

A Primer in Urbanization

An Overview of the Science of the City

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Humans, by nature, are animals well adapted to living in relatively small groups and gathering their necessary resources from the natural environment. This may seem a funny way to begin an essay on urbanization, but it is important to remember that humans are not “naturally” urban creatures (Massey 2005). In fact, it may be argued that such species as ants and honey bees are better adapted for urban life than humans (Wilson 2013). Cities are thus formed under conditions when population growth has outperformed the ability of humans to gather necessary resources locally by maintaining traditional hunter-gatherer lifestyles.

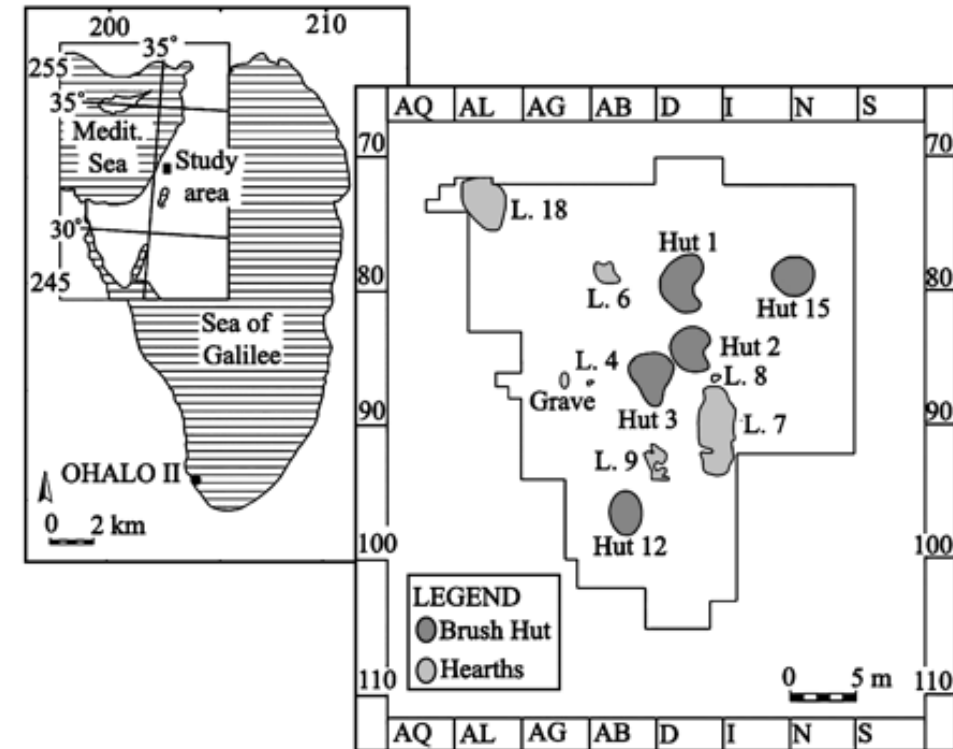


Bonobos, the closest living species to Humans, are also very social.

The earliest evidence of **sedentism**—the year-round habitation of a site and thus a shift from transhumance (or nomadism)—is at a 23 thousand year old site in Israel named Ohalo II. Located on the shores of the Sea of Galilee, the site enabled the population of only 13 huts access to fish (Zohar 2002), mammals from various nearby environmental niches (Rabinovich 1998), and a broad range of plants (Kislev et al. 1992). Being in one place allowed for a well-developed flint industry (Nadel 2002) and perhaps even the earliest experiments in plant cultivation (Snir et al. 2015). The small population of the community ensured that the ability of the environment to provide for the people who lived there—the carrying capacity—was not exceeded.

Sedentism introduces a challenge in acquiring certain resources at a distance from the settlement. Many such villages had **gift economies** wherein trade was conducted between communities in the form of gift exchange. Sedentary communities could acquire all the resources necessary for survival through a combination of harvesting from the local environment and gift exchange with distant neighbors. When hunting and gathering was no longer enough to feed the local population, communities turned to agriculture as a means of guaranteeing that necessary food resources would be available (Bellwood 2004). In principle, such small settlements could remain viable and stable for generations (Heilbronner & Milberg 1998).

Ohalo II



Cities developed when population outstripped the carrying capacity of their local environments. Cities exhibit **urban dependency**, a dependence on non-local resources for survival. Faced with a need to acquire resources from other communities cities have two options: acquire them through trade or directly through force. As a settlement grows larger urban dependency grows as well, and satisfying this objective need only serves to intensify urban dependency. Consider a settlement that has grown too large to feed itself through agriculture. The community may at first trade with a less populous neighbor, but in time the neighbor with a surplus of food may find it necessary to retain those resources to feed its own population. Faced with starvation the first settlement may forcefully take the food from the second, or the two villages may work together to develop new land for agriculture. In time, however, a surplus of resources will again result in a population increase that forces some change in the system. The higher the populations involved the more acute urban dependency will be. Not surprisingly urban dependency is tied to the origins of aggressive war (Flannery and Marcus 2003), but it is also tied to the growing importance of trade as urban systems evolved (Thomas 2012). It is within this matrix of human need and environmental provision (or not) that cities both evolved and continue to exist.

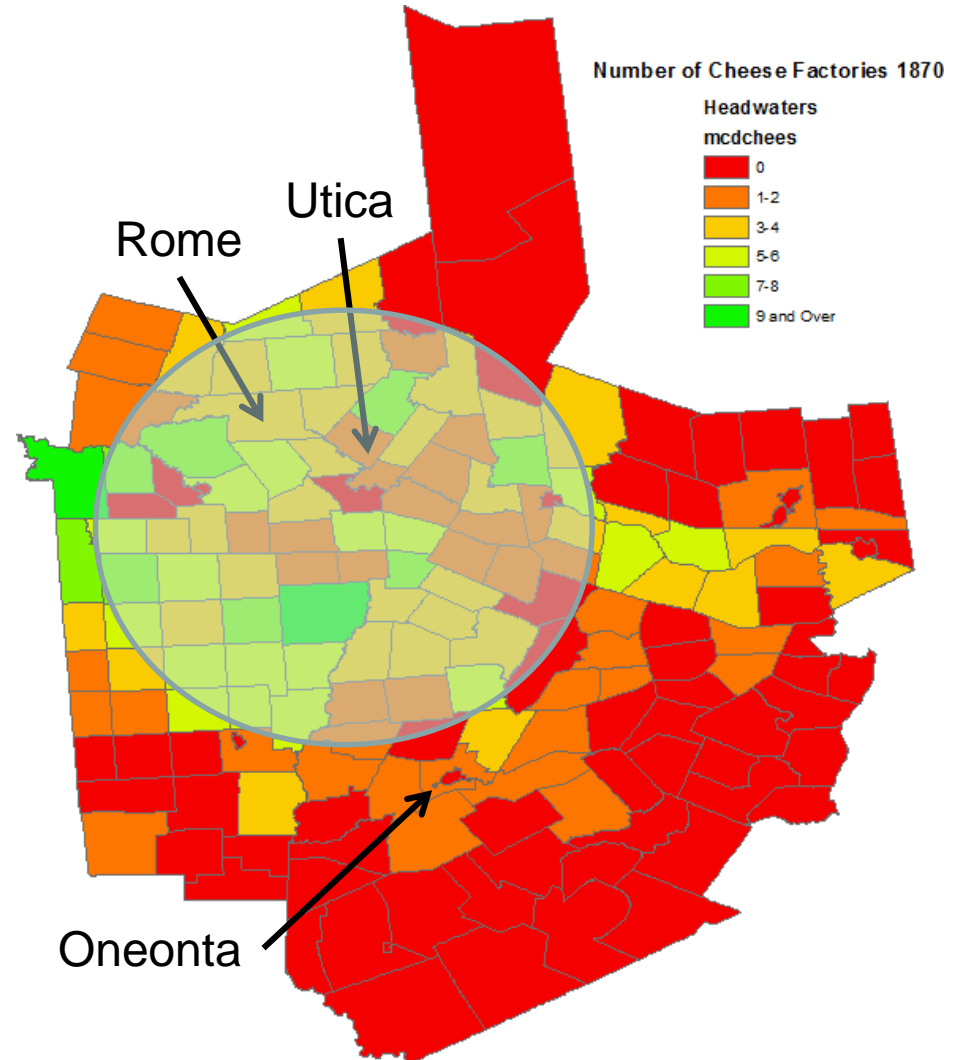


Like Boston, cities do not have enough open land to feed their population—the city has outgrown the carrying capacity of its territory.

Urban dependency in the region around Utica, N.Y. in 1870.

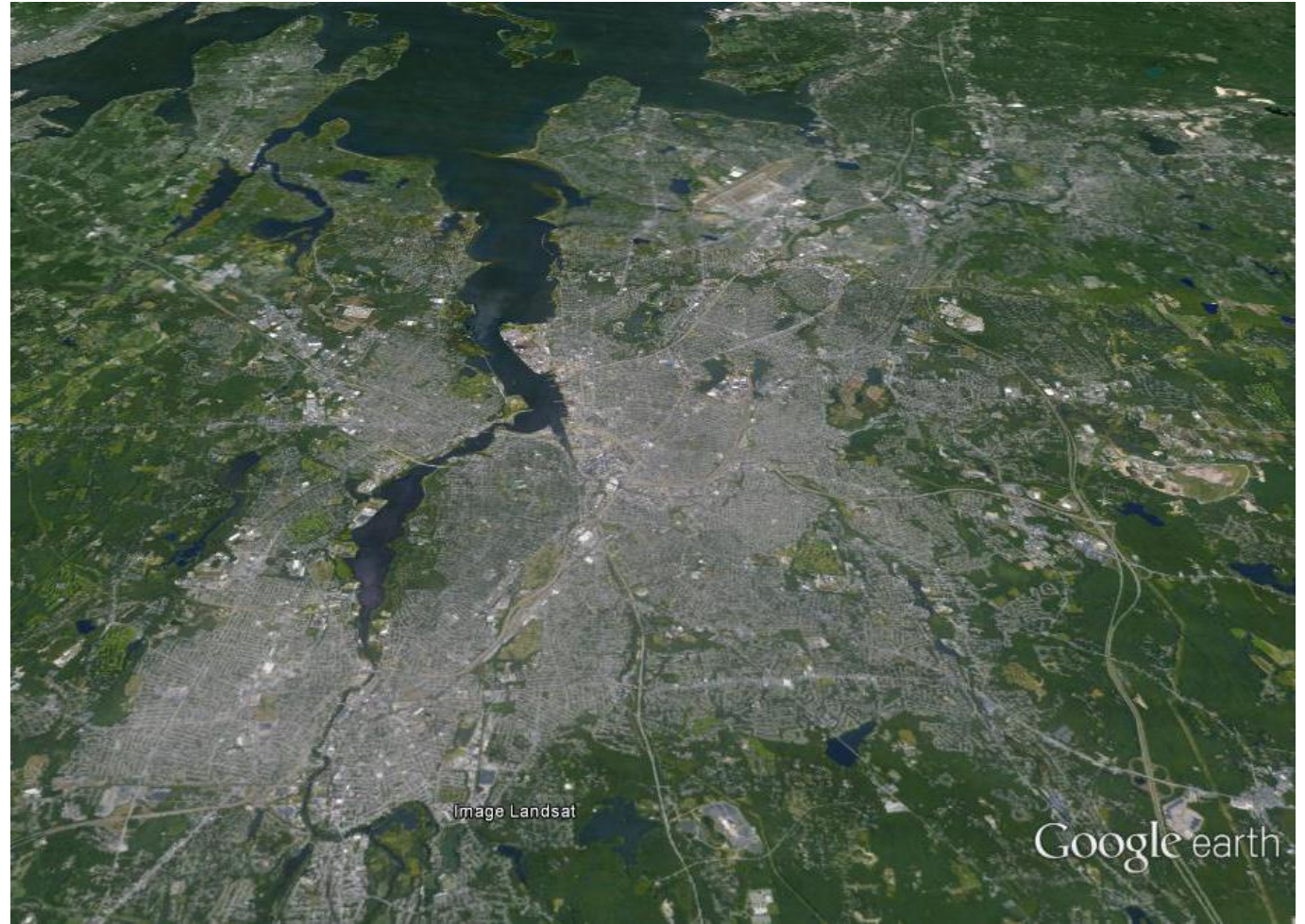
Cheese factories are an indicator of the dairy industry. Note that cheese factories, and dairy farms, were most prevalent in a band of 20-30 miles from the Utica. Smaller cities such as Rome and Oneonta further spread the industry further afield, but less populous territories north and south were home to few cheese factories as there was less of a market for cheese. Similar patterns are found with vegetables, whereas lumber mills (and the timber industry) were found beyond 30 miles of Utica and well south of Oneonta.

Rural industries such as cheese and lumber grew near cities because urban populations provided the market but could not produce such products in large enough quantities locally. Instead, an “urban system” marked by exchange relations between city and country developed. Residents of the city were dependent on the surrounding hinterland, and the surrounding hinterland developed a culture that was heavily influenced by the urban center.



EXTERNAL ORGANIZATION: HOW PLACES RELATE TO OTHER PLACES

The early sociologist Robert Park (1925) suggested that cities develop in **natural areas** dependent on their needs. For example, a crossroads or a natural harbor offers locational advantages for a community wishing to trade for resources—a necessary consideration when conditions of urban dependency exist. Once established, conditions within a settlement are influenced by the built environment of the city as well: industry tends to locate near rail lines, for example, whereas residents with the economic means tend to locate away from polluting industries (Zorbaugh 1929). The locational advantages afforded one community over another also influences the relative importance of each community in the trade network, and more important nodes in the network tend to grow larger in population than less important ones.



Like other cities, Providence, R.I. developed around a natural harbor and has natural areas within the city in relation to the harbor.

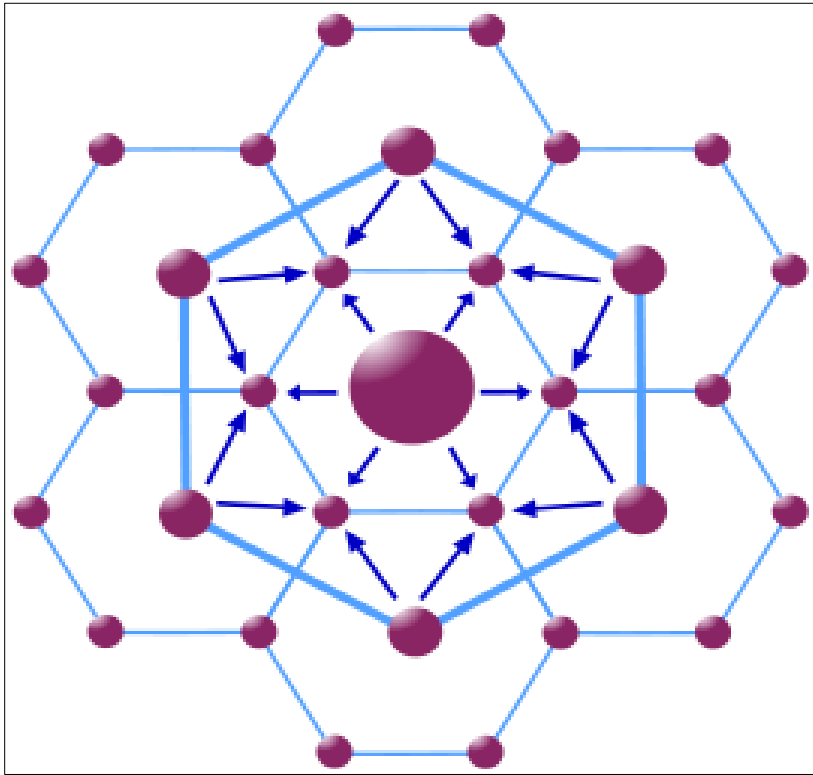


Figure 1: Central Place Theory. For a more detailed discussion, see the Wikipedia article at https://en.wikipedia.org/wiki/Central_place_theory

The analysis of settlements as part of a trade network is central to **central place theory**. In central place theory, each settlement is a node in the network and acts as a center for exchange between goods from the surrounding region (or **hinterland**) to the system and from other settlements in the system to the hinterland (Christaller 1966 [1933]). Each node or central place trades with other places of similar size—or orders. One can consider a factory in a small town bringing products to market in a larger city, the larger city selling those products to traders in another city, and those traders in turn selling the products to consumers living in smaller towns in the market area of the second city. First order cities serve entire regions whereas lower order settlements have smaller market areas.

Consider the network of communities in New York State. Home to Wall Street and Broadway, New York City is not surprisingly the first order city for the region. The state has a number of smaller cities that serve as major market centers as well, such as Albany, Utica, and Binghamton. These major market centers serve smaller regions that typically stretch 45 miles from the city center and are second order cities.” Within the hinterland of each second order city is also a number of third order cities that have smaller service areas and hence have a more limited amount of trade activity: Amsterdam near Albany and Oneonta near Utica. In general, high-end retail (to use just one type of indicator) such as Tiffany Jewelers are only found in New York, whereas Albany and Utica also have Macy’s department stores. In Oneonta and Amsterdam, many residents drive to second order cities for certain items but rely on local stores for more common items. Fourth order cities are typically smaller still and serve much smaller geographic areas for goods required by the population on a more regular basis; villages like Cooperstown and Delhi typically have grocery and hardware stores but lack higher order functions. Fifth order villages, such as Hartwick and Milford, often have a limited number of businesses such as a convenience store, gas station, or other regular trade item. In eastern New York a number of even smaller communities, such as Mount Vision, at one time performed such economic functions but due to the ease of transportation afforded by the automobile have few if any of those functions left.

(See next two pages for graphics)

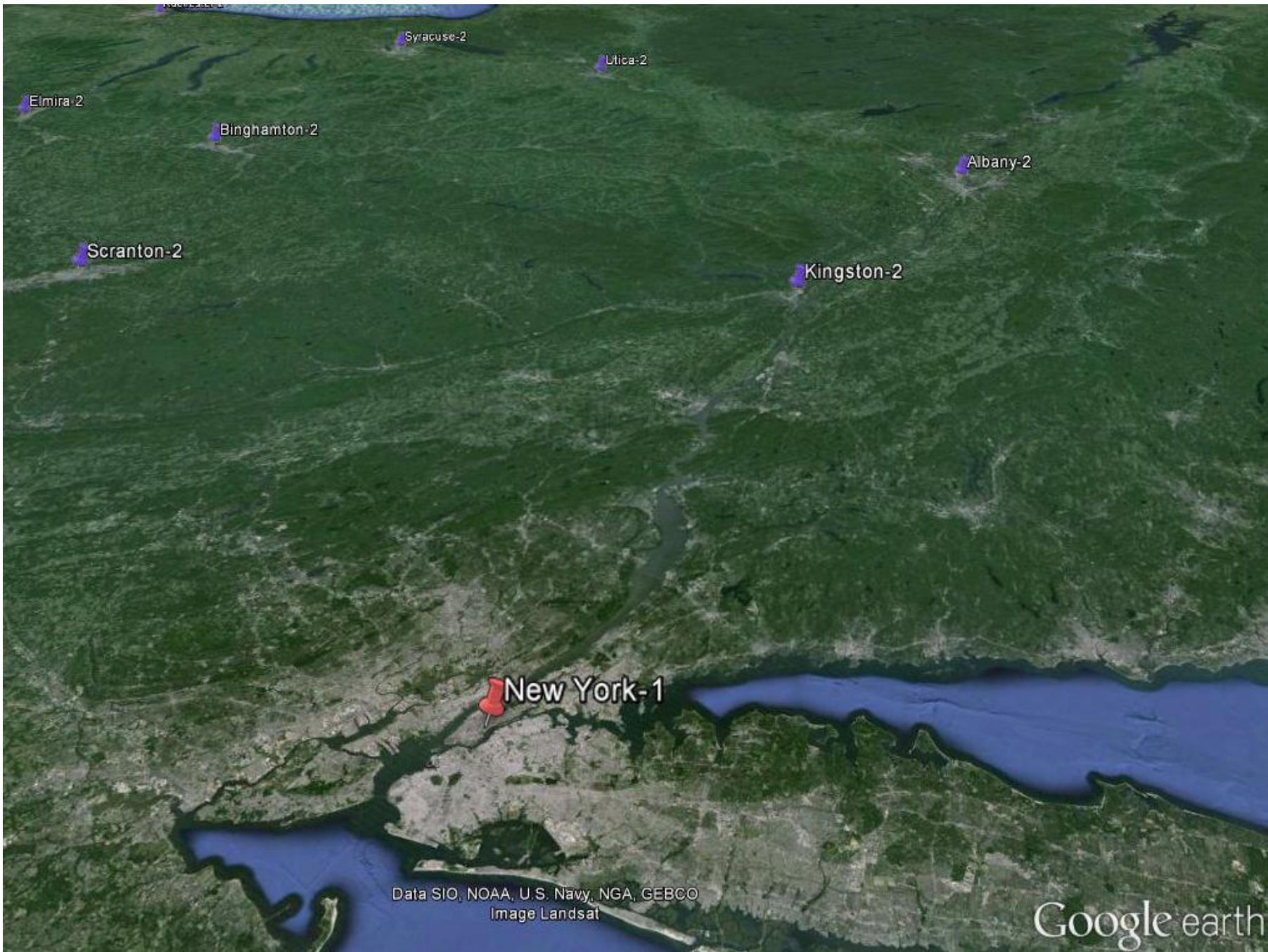


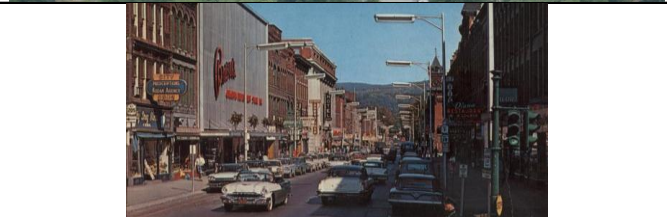

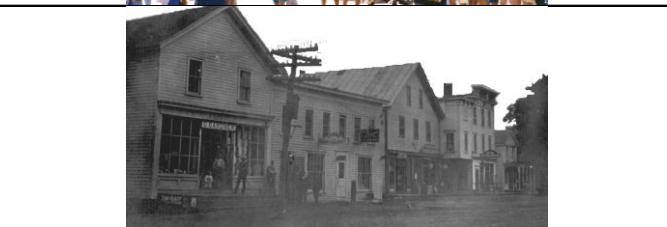



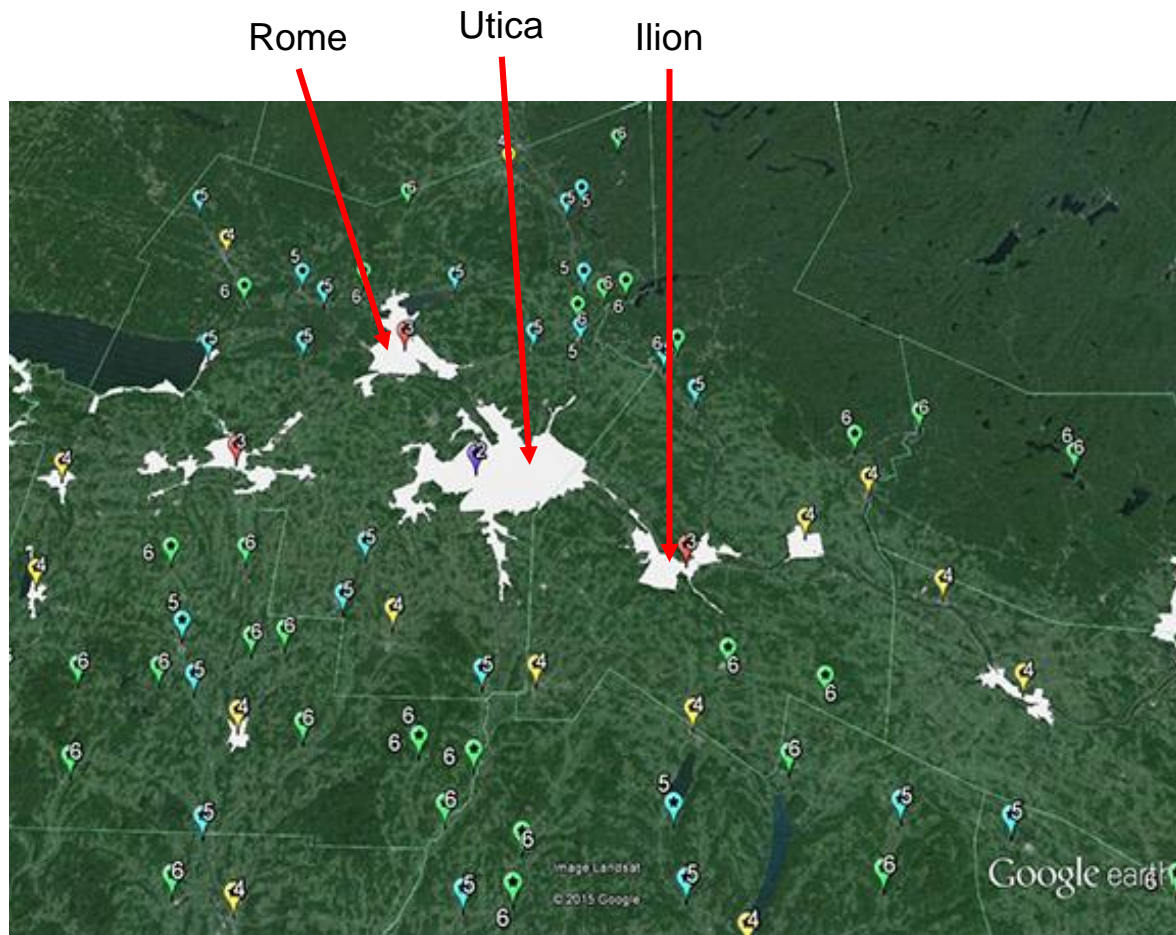
Figure 2: New York's Urban System. New York City is a first order city and is networked with multiple second order cities in the interior.

First Order Cities		Global hubs of finance, commodity, and demographic flows e.g., New York
Second Order Cities		Regional hubs of commodity and demographic flows; regional retail e.g., Utica
Third Order Cities		Localized hubs of commodity and retail trade e.g., Oneonta
Fourth Order Cities		Hubs of retail and service trade serving a limited geographic area e.g., Cooperstown
Fifth Order Cities		Hubs of retail and service trade serving a narrow geographic area e.g., Hartwick
Sixth Order Cities		Hubs of services serving one particular community e.g., Mount Vision

Typically, regions center on higher order settlements (i.e., 1 and 2) and the lower order (i.e., 3-6) are distributed around the region according to distribution functions as shown in figure 3 but molded by the geography of the region.

2016 Population
 New York City: 8,550,405 (CSA: 23,689,255)
 Utica: 62,235 (MSA: 297,592)
 Oneonta: 13,955
 Cooperstown: 1,770
 Hartwick: 629
 Mount Vision: Census does not record data

Figure 3: The nine county region surrounding Utica, New York is a six-tier system.



In figure 4, the largest urban area is Utica—a class 2 settlement. The urbanized area shown above includes not only the city itself but the contiguously urbanized areas surrounding the city—the suburbs. To the east and west of Utica are two class 3 settlements—the city and suburbs of Rome (west) and a string of industrial suburbs centered on the village of Ilion. The non-contiguous nature of the urbanization between Utica and Ilion is explained by the presence of a large hill (Frankfort Hill) and swamps on either side of the Mohawk River. Beyond these larger settlements are found a network of lower order settlements, with fourth order settlements typically surrounded by fifth and sixth order settlements that are largely dependent on them.

Figure 4: Distribution of Settlements near Utica, N. Y.

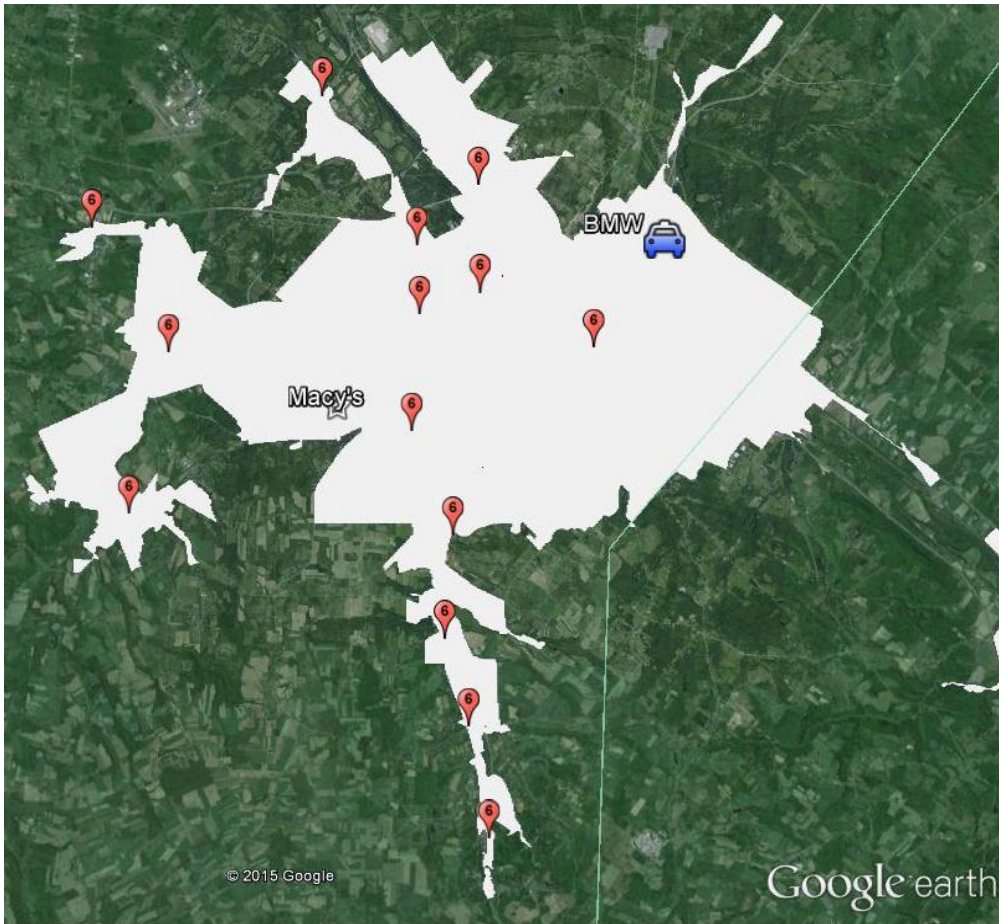


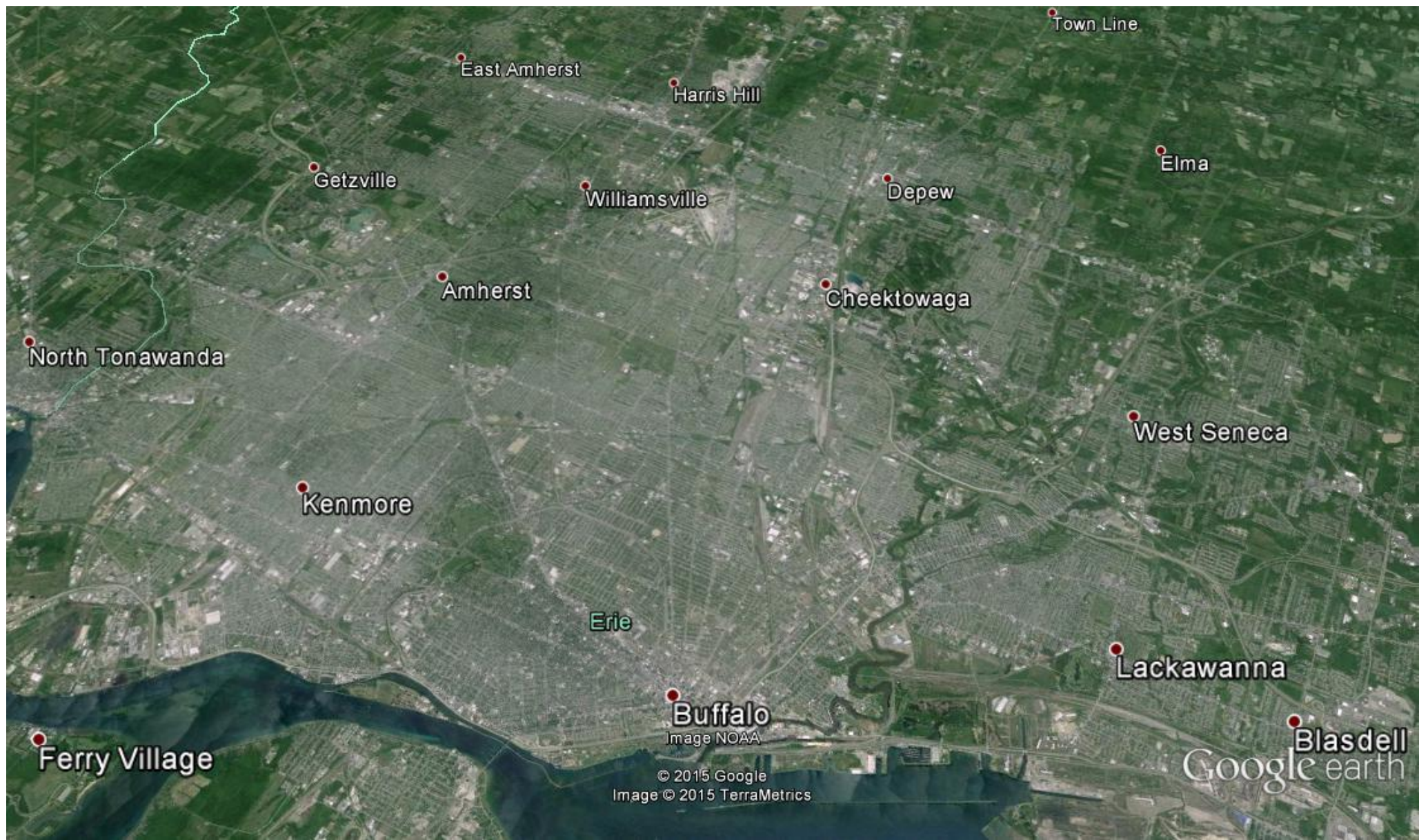
Figure 5: Second order and sixth order functions in Utica, NY settlement area.

The trade functions of a settlement both influence and are influenced by the settlement's position in the larger urban system. The location of a settlement in a particular natural area—a natural harbor, for example, or a source of power—will aid it in achieving a higher order function in the system. However, factors internal to the settlement also influence its role. One internal factor is the presence of economies of scale: the cost advantage available to an enterprise due to the size or scale of an operation (see the article in Wikipedia at https://en.wikipedia.org/wiki/Economies_of_scale). Simply stated, larger populations can support more and a greater variety of businesses. In sixth order settlements, the low populations translate into lower economies of scale and, consequently, the settlements typically have a post office and little more. In contrast, Utica—a second order center—not only has a plethora of post offices but a range of other enterprises that rely not only on the local market of the settlement but on that provided by commuters as well. Commuters may be there for employment, but second order centers also typically function as major retail centers for entire regions. As such, in addition to lower order functions there are also functions that rely on the entire region for support. In figure 5 below, there are fourteen post offices scattered throughout the city and suburbs—a sixth order trade function. In contrast, there is only one Macy's—a second order function that achieves its economies of scale by servicing not only the city but the entire region. Similarly, there is one BMW dealer. As third order settlements also typically have automobile dealerships, the presence of a dealer in Utica is not surprising. However, as BMW is a high-priced car the dealerships tend to be found in second order cities because they must leverage the market of an entire region in order to find enough customers wealthy enough and willing to pay BMW prices.

Another important aspect of internal organization is economies of agglomeration: the benefits that accrue to enterprises by clustering near one another (see the Wikipedia article at https://en.wikipedia.org/wiki/Economies_of_agglomeration). A classic example is that of Detroit, Michigan, where a high concentration of firms specializing in products relating to the automobile took hold during the early and mid-twentieth century. The proximity of such firms to one another made it comparatively easy for large firms (e.g., Ford) to buy necessary components (e.g., windshield wipers) for their own products (cars). The presence of so many firms required labor to produce goods and subsequently lead to population increases. Increased population in a settlement has a reflexive effect as the presence of more people requires more teachers, police, and stores to service them and, in a feedback loop, ultimately attracts (or retains) more people.

INTERNAL ORGANIZATION: HOW PLACES ORGANIZE THEMSELVES

Sociology has developed a number of theoretical models to explain the growth of cities and the distribution of goods throughout its region. Most models of urban growth and organization fall into one of two schools: Human Ecology or Political Economy.



Buffalo, N.Y is divided between the city and any number of suburbs spread across the settlement space.

The Human Ecology School

Human ecologists develop models based on a number of assumptions that simplify the mathematics. The first is that humans behave, in the aggregate, rationally and this rationality translates into patterns that are observable and measurable. A second assumption is the creation of “ideal types” that simplify the model but are not meant to be understood as reflecting real places—the model is a basis for comparison against which real places can be understood. As such, the most basic human ecology theories not only assume rationality but also an “isolated state:” the settlement develops by itself on a plain surrounded by wilderness. Of course, we saw above that such assumptions are interrupted by actual geography but the overall lessons of central place theory are nevertheless useful. In the case of human ecology not only does physical geography interfere with the observed world, but the mere presence of other places does as well. Nevertheless, human ecology has given us valuable tools for understanding the internal organization of places.

An early example of a human ecology theory is the model of agricultural production by Johann von Thünen (2009). Von Thünen wrote during the early nineteenth century before the major social science disciplines—economics, sociology, and psychology—had separated from one another and philosophy, and as a result he was quite comfortable making an assumption of human rationality and attempting to explain geographical patterns on the basis of mathematics. His model proposed that the location of particular agricultural products around a city was related to the cost of production and transportation according to this equation:

$$R = Y(p - c) - YFm$$

Where R=the cost (or rent) of land; Y=the yield of a particular unit of land; p=market price of an agricultural commodity; c=cost to produce a commodity; F=the cost of transportation (freight); and m=the distance to market. The result is a pattern like that shown in figure 6.

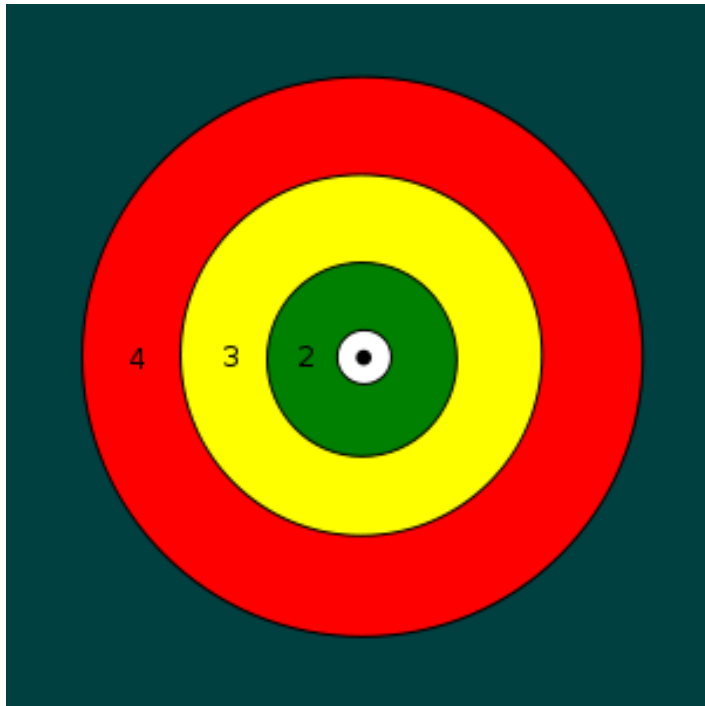


Figure 6: von Thünen's model: the black dot represents a city; 1 (white) dairy and market gardening; 2 (green) forest for fuel; 3 (yellow) grains and field crops; 4 (red) ranching; the outer, dark green area represents wilderness where agriculture is not profitable (Graphic and more information at:

https://en.wikipedia.org/wiki/Johann_Heinrich_von_Th%C3%BCnen)

And take another look at page 5!

By the early twentieth century sociology had developed as an independent scientific discipline. Considered to be the research side of social work, many sociologists were concerned with the plight of the inner city. Much of the earliest work was performed in the first sociology department in the United States, at the University of Chicago, and hence came to be known as the “Chicago School.” The prevailing sentiment in the department defined the internal organization of a city as independent of the city’s agricultural hinterland. As a result, the Chicago School developed theories where cities developed on a plain that were able to trade for food from distant lands—the relationship between urban growth and the carrying capacity of its environment was thus conceptually lost. The first of the Chicago School theories was developed by Ernest Burgess in 1925 and is called Concentric Zone Theory. Like the von Thünen model concentric zone theory assumes rationality and a resulting bid rent curve that structures how a place develops. Burgess also assumed continuous, and even rapid, growth of a city. The city develops at a natural point—a harbor or crossroads—and expands outward as the community grows. The resulting pattern is that the historic center of the place remains the most advantageous location for business and comes to be known as the central business district (CBD). The CBD is characterized by more intensive development than other areas of the city as bid rents—land values—are high due to the advantageous location. One result is that downtown buildings tend to take up the entire building lot so they touch neighboring buildings as well as tend to be taller. The high rents also encourage demolition of older structures and the construction of newer, and frequently bigger, buildings. The oldest buildings are thus not typically downtown but in an area surrounding the CBD—the zone of transition. As older buildings tend to be smaller and lacking in modern conveniences, they also tend to be less desirable than newer housing further out in the city and thus lower rents. As a result this zone also tends to house the poorest residents of a city, including recent immigrants, and there is a pattern that as one travels out from the inner city toward the suburbs that housing gets newer and more expensive. The resulting pattern is one of wealthier residents living away from downtown and a variety of social problems, including crime, vice, and urban decay, located closer to downtown (see figure 7).



- Commuter zone
- Residential zone
- Working class zone
- Zone of transition
- Factory zone
- Central business district

Figure 7: Concentric Zone Theory. Graphic and further information at https://en.wikipedia.org/wiki/Concentric_zone_model

Although the match is not perfect, concentric zone theory can be visualized when examining Rochester, New York.

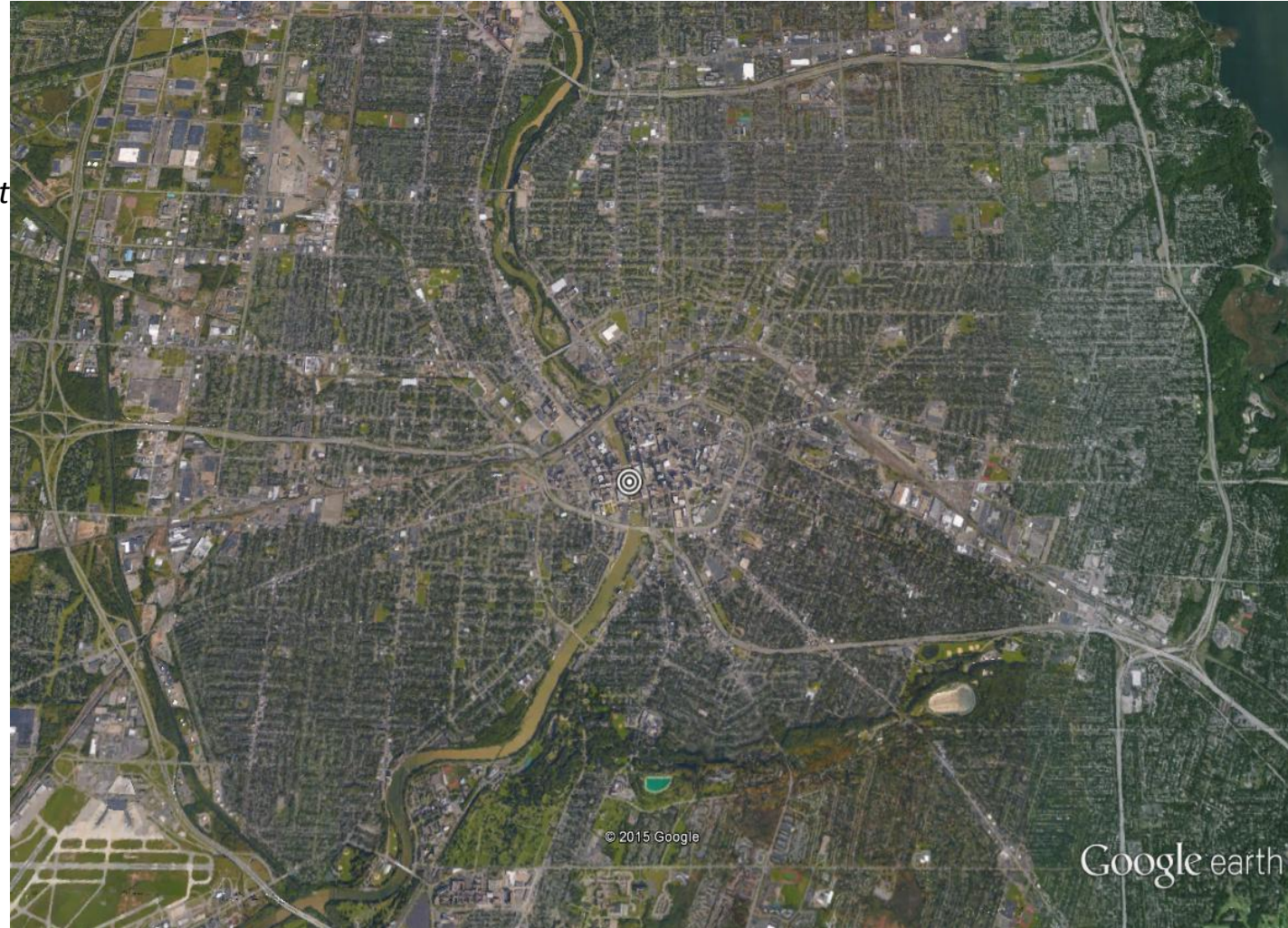
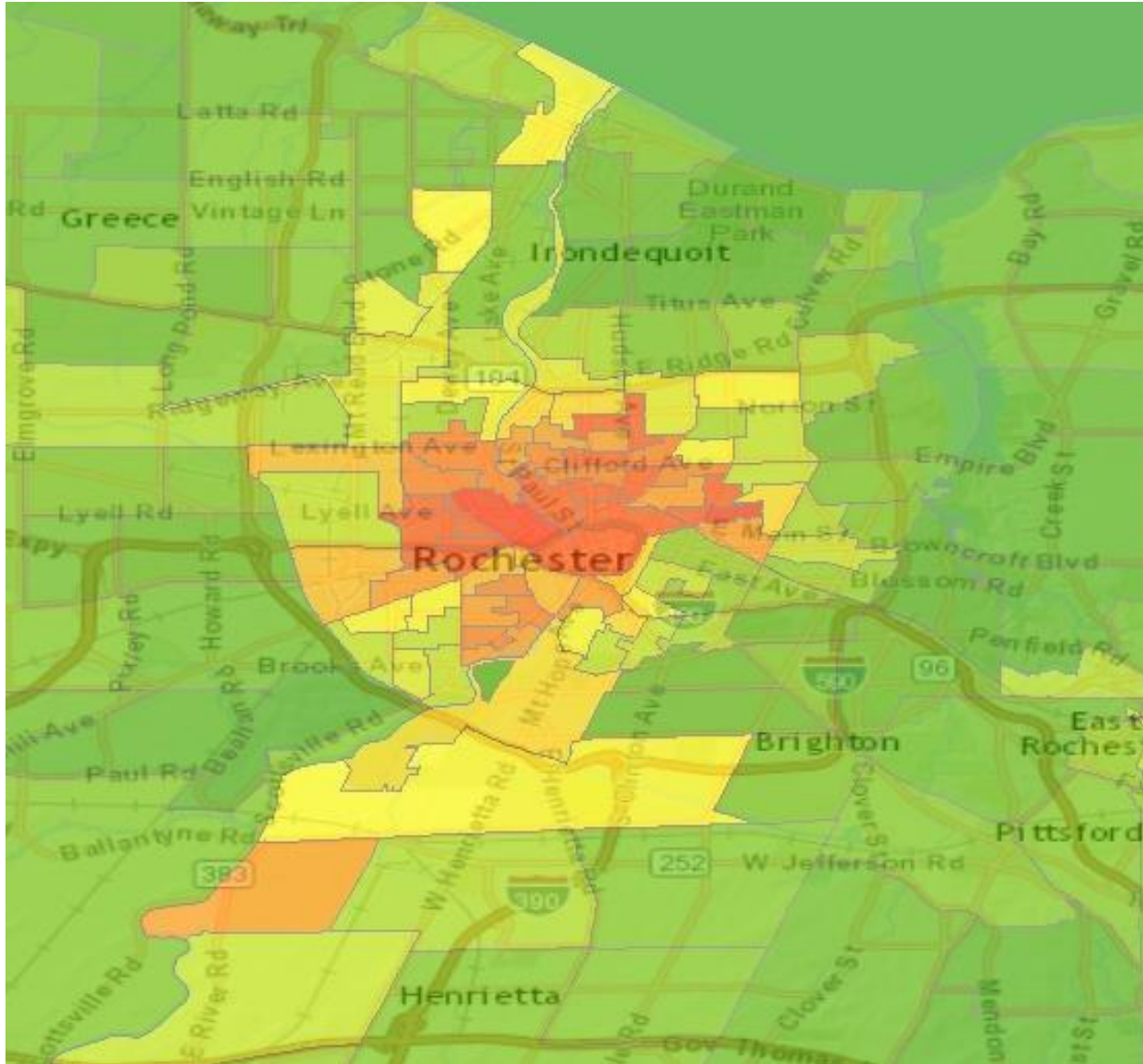


Figure 8: Aerial photography of Rochester, NY

Rochester grew at the point where the Erie Canal crossed the Genesee River (denoted by the concentric circles above) and then spread outward. As predicted by the theory, the largest buildings are downtown. As shown in the map below, income does rise as one travels from downtown toward the suburbs, and most poverty is concentrated in the areas surrounding downtown (in red and orange) whereas most suburban areas have less poverty (in green).



Few metropolitan areas, however, are located on plains and thus resemble the patterns predicted by concentric zone theory as well as Rochester. In fact, due to the city being located on Lake Michigan, not even Chicago matches the pattern very well. In response, other scholars endeavored to refine concentric zone theory to match geographic realities. Homer Hoyt developed sector theory in an attempt to account for the presence of corridors through a city. Hoyt recognized that certain features attracted particular types of urbanization and not others. For example, a canal or railroad corridor was more desirable for industry who required the access to transportation but not for residents who avoided the noise and smells associated with those areas. The result is that industry tends to grow outward along those corridors forming an industrial sector, and the bid rent for residential property is in relation to the industrial corridor. The predicted pattern is thus a central business district with industrial sectors extended out from the commercial area, with a zone of transition closer to that sector and rising residential real estate values as one gets further away.

Figure 9: Poverty Rates in Rochester and Suburbs

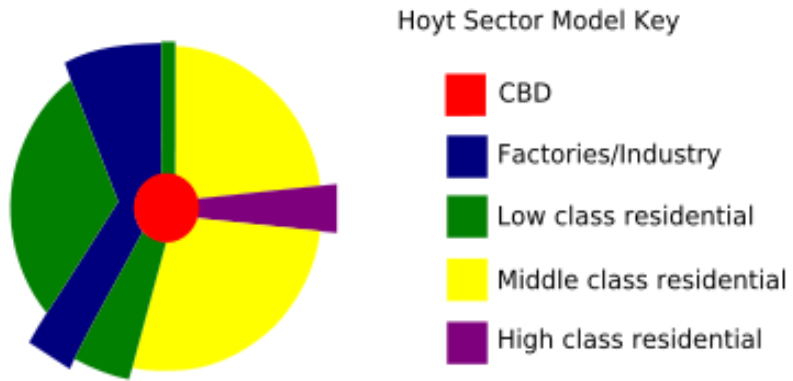


Figure 10: Sector Theory. For more information see https://en.wikipedia.org/wiki/Sector_model

Sector theory does predict a higher level of complexity in cities than that predicted by concentric zone theory, as shown in figure 11. In Utica, the expressway in the foreground of the picture is built along the earlier route of the Erie Canal. The industrial buildings were built there for ease of access to the canal both in terms of getting raw materials and fuel to the factory as well as for shipping final products out of the city. Immediately beyond the industrial sector there are multiple vacant lots—urban decay—evocative of the zone of transition in concentric zone theory.



Figure 11: An industrial sector in Utica, New York.

Harris and Ullman's Multiple Nuclei Model

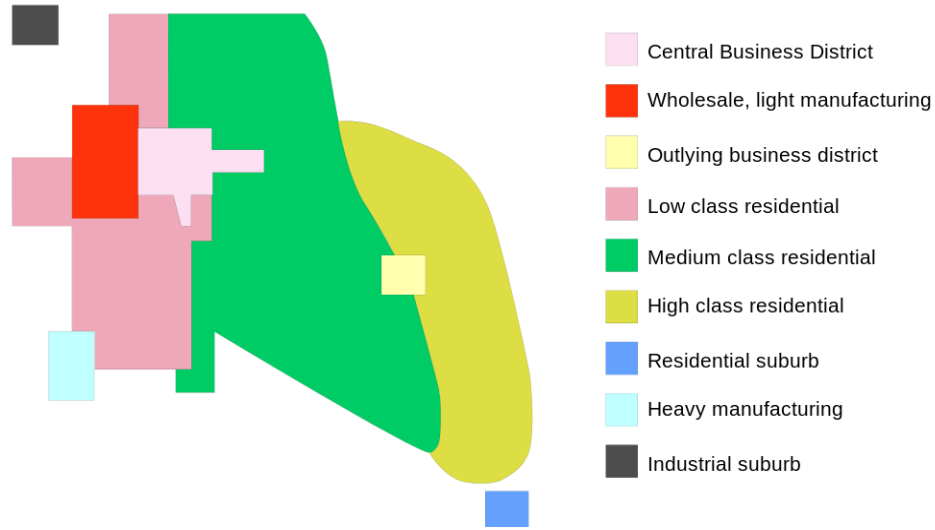


Figure 12: Multiple Nuclei Theory. Find more information at https://en.wikipedia.org/wiki/Multiple_nuclei_model

The simplest way to think about Multiple Nuclei Theory is that cities tend to grow together, and as that process continues that pattern of the city becomes increasingly complex. In time a community may be entirely encompassed by the larger city.

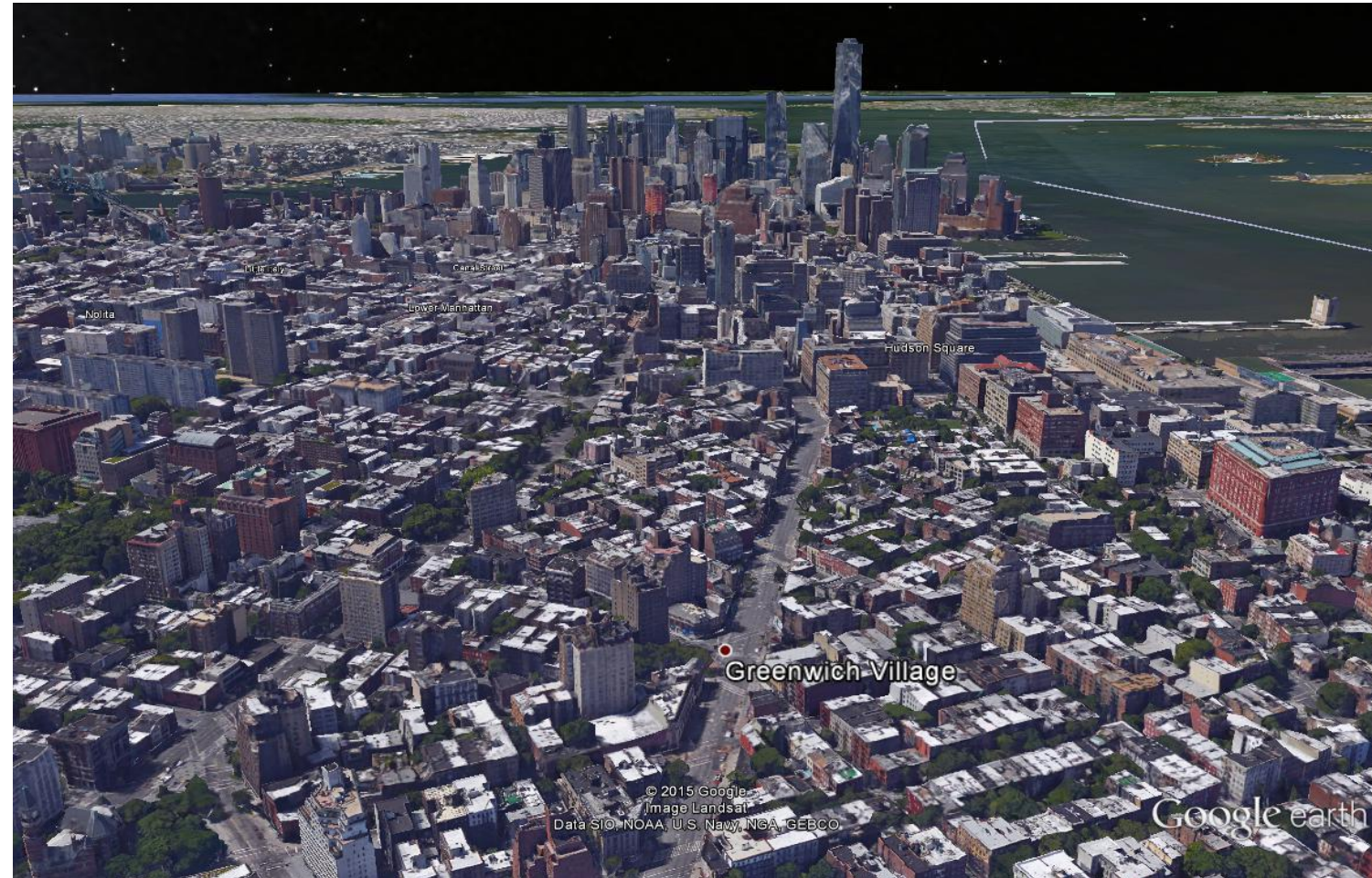


Figure 13: Greenwich Village was originally a village upstream from New York on the Hudson River. It is today completely absorbed by the city and functions as an inner city neighborhood.

The Political Economy School

As early as the 1960s urban scholars criticized the inability of the Human Ecology School to account for such human processes as racism and politics. For example, figure 9 shows the pattern expected in regard to poverty in Rochester: there are higher poverty rates in the inner city than in outer neighborhoods and suburbs. However, figure 14 shows the proportion of whites in a neighborhood by shading the tract white.

As predicted by concentric zone theory the proportion of whites in a tract increases as one travels to the suburbs, and the lowest proportions are southwest and north of downtown. Put another way we see a pattern of racial segregation as well as a degree of class segregation within non-white areas. Figure 15 demonstrates ethnic segregation as well: areas north of downtown are primarily Latino.

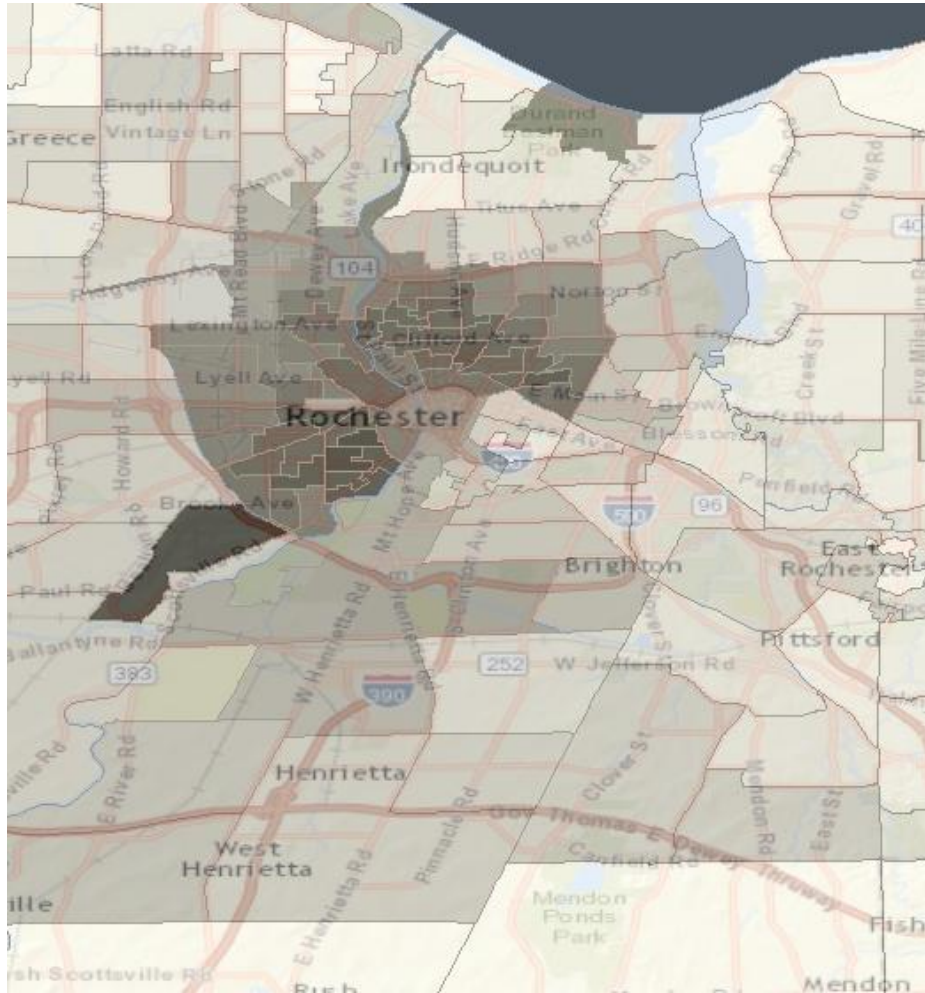


Figure 14: Racial segregation in Rochester. Lighter shaded tracts have a higher proportion of white residents.

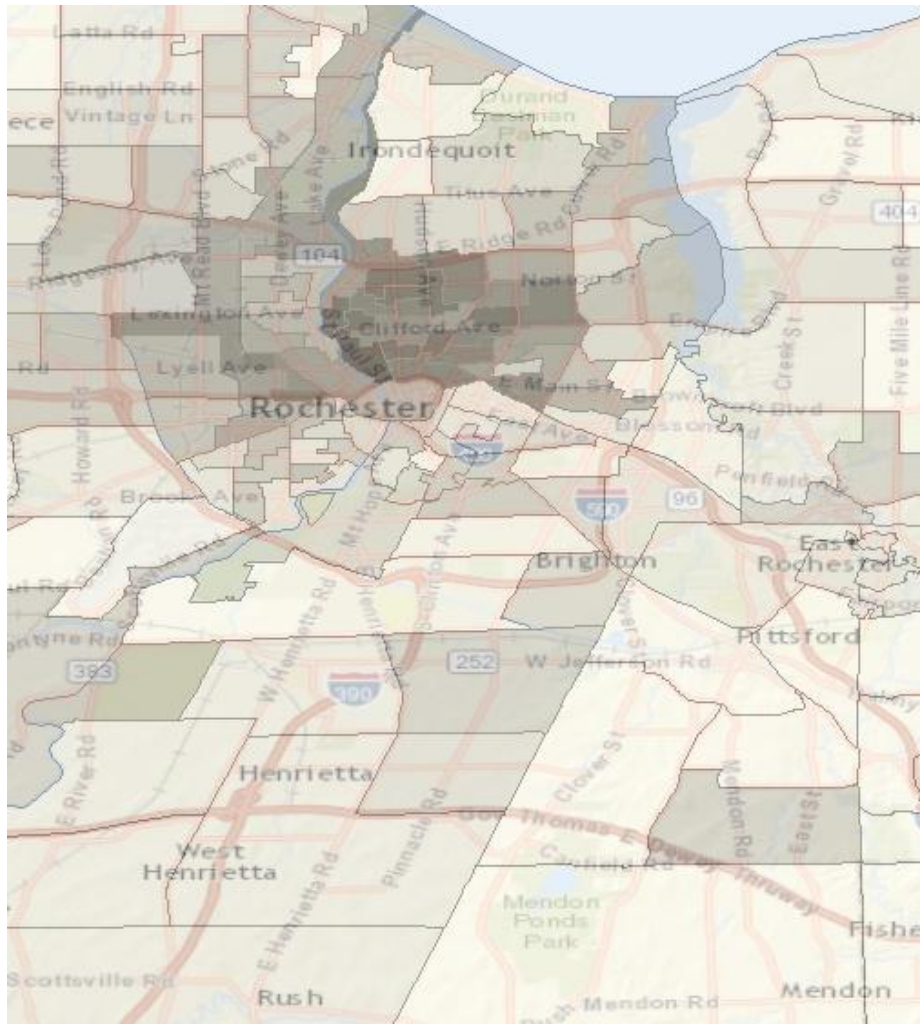


Figure 15: Ethnic segregation in Rochester. Darker shaded tracts have higher proportion of Latinos.

Political economists have shown that Human Ecology models cannot explain such patterns because they are outgrowths of cultural biases played out by developers and political leaders over time. In his 1973 study of Baltimore, David Harvey analyzed the role of developers, business leaders, and city officials in shaping the city. Followed by Mollenkopf (1983) and Castells (1977, 1985), this approach to urban studies focused far more on class conflict, the power of elites, and the self-interest of other actors involved. Similar themes were established in studies about Houston (Feagin, 1988), Buffalo (Perry, 1987), and Los Angeles (Soja, 1987). Informed by World Systems Theory (e.g., Wallerstein, 1979), Political Economists examined cities as part of a larger network of capital flows and power differentials (Timberlake, 1985; Sassen, 1991).

Perhaps the most cited exposition of ideas related to the political economy perspective was contained in *Urban Fortunes* (Logan & Molotch, 2007). *Urban Fortunes* stresses the conflict between use and exchange value. Use value refers to the utility of a piece of property in a particular neighborhood, such as an empty lot used as a *de facto* playground by children. In contrast, exchange value refers to the value of property if sold or rented on the open market. Logan & Molotch stress the conflict between the two. For instance, our hypothetical open lot might be valuable to children as a place to play (use value), but might be worth more to a developer as a housing lot (exchange value). In this way, private property relations favors exchange value, and members of a community might find themselves at odds with a landowner who owns a piece of real estate. In principle, this applies to a city-owned park as well. This conflict is mediated by “urban growth machines.” These are coalitions of government officials, business leaders, and developers who work together to ease the way for development. Business leaders and developers get new opportunities for profit, and the city gets an enhanced tax base. Through the interaction of these various actors, the structure of the city—social and physical—comes into existence and reproduces itself.

David Smith (1995) outlined five basic assumptions made by Political Economists that effectively summarize the perspective:

- 1) Cities are situated in a hierarchical global system. Studies of global cities like London and New York have shown a high concentration of resources at the top (Sassen, 1991). Studies of smaller cities have shown the extent to which they are managed by the elites in global cities (Nash, 1989; Thomas, 2003), extending down to even small towns (Thomas, 2005; Tauxe, 1993; Fitchen, 1991).
- 2) The World-System is one of competitive capitalism. There is no real question about this assumption today, although it is bound in time and place. To be sure, both trade and mass production existed in the ancient world, and as such one might find certain similarities, but social and economic organization was hardly capitalistic.
- 3) Capital is easily moved; cities are locationally fixed. Again, this assumption is at its core time-bound in that it presupposes a modern financial system. Nevertheless, many cities have discovered that capital, such as government function or a factory, can be relocated. When this happens, the social and economic system is significantly disrupted.
- 4) Politics and government matter. Yes, they do, but this is primarily a critique of the relatively quiescent Human Ecology school.
- 5) People and circumstances differ according to time and place, and these differences matter. It is not surprising that ancient Rome functioned differently than New York does today even though the two cities occupied similar positions in the global economy of their respective time. In fact, studying differences and similarities through time can illuminate deep structural dynamics.

In *Great American City*, Robert Sampson (2012) synthesized many of the ideas of both schools by utilizing Human Ecology methods (particularly social area analysis) and positing the political-economic interactions as the cause of the patterns over the rational actors assumed by earlier human ecologists.

SETTLEMENT SPACE

The patterns that result in the built environment of a city are referred to as its settlement space. This includes not only economic functions such as central business districts and industrial sectors, but also how the population of a place is distributed across the environment. One aspect of this distribution is segregation, defined by the American Heritage Dictionary as “the policy or practice of separating people of different races, classes, or ethnic groups, as in schools, housing, and public or commercial facilities, especially as a form of discrimination.” In many cases, and especially historically in the United States, segregation was achieved through overt discrimination: discrimination through policies or actions specifically intended to separate one group from another. This was the case in many cities in the United States where local, state, and federal policy functioned to segregate African-Americans from other populations. In contrast, institutional discrimination occurs when policies or actions unintentionally function to separate one population from others—this is generally the case with class segregation.

An important aspect of the settlement space is population density. Density refers to the amount of population (or economic function, such as stores) in a given area. Historically, cities that grew prior to the advent of the automobile were quite dense as people needed to walk from place to place. Since the car has become the dominant form of transportation in the United States, however, the density of the settlement space has declined precipitously. Two factors related to the automobile have greatly affected American cities: suburbanization and urban renewal.

Suburbanization

While a major adaptation to the dominance of the automobile was suburbanization (read here: <https://en.wikipedia.org/wiki/Suburbanization>), the movement of people from the central city to adjacent areas from where they could commute is not a new phenomenon: ancient Rome had suburbs as well. In the United States, Brooklyn developed as an early “ferry suburb” of New York City as early as the late eighteenth century, and “streetcar suburbs” developed along streetcar lines during the nineteenth century. In Boston, for example, the first subway in the United States (today’s Green Line) emerged from underground and extended along major arteries at street level, specifically along Commonwealth and Brighton Avenues (B and A lines), Beacon Street (C line) and Huntington Avenue (E line), and these streets were quickly bounded by five and six story apartment buildings intended for middle class commuters into the city. Away from the streetcar lines themselves smaller apartment buildings, known as “triple deckers,” as well as single family homes were located within walking distance of the lines and largely mimicked the pattern predicted by Sector Theory (see Figure 16).



Figure 16: Streetcar on Beacon Street in Brookline, Massachusetts

As early as the 1920s, significant numbers of Americans were moving to suburbs accessible only by car. Today, we tend to think of suburbs as being centered around the car, and that is because of government policies that increased the pace of suburbs after World War II—and they were centered around the car.

Urban Renewal

Partly in response to competition from the suburbs, central cities attempted to remake the inner city by redoubling efforts in urban renewal. Urban renewal refers to the process of redeveloping an urban area, typically one in disrepair (read here: https://en.wikipedia.org/wiki/Urban_renewal). While the redevelopment of older urban areas is as old as cities themselves—even in ancient times urban leaders would rebuild temples and central plazas as a means of enhancing their own image—in the United States “urban renewal” normally refers to a set of policies that evolved during the early twentieth century and were consolidated in the Federal Housing Act of 1949. As early as the late nineteenth century scholars and activists were alarmed by the concentration of the poor in urban ghettos, with such neighborhoods as New York’s Five Points on the Lower East Side of Manhattan achieving a degree of infamy. Reformers argued for slum clearance and redevelopment of the neighborhoods in order to deconcentrate poverty and build neighborhoods with more green space and less overcrowding. The result was a number of parks, including New York’s Central Park (read here: https://en.wikipedia.org/wiki/Central_Park), as well as experiments in commercial plazas. One of the best known commercial ventures was New York’s Rockefeller Center, a sprawling complex of shopping and office space in Midtown Manhattan (read here: https://en.wikipedia.org/wiki/Rockefeller_Center).

Suburbs and Urban Decay

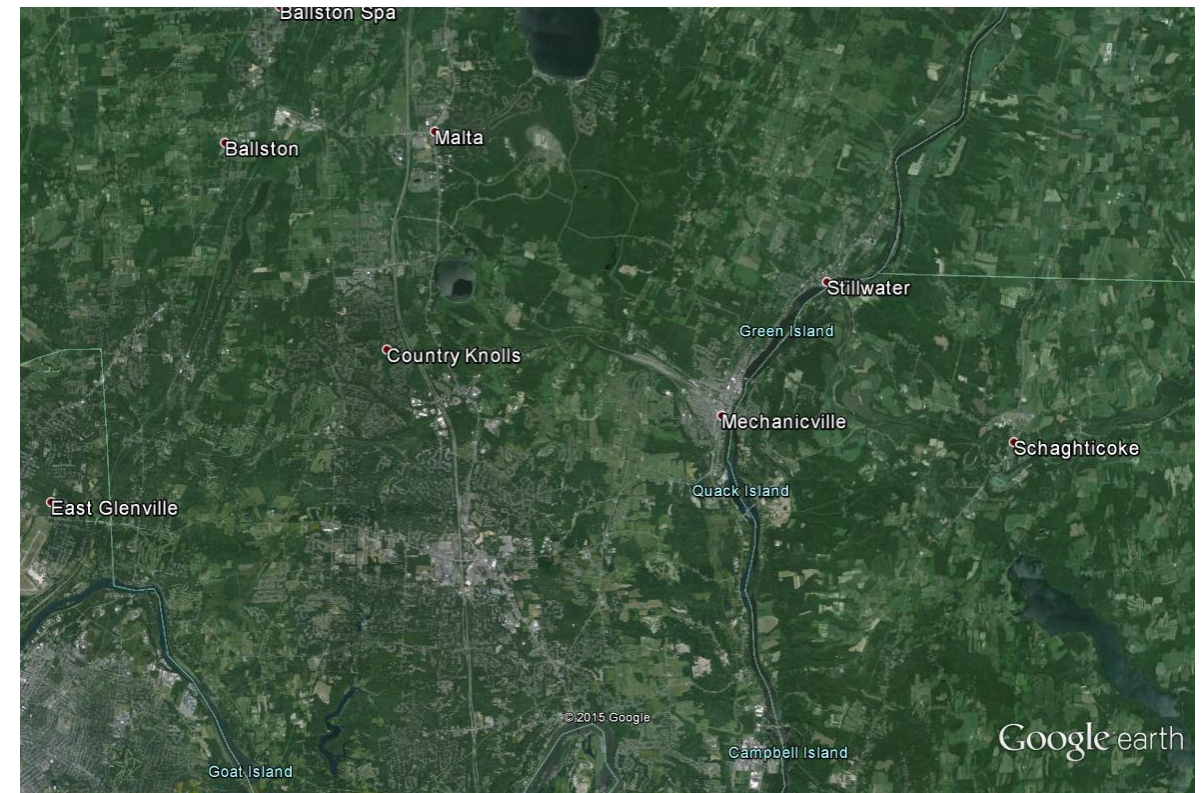
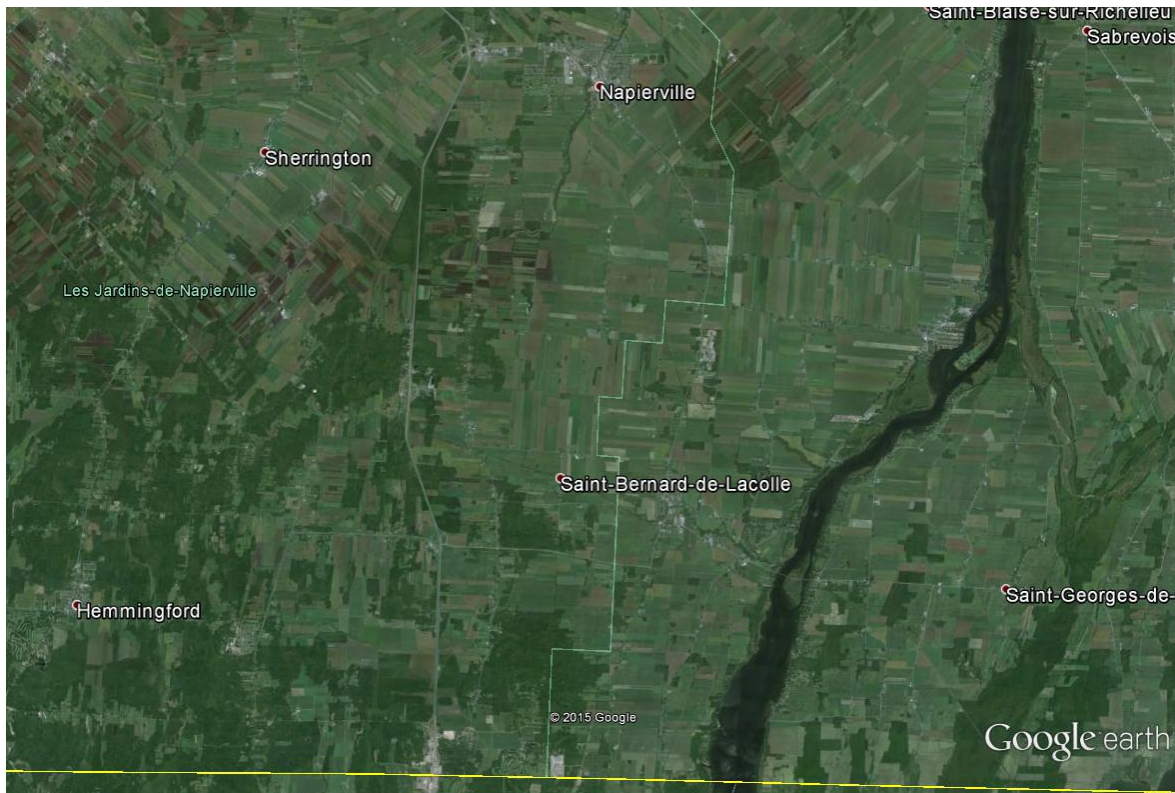
Suburbanization and inner city decay are related to one another through a conceptually simple but politically complex reality: when settlement space growth outstrips population growth urban decay is the result. This is because the older inner city neighborhood developed with an economy and population density that assumed a particular range of population that is undermined when population falls below an acceptable threshold. In other words, if a neighborhood that developed around a population of 10,000 residents loses half of those residents the retail economy will suffer accordingly, thus encouraging others to leave the neighborhood—this is a “push factor.” The presence of new housing in the suburbs also acts as a “pull factor” that attracts residents with the means to afford new housing out of the inner city. When the population leaving the area is not replaced by new residents, either through a high birth rate or immigration, urban decay ensues.

Automobile suburbs typically have low population densities even when compared to urban neighborhoods with single-family housing. For example, it was historically common for 4-5 single family homes to be built per acre, and in many cities this same lot may have contained multiple-family units on a building lot. In contrast, newer suburbs typically have more land—in some communities a single-family home may sit on parcels of five acres or more. In figure 17, the view shows downtown Woodstock, New York in the foreground with the historical population density giving way to a hillside of single family homes poking out of a sea of trees; Woodstock has a minimum lot size of three acres, and many homes have larger lots. Driven by a desire of residents to live in nature, the result is a landscape that is neither urban nor rural. In addition, unlike the historical pattern where residents could walk to such facilities as playgrounds and shops, the newer settlement pattern requires an automobile to conduct even the most basic of business. Variations on this low-density, automobile-intensive settlement pattern are found across the country and are largely responsible for escalating carbon emissions.



Figure 17: Woodstock, New York. The historic village center is in the foreground and newer housing tapers for several miles into the countryside.

The sprawl associated with less dense settlement patterns and population growth in large metropolitan areas can spread development many miles from the city center. For example, the development around Woodstock is about 100 miles from New York City, but its county was classified as part of the New York Combined Statistical Area in 2003. Although it is tempting to think that such sprawl is simply a function of population, the case of metropolitan Albany in New York and Montreal in Canada show glaring differences. Montreal (below, left) is home to about 3 million residents, whereas the Albany CSA (below, right) is home to about 1.1 million. Driving from Albany toward Montreal on Interstate 87 one moves through 60 miles of sprawl—housing and retail that has developed within driving distance of the expressway. In contrast, upon entering Canada, Interstate 87 becomes Highway 15, and the fifteen miles between the border and Montreal is characterized by farmland. The reason is that Canadian policy has stressed mass transit and medium density development over expressways and low density development, and the difference is easy to see.



FINAL THOUGHTS

Cities are wondrous places but are hardly natural to the human condition. They grow to satisfy human needs but soon become dependent on the territory that surrounds them. Their success means further expansion into this hinterland, gobbling up more arable land and increasing the territory on which they depend. In a sense, their greatest threat is their own success.



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