through competition some order established itself without either plan or tradition.

Change of Preference. Desirability of location did not remain the same throughout the course of urban growth. In the early American city topographical conditions were of greater importance for differential construction than they have been since. Spectacular and more sanitary sites were pre-empted for the residences of the more affluent members of the community. They sought pleasant views of highlands not endangered by recurrent floods. The poor clustered on the less desirable lowlands.

As urban settlement grew, the importance of topographical features diminished as compared to various aspects of the man-made environment itself. Proximity to or distance from the central nucleus of commercial, governmental, and industrial construction became a matter of primary consideration. Advantages and disadvantages of either central or peripheral location shifted constantly during the history

of American city growth. In the beginning, there was an obvious advantage for the wealthy in settling close to the center of town, with in easy walking distance from their places of work, close to the docks and wharves, the storehouses, and the office buildings. The poor had to come in daily from the fringes of town where they lived in relatively primitive shelter.²

As means of transportation improved, as wealthy citizens traveled to town by carriage, as the street car, the cable car, the train, the subway, the bus, and the private automobile made their entrance to ease the commuting problem, the wealthier citizens turned their eye to the outskirts of the city where they found an opportunity to settle in relatively spacious mansions on well landscaped grounds. They leap-frogged beyond the ranges of less desirable housing and left their city homes to be taken over by other land uses.

There are exceptions to this rule. The stately city homes of Beacon Hill in the center of Boston testify to the survival of earlier forms of city development.³ At the fringes of many of our large metropolitan areas, we still find poor housing, simple shacks, and deteriorating farm housing converted to residential use.⁴

About Concentric Urban Growth

European Cities. The American⁵ city expresses more clearly

² "The Mirror's" articles included comments...on the immigrants and ragged beggars who came into the city from the suburbs each morning." James Ford, 'Slums and Housing, Cambridge: Harvard University Press, 1936, pp. 94-95.

³ See Walter Firey, 'Land Use in Central Boston.' Cambridge: Harvard University Press, 1947, Chapter III, "The Influence of Spatially Referred Values Upon Land Use: Beacon Hill," pp.87-135.

⁴ For the "tendency for residences to gravitate to the lowest use in terms of class status" in the urban fringe, see Walter Firey, "Ecological Considerations in Planning for Urban Fringes," 'American Sociological Review, Vol. 11, No.4 (August, 1946), pp.418-419.

⁵ Where we talk about the "American" city, we have in mind specifically the city of the United States. Cities in South America differ markedly from cities in this country with regard to most social conditions.

than the European city the competitive forces inherent in the industrialization process. This is true for two reasons: (1) American cities are not superimposed upon urban settlement that survived from previous historical conditions; and (2) American cities have grown more rapidly than those of the European continent.⁶

Most European cities were already fairly well structured by the time the industrialization process got under way. There were public buildings in the center of the city, castles and cathedrals, theaters and museums, public squares and stately boulevards. The business centers of these cities developed close to, but remained clearly segregated from, the centers of public construction.⁷ Public functions, parades, speeches, and performances took place in convenient proximity to, but did not quite intermingle with, the functions of the business districts where the department stores attracted their customers, where the newspapers went to press, and where the bankers dealt with their clients. At their inner cores, these cities reflected the presence of royalty and aristocracy alongside new shopping districts that displayed glamorously the wares turned out by the advancing industrialization process.

Beyond the central part of the European city, the urban area tended to fall apart into a limited number of more or less distinct sections. The workingmen's section was easily distinguished from the

⁶"The European cities have assumed their urban character and proportions more gradually than have those of the United States." 'Our Cities, Their Role in the National Economy.' Report to the National Resources Committee. Washington, D.C.: U.S. Government Printing Office, 1937, p.26. Consider the entire section on "Comparison between American and European Urbanism," pp.25-27.

⁷"We find many of the European cities divided into two major parts: the ancient city at the center and the new or modern city outside the line of former walls which enclosed the inner core." 'Our Cities,' op. cit. p.26. Consider that the "line of former walls" enclosed only a minute section of the modern metropolis.

area where the well-to-do lived in relatively pretentious apartment housing. Far toward the outskirts, large sections were built up entirely of single-family housing.

The European city tends to be partitioned into segments that serve distinctly different purposes. Close to the docks and the early manufacturing plants, there had always been the homes of the workers and the poor. On hills and near lakes, there had always been the homes of the wealthy. These tendencies were reinforced by the push and pull of "natural" segregation, by the desire of like to live with like, and by the resistance of different groups of city dwellers against association in their private lives with those either above or below their social station. Never did these cities grow fast enough to obliterate the sectional pattern into which they had chanced to fall before the onset of the process of industrialization.

American Cities. The concentric pattern of city growth has found its most blatant development in the American scene. Even here, the simple geometrical design rarely achieves full perfection. It is warped by natural man-made obstacles. These obstacles arise in the form of lakes, rivers, or other waterways, hills, freight yards, warehouses, or early industrial plants. They either bring urban construction to a standstill or are by-passed by urban growth.

Chicago, the city pattern of which has been more thoroughly investigated than that of any other urban community in the world,⁸ grew very rapidly in the second half of the 19th Century and has obtained a fairly regular outlay of construction and land use. Geometrical regularity exists there, but Chicago's lake shore location has sent out waves or rings of successive expansion that bulge in the form of semicircles of increasing radius.

⁸For the development of urban sociology at the University of Chicago, see Edward Shils, 'The Present State of American Sociology.' Glencoe, Ill.: The Free Press, 1948, "Urban Sociology," pp. 7-14.

Minneapolis has grown in a southwesterly direction. At the northeast end, this city was cut off from further growth by spacious freight yards and railroad tracks. Toward the east, it was hemmed in by the Mississippi river.

Seattle extended inland on terraces that rose from Puget Sound. In New York City, urban growth has been restricted and forced into a vertical direction (by means of tall buildings) due to its position on Manhattan Island. At present, this largest city of the world is overflowing into the four other boroughs of its metropolitan area, and also into Long Island, Westchester and New Jersey. This development is dependent upon means of transportation, such as ferries, bridges, and tunnels. Thus any semblance to a strictly concentric pattern of construction is obscured by the unique configuration of natural hindrances and man-made facilities.

Concentric Growth. That our fast growing cities have expanded in approximately circular form is not hard to understand. In the circle, a maximum surface is contained within the shortest distance from the center. A circular form of city development eases the burden of the intra-urban communication.

Without the desire to keep commuting distances to a minimum, our cities might well have sprawled indiscriminately. As it is, urban construction is influenced by centripetal tendencies. Economy of transportation does not permit building activities anywhere but at the shortest possible distance from the central nucleus of the city. Usually, until everything is built up within six miles of the city center in all directions, few will venture into construction activities as far removed from the city center as 7 miles.

Concentric Rings. At varying distances from the city center, belt lines of similar construction run through the entire urban area. Workingmen's homes did not always cluster in either the north or the

south, the east or the west, of the city. They once ran like a belt line relatively close to the center of the city, encircling the down-town business district. Today, the situation is somewhat different.

In the American city of the 19th century, a relatively homogeneous type of construction was found at the same distance from the central business district in all directions that permitted construction. This statement holds completely true only where equally good transportation facilities run in all directions from the center. Otherwise, the circles are extended in immediate proximity to transportation lines. We have to express distance from the central business district in terms of commuting time to find similar types of construction at all locations equally close to the city center.

The ring theory of urban development confronts us with a simplified theoretical structure realized to perfection only under highly-simplified conditions.⁹ If we take cities as they have actually grown, we shall see the theoretical structure "shine through," being approximated by observable land use and construction. There are innumerable deviations, however, which necessitate the consideration of local conditions.

Burgess' Five Zones. With these limitations in mind, a useful orientation is provided in Burgess' well known theory of concentric city development.¹⁰ Not only does he emphasize concentric growth as such; he tells us specifically what sequence of land uses to expect as we move away from the center of the city.

⁹For equally simplified assumptions with regard to human motivation in the foundation of economic theory, see Talcott Parsons, 'Essays in Sociological Theory, Pure and Applied.' Glencoe Ill.: The Free Press, 1949, "The Motivation of Economic Activities," pp.200-217; also Adolf Loewe, 'Economics and Sociology'. London: George Allen & Unwin, Ltd., 1935.

The Business District. Burgess distinguishes five zones of urban construction and land use. Zone I contains the "loop," or central business district. Here we find the department stores and office buildings, frequently in the form of skyscrapers. Here are the specialty stores which cater to the entire urban population. Here we find the courthouse, the library, the museum, and other public buildings.

The Zone of Transition. Zone II girds the central business district. It is often called the "Zone of Transition." This designation is well-deserved. It harks back to times when one wave of immigration after another reached this country and settled in the large cities, finding a first temporary residence in the centrally-located city slums.

As they improved their economic status, as they learned to speak the language of this country, as they acquired skills in industry and were able to move to outlying districts with more expensive, better constructed, better equipped, and better maintained homes, these immigrants left their quarters in the Zone of Transition, only to be followed by a group of new arrivals. The Zone of Transition changed from an Irish to a Swedish, to a German, to an Italian or Negro neighborhood.

While different nationality groups moved through, leaving traces of their former dominance in the German club, the Irish Catholic church, the Swedish Salvation Army station, and the Italian restaurant, the area retained a more or less similar character. This area continued to harbor the slum (housing considered dangerous to the health of its inhabitants according to modern American standards.)¹¹

¹¹ For further discussion of the slum environment, see Chapter 6.

The Zone of Transition harbors a mixture of changing land uses. Within this first ring of urban construction surrounding the central area, we also find "skid row," or the single men's district, we find hangouts, headquarters, and residences, of the criminal underworld. In glaring contrast to this sordid environment, yet located in immediate proximity and at the same distance from the central area, we find some of the fanciest apartment buildings, and the bright light district with luxurious eating places, night clubs, and theaters. In the modern metropolis, the Gold Coast hugs the slum. Both of them are located in the Zone of Transition.

Workingmen's Homes. The Zone of Transition is followed in Burgess' scheme, by zone III, the Zone of Workingmen's Homes. This zone is given a somewhat unified character by housing conditions which although not quite as bad as in the Zone of Transition, are bad enough to be used for living quarters only by the relatively poor. Though there may be no slums (outright insanitary housing) in this environment, it is quite customary to talk about this part of the city as being "blighted." The term blight does not relate as much to health hazards as to economically unsound housing conditions.¹² Conditions tend to be economically unsound not because of physical, but because of functional deterioration. Construction may be strong, fireproof, and well equipped with elementary sanitary facilities. Yet, being unplanned and converted from construction previously intended for different use, the desirability of homes in this environment is decreasing. These parts of town are unattractive at best, and sordid where they are at their worst. They were built at a time when little consideration was given to park planning and the provision of attractive green spaces to improve the livability of residential districts. This zone contains former stately mansions now cut into kitchenette apartments. Residential construction expresses the change from former

¹²Causes for blight formation are discussed on p. 100.

glory to present humiliation.

Residential Zone. Most middle class residences are packed into the wide zone IV, designated as the "Residential Zone." Home construction, in this environment, runs the entire gamut from multiple dwellings to one-family homes, from modest quarters to expensive mansions, from rental housing to conditions of stable home ownership.

By and large, the better homes are found located more closely to the outer than the inner belt-line of this area. Home ownership, lower construction, and less densely built-up lots increase as we proceed from the inner to the outer rings of this zone. Such ring-formed regularities, however, are interrupted by neighborhood business districts, so-called "satellite loops," or by fashionable apartment hotels that might spring up anywhere close to a city park or a train station.

At the outer edge of zone IV, we find a mixture of land uses which can be compared only to the Zone of Transition close to the city center.¹³ In large metropolitan communities, the outer fringes of zone IV appears as a secondary bright light district. Space consuming entertainment facilities, such as eating places (road houses), night clubs, golf courses, drive-in theaters, racetracks, and baseball parks are located in this vicinity. In the modern city, the residential area turns outward as well as inward for entertainment.

FIGURE No. 4. Peripheral and Central Transition.

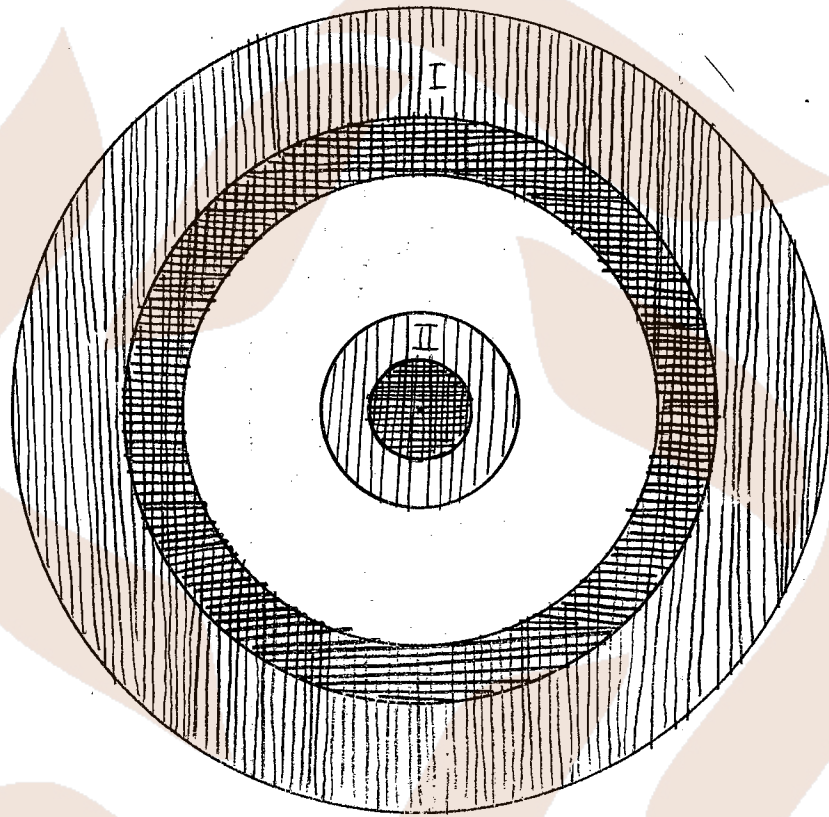
To be found on page 11.-

The commercial and entertainment belt at the outer edge of the residential belt shows this list of land uses at Harlem and North in Chicago:

Business related to residential development:

Realtors

¹³Burgess did not give much attention to a breakdown of these developments at the urban fringe. These developments did not become apparent until the 1930's and 1940's. His theory was published in 1925.



BUSINESS AND ENTERTAINMENT



ZONES OF TRANSITION



RESIDENTIAL BELT

I - TRANSITION FROM AGRICULTURAL TO RESIDENTIAL (COMMUTERS' ZONE)

II - TRANSITION FROM RESIDENTIAL TO COMMERTIAL (AREA OF "TRANSITION")

FIG. 4 - PERIFERAL AND CENTRAL TRANSITION

contractors
furniture stores
garden equipment
hardware stores
carpeting

Entertainment enterprises:

golf courses
miniature golf
kiddie camps
race track (harness racing)
baseball park
drive-in theaters
driving ranges
road houses
ice cream parlors

Garden and farming establishments:

tree nurseries
truck farms
hot houses
florists (wholesale)

Two characteristics are inherent in all these enterprises:

(1) They demand more space than can profitably be acquired in more central location, and

(2) purchases or services are required at relatively rare occasions at which a drive to the periphery may well be considered.

Intermixed with these entertainment facilities are commercial establishments which have one thing in common. They require space on relatively inexpensive land and cater to the city dweller at special occasions only. Located upon relatively large tracts of land and engaged in business less lucrative than downtown commerce, these facil-

ities have lost out in competition for downtown real estate and moved to areas of second choice which offer relatively low land values and relatively easy access to the residential areas of the city.

Commuters' Zone. The outermost zone (V) is designated by Burgess as the Commuters' Zone. This zone may stretch far into the urban hinterland and is not necessarily part of the built-up section of the urban community. It may extend to semi-rural communities outside the incorporated city. Along rapid transit lines, this area will reach right into the midst of primarily agricultural land uses. ¹⁴

Reasons for Concentric Growth

The Real Estate Market. The reasons for concentric urban growth are found in the dynamics of the real estate market. ¹⁵

Our cities have grown rapidly. At any given time, building activities did not reach further beyond the built-up area than was absolutely necessary. Land at a certain distance from the central

¹⁴For an empirical study of recent fringe developments in the outer rings of Burgess' concentric pattern, see Walter Firey, 'Social Aspects of Land Use Planning in the Country-City Fringe.' 'The Case of Flint', Michigan. East Lansing, Mich.: Michigan Agr. Exp. Sta. Special Bulletin 339, June, 1946; also Selon T. Kimball, 'The New Social Frontier: The Fringe.' East Lansing, Mich.: Michigan Agr. Exp. Sta. Special Bulletin 360, 1949. For a French statement of the problem, see Pierre George, M. Agulhon, L. A. Lavandeyra, H.S. Elhai, and R. Schaeffer, 'Etudes sur la Banlieue de Paris.' Paris: Librairie Armand Colin, 1950.

¹⁵The economist is concerned with the direction of effective demands as the foundation of his analytic reasoning; the sociologist probes deeper into the causes for such direction, and thus finds himself very much concerned with the background of preferences and values. What is a fact for the economist becomes a problem for the sociologist. Walter Firey seems to have misunderstood, somewhat, this relation when he pleaded for the consideration of values in human ecology. See Walter Firey, op. cit., "Introduction to the Problem," pp. 3-40.

¹⁶"Among the factors that push the people out of the city are: (1) the expansion of commerce and industry in the central zones; (2) expansion

business district had to be exhausted before the realtor ventured into the development of further outlying areas. Thus, a relatively even growth extended in all directions.

The question remains why the wealthier residents of the urban community seem to have preferred peripheral sites for their building activities, being followed in more or less regular succession by lower status groups and economically less-powerful citizens. It has been argued that the more well-to-do city dwellers in the 19th century sought refuge from urban grime and congestion by placing their residential housing close to the urban fringe.¹⁶ They escaped the central city to enjoy an easy access to nature, fresh air and sunlight.

These new-arrivals to the urban fringe vacated residential facilities in the inner city. These, in turn, were occupied by city dwellers next in line with regard to social status and purchasing power. These followers moved into the abandoned mansions of the well-to-do and made themselves at home in a type of construction which often did not fit their needs of everyday living. Thus, urban home construction in the residential belt changed hands not only once but many times.¹⁷

of racial and ethnic belts; (3) hazards and discomforts associated with heavy traffic; and (4) presence of vice and crime in certain parts of the city." Noel P. Gist and L. A. Halbert, 'Urban Society.' New York: Thomas Y. Crowell Company, 1948, p. 127.

"The peripheral expansion in Milwaukee country is a movement of people from the better sections of the city who seek to avoid certain disadvantages of the city without depriving themselves of the urban services to which they have become accustomed." Richard Dewey, "Peripheral Expansion in Milwaukee County," 'The American Journal of Sociology,' Vol. LIV, No. 2 (September, 1948), p. 118.

¹⁷The great mass of the housing supply consists of used housing.... the average ratio between the annual production of non-farm dwellings and total supply was 2.3 percent from 1,900 to 1,940, ranging from 1.3 to 3.2 percent." 'American Housing. Problems and Prospects.' New York: The Twentieth Century Fund, 1947, pp. 182-183.

With each sale and purchase, original design and construction lost in functional relationship to the housing needs of its occupants.¹⁸ The discrepancy between original design and present usage of real estate property grew to such proportions that the landlord considered the possibility of conversions. The usefulness of the available structure was improved by makeshift remodeling. One-family mansions were transformed into apartment housing. Additional sets of kitchen and bathroom facilities were installed. Once begun, this process continued to the point where the entire building, whatever its original shape or form, was cut into a maximum number of minimum-sized kitchenette apartments with bathroom facilities shared by several families and kitchen facilities offered in the form of hot plates.

Succession. During rapid city growth, the entire urban fabric was continuously in a state of transformation.¹⁹ The highest status and income groups pushed toward the periphery of the city to escape congestion and other urban nuisances. They were followed by their immediate "inferiors" trying to penetrate the home environment of their "betters." This race continued all down the line through the various strata of the middle classes and through the lower income brackets. Even the slum-dwellers stood ready to push in an outward direction.

This centrifugal pattern of urban growth and succession stratified the urban fabric in layers of increasing social status toward the outskirts. Most urban sociologists have explained this phenomenon with the desire for residential location at the urban fringe.²⁰

²⁰"Factors which attract or pull city people toward the outer zones include: (1) improved transportation facilities; (2) a rising standard of living expressed in terms of exclusiveness, spaciousness, and freedom from traffic noises; (3) advertising and propaganda, particularly the influence exerted by merchants and realtors; and (4) the tendency to conform to prevailing fashions and customs." Neel P. Gist and L. A. Halbert, *op. cit.*, p. 126-127.

At close scrutiny, this explanation is not satisfactory. Peripheral residential location may be desirable, but it should not matter much whether - once encased in the urban fabric - the family residence is removed one, two, or three miles from the semi-rural playgrounds.

Second Hand Housing. Thus, it remains unexplained why inside the outmost peripheral belt-line of urban residential construction housing conditions arrange themselves in a regular status sequence. To understand this pattern better, we have to recall that only a few of the urban residents in the 19th century were able to have their houses built for themselves and designed for their unique needs. To build at all, the well-to-do families had to go where building was possible, namely to the edge of the built-up city. New building activities in any other part of the already built-up city were economically encumbered by the necessity of demolishing existing construction, still in use and still yielding an income.

The status arrangement of subsequent residential belt-lines, thus, explains itself more easily. Competition does not struggle only for decreasing distances to the city fringe, but struggles also for a functionally less obsolete type of residential housing. It may not make a difference whether the city dweller lives one or two miles removed from the open country, but it does make a difference what vintage housing his family occupies. The poorer families lose out in this competition. They have to live in far outdated housing. Age of construction decreases in approaching the urban fringe. We need not be surprised to find ourselves confronted here with occupants of increasingly higher income brackets.

Central Rehabilitation? Few of our cities have reached the age where thorough rebuilding and rehabilitation programs can profitably be undertaken in the inner city. In the future, we shall have better opportunities for central rehabilitation. At that time, the wealthier members of our urban communities will consider the advantages

of open developments at the city outskirts as well as the advantages of residential location in close proximity to the central business district.

As complete physical deterioration makes inner city areas available for new construction, the now existing status arrangements in our city pattern may reverse itself. Land values rise also as we move close toward the central business section of the urban settlement. One day, perhaps, there may be a sequence of residential housing that improves as we advance toward the city center rather than the other way around.

The Riddle of the Slums. The utter deterioration of the slum environment in the immediate vicinity of the downtown business district needs explanation. Here is desirable land in closest proximity to the heart of the city, yet standing construction deteriorates visibly, maintenance is neglected, and only the least successful members of the urban community are willing to put up with living conditions in this environment. The combination of high land values in this Zone of Transition with low incomes derived from real estate available at this location presents a paradox.

The answer to the riddle is conventionally given as follows: Land values in the slum environment are high not because of the income derived from the slum property, but because of the high income expected sometime in the future, when the central business district will extend into this area. Thus, the high land values in the slum environment have a speculative basis.²¹

²¹"One fruitful source of error in studying land values is to regard the problem as involving only a point of time instead of a period of time." Richard M. Hurd. 'Principles of City Land Values.' New York: The Record and Guide, 1903, p. 18.

"Inquiry will disclose that much of the land in the area (area of transition) is in the hands of absentee owners who hold it for speculative reasons, hoping that as the city grows, the business district will expand and skyscrapers will be erected on these lots. Consequently, land values are inflated, but rents in comparison are low." "Our Cities", op. cit., p. 7.

There is some doubt today whether the expectations of property holders in the slum environment will ever be borne out. The growth of the core of the modern city has practically come to a standstill. This is not entirely due to the slowing down of city growth. It is also due to the business district's tendency of growing vertically rather than horizontally. Additional office space and other building needs are provided for in skyscrapers.²²

The owners of slum property, thus, find themselves "holding the bag." One might ask whether it wouldn't be justified to leave them in that unenviable situation. They speculated on profitable sales; their speculations misfired; why not leave the real estate business to the free play of the market?

The community, however, has somehow committed itself to the support of high land values in this environment through tax assessments based on similar expectations.²³ It will seem unfair to have demanded

²²"The central business district of a city can expand in two ways, vertically and laterally... The invention of the steelframe skyscraper and the electric elevator has facilitated vertical as against lateral expansion in many cities." Arthur M. Weimer and Homer Hoyt, 'Principles of Urban Real Estate,' New York: The Ronald Press Company, 1948, p.99.

"Vertical expansion of business and industry and decentralization made many early zoning ordinances look ridiculous and defeated the speculative hopes of owners of property close-in to central business districts. Erroneous anticipations tended to frustrate appropriate development and rebuilding." S. E. Sanders and A. J. Rabuck, 'New City Patterns: The Analysis of and a Technique for Urban Reintegration.' New York: Reinhold Publishing Corporation, 1946, p. 6.

²³One of the causes of central slum development is said to be "High taxes and the unwillingness of both public officials and property owners to adjust inflated assessments and values to realities."

"It is a well known fact that present assessments in urban blighted areas are much higher than legitimate land use values." S. E. Sanders and A. J. Rabuck, *op. cit.*, p. 16.

a payment of dues on fictitious basis.

There also remains the concern for future taxable income. With annexation procedures lagging behind the growth of urban construction at the periphery of the urban community, the municipality becomes increasingly dependent upon its source of income in the central city.²⁴ Under the circumstances, there is little enthusiasm for letting the bottom drop out of the real estate market of slum properties. Nor is the economic situation in the slum necessarily as grim as our reasoning would have it.

Recent investigations have not definitely proven, but have indicated the likelihood that residential slum properties are yielding a fair return on capital investment. Rentals in this environment may be extremely low but total income seems to have been raised at many places by crowding a very large number of occupants into available dwelling units. Expenses for maintenance are reduced to a negligible portion of the total income and, thus, a fairly acceptable economic situation is temporarily established - at least until neglected construction deteriorates further and physically falls apart, or is condemned as a hazard to the life and health of its occupants.

Scattered Slums. The dynamics of slum formation are not confined to the Zone of Transition. Slums blossom forth wherever inferior and less remunerative land uses are replaced by relatively superior and more remunerative land uses.

Any student knows the slums or blighted areas that flourish in the immediate environment of the university campus. Here, land is expected to change over from residential to institutional use. The university is expected to buy up sooner or later most of the residential properties that border its campus. Under the circumstances, it is smart to wait for the university to branch out, not to waste any money for new construction on lots that are going to be sold profitably in the near future anyway, to reduce expenses for maintenance to a minimum,

and yet to try to use available construction for rooming and boarding houses.

Although slums are not limited to the central Zone of Transition, they are more prevalent here than in any other part of the city. Nor are slums found in every changing residential environment; if so, they would have to be found all over the city, because the entire urban fabric is continuously in a state of gradual transformation, superior land uses being gradually replaced by inferior ones. To make a slum, the changeover from one type of land use to another has to take more than a gradual step. The gain in income from property has to be so substantial as to make present usage irrelevant in view of expected sale prices.

This condition prevails on a large scale in two parts of the modern city; in the Zone of Transition skirting the central business district, and at the very edge of the solidly built-up city. At the former location, residential land uses are held in readiness for replacement by commercial land uses that are economically more powerful. At the latter location, rural land uses are being replaced by urban residential land uses which are also economically more powerful.²⁵

There results in either location a period of confusion during which we find deteriorating construction of the disappearing type side by side with new construction that anticipates future developments.

During this period of temporarily mixed land uses, the central Zone of Transition as well as the "urban fringe" are temporarily entered by short-term ventures in the entertainment industry, such as restaurants, night clubs, road houses, carnivals, and theaters. Such business establishments find little access to consolidated residential areas. They are forced to find a place for themselves in the central and the peripheral Zones of Transition. Short-term profits are large enough to warrant substantial investment in construction that may not, in either location, serve its purpose for more than a very limited number of years.

Recent Changes in the Pattern of Urban Growth.-

New Patterns of Urban Settlement. The ring theory of urban development will be used in the future to explain a historically limited phase of spectacular urbanization in the United States. It cannot be accepted as a theory of city growth with general validity and universal application.

In the 1930's, American modern city growth had changed in pattern and direction. With the help of the W.P.A., real estate inventories were undertaken in a large number of American cities.²⁶ These revealed interesting empirical evidence of recent changes in the pattern of urban growth. Homer Hoyt, a well known land economist, stands out as the most prominent interpreter of these data.²⁷ He made them the basis not only for a thorough criticism of the ring theory of urban growth, but also for tentative predictions regarding the future structure of American cities.²⁸

The Sector Theory. These observations about modern city development refute the simple regularity claimed earlier by Burgess' ring theory. The claim of the ring theory that belt-lines of homogeneous land uses will be found at similar distances from the city center, collapses completely.

²⁷Homer Hoyt is known as the originator of the "Sector Theory" of urban development, to be discussed below. "This theory was worked out by Homer Hoyt and first presented in a series of articles in the FHA's Insured Mortgage Portfolio, Vol. I, Nos. 6-10." Footnote in Arthur M. Weimer and Homer Hoyt, *op. cit.*, p. 96.

²⁸Homer Hoyt, "The Structure of American Cities in the Post-war Era," *The American Journal of Sociology*, Vol. XLVIII, No. 4 (January, 1943), pp. 475-481. See also "The Future Growth and Structure of Cities," in A. M. Weimer and Homer Hoyt, *op. cit.*, pp. 104-119.

²⁶(By oversight) "As the techniques for making real property surveys were refined through the cooperative efforts of the Works Progress Administration, the Central Statistical Board, the Federal Home Loan Bank Board, the Housing Division of the Public Works Administration, and Division of Economics and Statistics of the Federal Housing Administration,

At the very periphery, there are fashionable mansions as well as factories and workmen's homes. These different land uses hold themselves to different sectors of the city outskirts. They are segregated from each other, but they are found at the same distance from the central business district.

In the center of the city, we find the Gold Coast in immediate proximity to the slum environment.³⁰ High class apartment housing along New York's East River is located directly adjacent to the tenement slums of Manhattan Island. For quite some time, we have looked at this phenomenon as the exception that proves the rule. Recent developments have made the fashionable apartment hotel in the downtown district such a regular phenomenon that we shall either have to explain it by some central theory, or give up such theory altogether.

Many Factors in Residential Location. It has become more difficult, also to make generalizations about the residential areas between the fringe of the city and its central core. Central location may be pre-empted by the higher income groups because of its convenience with regard to commuting. Peripheral location, on the other hand holds the advantage of lower density standards, lower building heights and more generous and attractive real estate developments. Thus, higher income groups are attracted in both directions.

Areas not claimed for the higher income group at whatever location in the urban fabric are left to the remaining sections of the urban population. Different advantages of site, of commuting convenience and construction offer themselves to a free market competition in which superior purchasing power wins out.

²⁶(Continued) the possibilities of utilizing the voluminous data (available for over 200 American cities) in developing principles of city structure were recognized. Thus, the present study was conceived. "Homer Hoyt, 'The Structure and Growth of Residential Neighborhoods in American Cities.' Federal Housing Administration Form No. 2088. Wash., D.C., U.S. Government Printing Office, 1939.

There does not seem to be a single principle today according to which different income groups arrange themselves spatially in the urban fabric. Peripheral advantages of location compete with central advantages. Attractive sites further complicate conditions.

FIGURE No. 5. The City of the Future (To be found on page 24).

Differential Preference and Segregations

Preferences. Since the slowdown of American city growth, building activities have not been guided exclusively by the objective of locating as close to the center of the city as possible without having to tear down previous construction. Physical deterioration, in many cities, has gone far enough to make possible the replacement of older buildings by new construction. Such new construction proceeds according to a more diversified pattern. Specific preferences determine the location of different building activities.

Summer cabins mushroom at attractive lake sites, too far from the inner city to be used for more permanent home construction. Factories and warehouses string out along the waterways that run through the city. Workers' housing develops wherever available real estate is cheap because of various kinds of nuisances. Wealthy families build their homes out in the country, or rent them in the fashionable apartment hotel close to the city center, or both. The modern city pattern has lost uniformity in a multitude of different preferences, all active in the choice of land on which to build.

"Octopus with Tentacles" The city does not grow slowly and systematically today in a spiral of ever widening concentric rings. The appearance of the city is no longer that of a circle. Homer Hoyt described the shape of the modern city as that of an octopus with its

³⁰The social problems arising from this condition have found artistic elaboration in Sidney Kingsley's play "Dead End," popular in the 1930's. The classic sociological study of these conditions is Harvey W. Zerkow's "The Gold Coast and the Slum" 'A Sociological Study of Chicago's Near North Side.' Chicago: The University of Chicago Press, 1929.

A CITY OF THE FUTURE

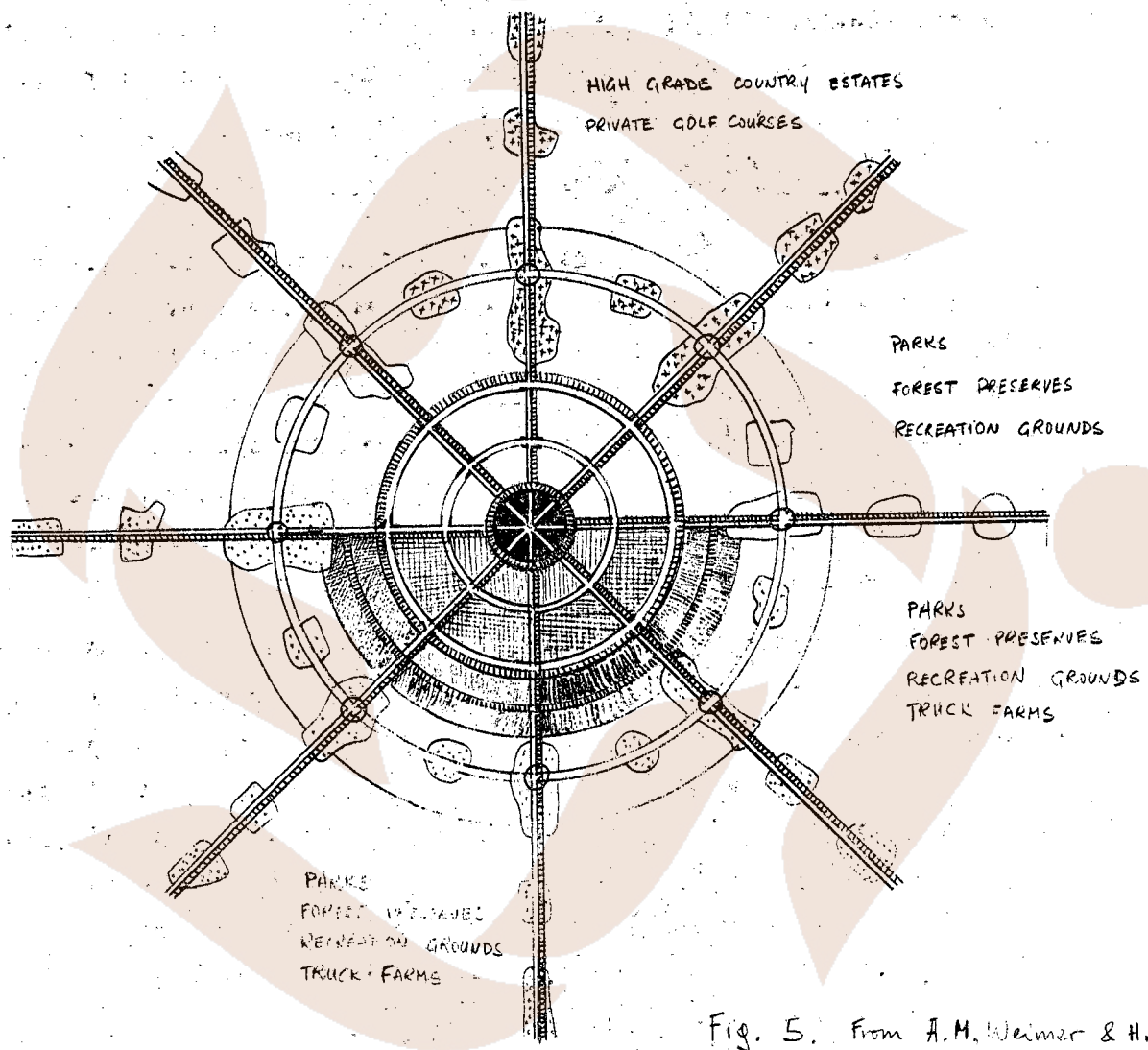


Fig. 5. From A. M. Weimer & H. Hoyt: "Principles of Urban Real Estate", Ronald Press, New York, 1948



tentacles stretched far out into the suburban hinterland. The tentacles stretch out wherever rapid transit lines reduce commuting time to the inner city area. They consist of apartment housing and a narrow belt of one-family homes following the railroad lines far out into the countryside.³¹

Developments during the 1930's have somewhat obscured the protruding tentacles. Two modern technological devices, the automobile and the septic tank,³² enabled the city dweller to move into the space left open between the rapid transit lines. The automobile made the city dweller independent of public means of transportation. He found his way into territory previously inaccessible to those gainfully employed in the downtown business district. The septic tank made it possible for the city dweller to build his home with all modern conveniences in an environment not yet reached by the urban network of underground facilities.

Segregation. Within the built-up city, we observe a tendency toward segregation, which is gaining influence upon the structure of urban land uses. This tendency asserts itself as the tempo of city growth slows down and as the problem of distance loses importance due to improved means of transportation.

In Europe, where city growth never was as hectic as in the United States of the 19th century, segregation has always been noticed as one of the most prominent features in the arrangement of land uses. If the workmen's housing in one city was to be found in a generally northern direction from the city center, the villas and the apartments

³¹See Fig. 18, "A City of the Future," in A. M. Weimer and Homer Hoyt, *op. cit.*, p. 117.

³²These unincorporated suburbs (of the 1930's) were located almost at random because the automobile, the septic tank, and the power-driven pump made a vast number of sites available and freed the new developments from dependency on fixed transportation routes and established sewer and water systems." Homer Hoyt, *op. cit.*, p. 477.

of the upper classes were most likely in the opposite direction.

In the United States, the tendency toward segregation was temporarily obscured by the circular growth which aligned homogeneous land uses in the shape of rings rather than in the shape of clusters. The tendency toward the clustering of similar land uses was overshadowed by a pattern of growth that added one belt-line of construction to another. Homogeneous land uses assembled in the form of citywide belt-lines rather than relatively compact clusters.

Segregation has been universal in urban construction and the urban way of life. Similar needs are better satisfied in unison. There is need for cheap grocery stores, cheap taverns, and low rentals in the workingmen's district. Special services are attracted where a settlement of definite character establishes a need for them. Once these services are being provided for a cumulative process accentuates the peculiarities of any given urban environment.

Nuisances. Nuisances also contribute to the establishment of homogeneous city areas. City nuisances, such as odors and noises, congestion, and unattractive appearance, are to some extent inescapable for those who cause them. Under the circumstances, land uses that create nuisances are usually found in close proximity to each other. In the inner city, industrial establishments, warehouses, and centers of commercial activity will seldom stray far from each other. Whatever nuisances they are here exposed to, they could not escape, anyway, because they produce such nuisances themselves. In sticking close to each other, they are not exposing themselves to any nuisances they could escape by going elsewhere. In the single men's district, the burlesque show does not provoke any feeling of moral indignation because it is closely related to fairly universal needs.

Yearning for Homogeneity. The trend toward segregation is all-pervading in the modern city. It is supported by the similarity

of needs and nuisances. Another motivating force is the reaction against occupational life in the cosmopolitan atmosphere of the central business district.

In his work, the city dweller mingles with a heterogeneous crowd of coworkers. He learns to get along with them. He learns to get along with Swedes and Scots, with Negroes, Poles, or whatever people may come his way in the pursuit of his business. He meets rich and poor, Catholics and Protestants, family men and bachelors. To relax from his working day, the city dweller seeks a residential environment where he will be free from the constant alertness that is forced upon him by mingling with the motley crowd of a heterogeneous urban population. To relax in his private life, the city dweller wants to be with "his own kind."

Status Considerations. Residential location in the city carries status connotations. The city dweller's "address" tells not only where he lives, but where he belongs in the social scale.

The realtor who takes his client around to arrange the purchase or the rental of a home carefully inquires about his background, his job, his "race," and his social contacts. On that basis, he will select the most suitable location for a family residence. An environment of people with similar social backgrounds is considered the most suitable location.

The total effect is a clustering of relatively homogeneous housing conditions and occupancy standards all over the city. From street to street and from block to block, there is a consciousness of social status as conveyed by residence in that very location.³³

³³An intricate system of status designations will be found in W. Lloyd Warner, Marchia Meeker and Kenneth Eells, 'Social Class in America.' Chicago: Science Research Ass., Inc., 1949; see chart on page 19. For the measurement of segregation, consult Eshreff Shevsky and Marilyn Williams, 'The Social Areas of Los Angeles. Analysis and Typology.' Berkeley and Los Angeles: Univ. California Press. 1949. See particularly the Chapter on "Segregation," pp. 47-60.

Preferential location develops into the formation of relatively homogeneous city areas. The orderliness of the ring-pattern of urban development may have been abandoned in recent decades. In a more haphazard manner, the orderliness of relatively homogeneous settlement in distinct clusters has remained.

Suburbia. Beyond the outer Zone of Transition, suburban developments and new functions of the metropolitan area find manifestation in types of construction not foreseen by the classical ring theory. Our suburbs are not all of one type.³⁴

Not only the speciously laid-out homes of the well-to-do are to be found in this Commuters' Zone. There are settlements of workers' homes, summer cabins, apartments, and prefabricated housing placed on vacant land for middle class families who need housing urgently. There are factories, and there are whole industrial towns, there are resort areas, and large tracts of land pre-empted by the truck farmer.³⁵

In a manner of speaking, these mixed land uses in the suburbs are protruding offshoots from the outer Zone of Transition. The Commuters' Zone of 50 years ago has changed into an area teeming with highly variegated productive, residential, and recreational land uses. So far, there are no distinct regularities in this environment. The metropolitan area is truly fuzzy at the edges.

³⁴For the suburban trend in the United States and a classification of types of suburbs, see Chauncy D. Harris, "Suburbs," 'The American Journal of Sociology,' Vol. XLIX, No. 1 (July, 1943), pp. 1-13.

³⁵"Nearly half of the population increase (1940-1950) of the entire country took place in the outlying parts of the 168 metropolitan areas the population changes of the last decade point to an increasing urbanization of the country, with the more spectacular development occurring in the smaller urban and suburban communities adjoining our metropolitan centers." '1950 Census of Population, Preliminary Counts,' Series PC-3, No. 3, November 5, 1950.

Selected Readings

1. Richard M. Hurd, 'Principles of City Land Values,' New York: The Record and Guide, 1903, pp. 1-159.
2. Ernest W. Burgess, "The Growth of the City," Robert E. Park, Ernest W. Burgess, and Roderick D. McKenzie, 'The City' Chicago: The University of Chicago Press, 1925, pp. 47-62.
3. Homer Hoyt, 'The Structure and Growth of Residential Neighborhoods in American Cities.' Federal Housing Administration Form No. 2088, Washington, D.C.; U.S. Government Printing Office, 1939, pp. 3-340.
5. S. E. Sanders and A. J. Rabuck, 'New City Pattern.' 'The Analysis of and a Technique for Urban Reintegration. New York: Reinhold Publishing Corporation, 1946, pp. 1-197.

PROBLEMS

1. From the Ring Theory to the Sector Theory of Urban Development. Consult 'The Growth of the City' by Ernest W. Burgess and 'Principles of Urban Real Estate' by Weimer and Hoyt. State clearly the tenets of both the ring theory and the sector theory of urban development. Write an essay on whether and how they can be combined in the analysis of contemporary city structure. Do the two theories contradict or do they supplement each other? In what respect do they contradict each other to the point of making integration impossible? In what respects can they be reconciled with each other?
2. Application of the Ring Theory and the Sector Theory to Seattle. Consult the readings as recommended in problem 1, and also Calvin F. Schmid's 'Social Trends in Seattle.' First, study the materials offered in Calvin F. Schmid's publication in the light of the ring theory. Second, study the same materials in the light of the sector theory. Write your conclusions as to the usefulness of either theory

for your purpose.

Informal Survey of an Urban Fringe. This problem calls for repeated visits to the fringe of one of the larger cities in your state or in one of your neighboring states.

Consider carefully what has been said in Chapter 4 about the fringe of the modern city, about recent developments in that environment, about asstetions pertaining to that environment, and about speculations regarding future fringe development. Read the books by Walter Firey and Selon T. Kimball, as quoted in footnotes to Chapter 4. Look up further references offered in Chapter 4 which, in part, may bear on the problem of the modern fringe. Then visit the fringe of an actual city, and note as systematically as possible your observations about prevailing land use patterns. Decide whether your observations bear out or contradict any statements or speculations you have come across in your readings.

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