
CITIES AND URBAN LAND USE



THE FORM, FUNCTION, AND
SIZE OF URBAN SETTLEMENTS
CHANGE CONSTANTLY

CITIES CHANGE



URBANIZATION

- ▶ Urbanization is the growth and diffusion of city landscapes and urban lifestyles.
- ▶ While most MDCs are highly urbanized, the # and % in less developed countries is growing.
- ▶ Eight of Ten of the most populous cities are currently in developing countries–
- ▶ In MDCs about $\frac{3}{4}$ of the people live in urban areas, compared to about $\frac{2}{5}$ in LDCs.

AN INCREASING PERCENTAGE OF PEOPLE LIVE IN CITIES RATHER THAN RURAL AREAS

The percentage of people living in cities increased from:

1800 - 1%

1850 - 6%

1900 - 14%

1950 - 30%

2000 - 47%

The population of urban settlements exceeded that of rural settlements for the first time in history in 2008.



Suburban
Developments

Refineries

Galveston Bay

Rural and undeveloped land



WHAT FACTORS ARE DRIVING URBANIZATION?

- ▶ Site and situation influence the origin, growth, and function of a city. *Examples?*
- ▶ Transportation and communication have facilitated urbanization (ex: *Borcherts's epochs of urban growth*) and suburbanization
- ▶ Improvements in agriculture, transportation, population growth, migration, economic development, govt. policies influence urbanization



BORCHERT'S EPOCHS

Urbanization is a product of access, and access is a function of transportation capabilities. It is for this reason that most early cities were located along waterways since this provided the best and cheapest access for goods and people. Changes in transportation technology allowed for more and different points of access. Geographer John Borchert developed a schema to identify four distinct epochs in transportation within the United States. Each epoch altered spatial interactions between urban and rural areas, and each had an enormous effect on the development of the North American interior and in the changing hierarchy of cities.

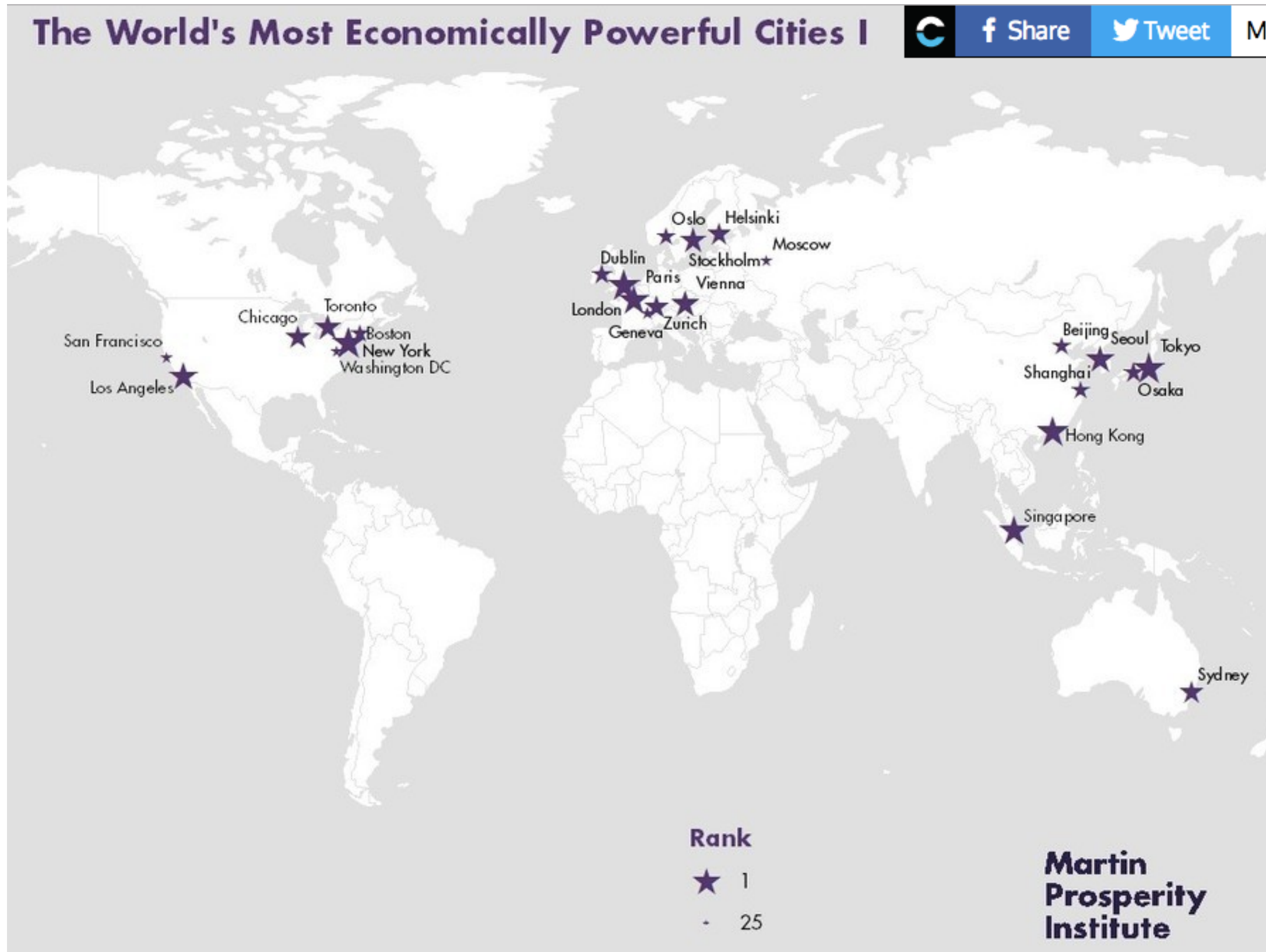
The first of Borchert's epochs was the Horse and Wagon Epoch (1790–1830) when the need for water-based navigation kept most sizeable cities along the Atlantic coast or on some of the eastern rivers serving Atlantic ports. The development of canals in the 1820s and 1830s helped to link these river and lake systems by water and spurred the development of the eastern Midwest. The second epoch is termed the Regional Railroad Network Epoch (1830–1870) and commenced with the development of the steam driven railroad and the steamship. New rail lines connected existing cities and new cities emerged along the railroad networks. The biggest beneficiary of the growth of the railroad was Chicago which was situated at the node of these burgeoning rail lines. Cities such as Omaha, Minneapolis, Memphis, and Atlanta (originally named Terminus) grew and prospered as well. With the development of the transcontinental railroad, the third epoch (the National Railroad Network Epoch (1870–1920)) tied the entire country together and allowed for urbanization and industrialization to flourish wherever rail lines had been laid. Finally, the fourth epoch, the Automobile-Airplane Epoch (1920–present) moved the country from a network of rail lines to a network of roads and air routes. Automobiles were used for personal transportation and trucks were used for shipping. Cities were able to prosper in places that had previously been bypassed and this era saw the migration of people from the industrial north to the south and the west. It was more important for major cities to have a large airport than a big train station.

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Megacities



MEGACITIES ARE RAPIDLY GROWING IN DEVELOPING NATIONS

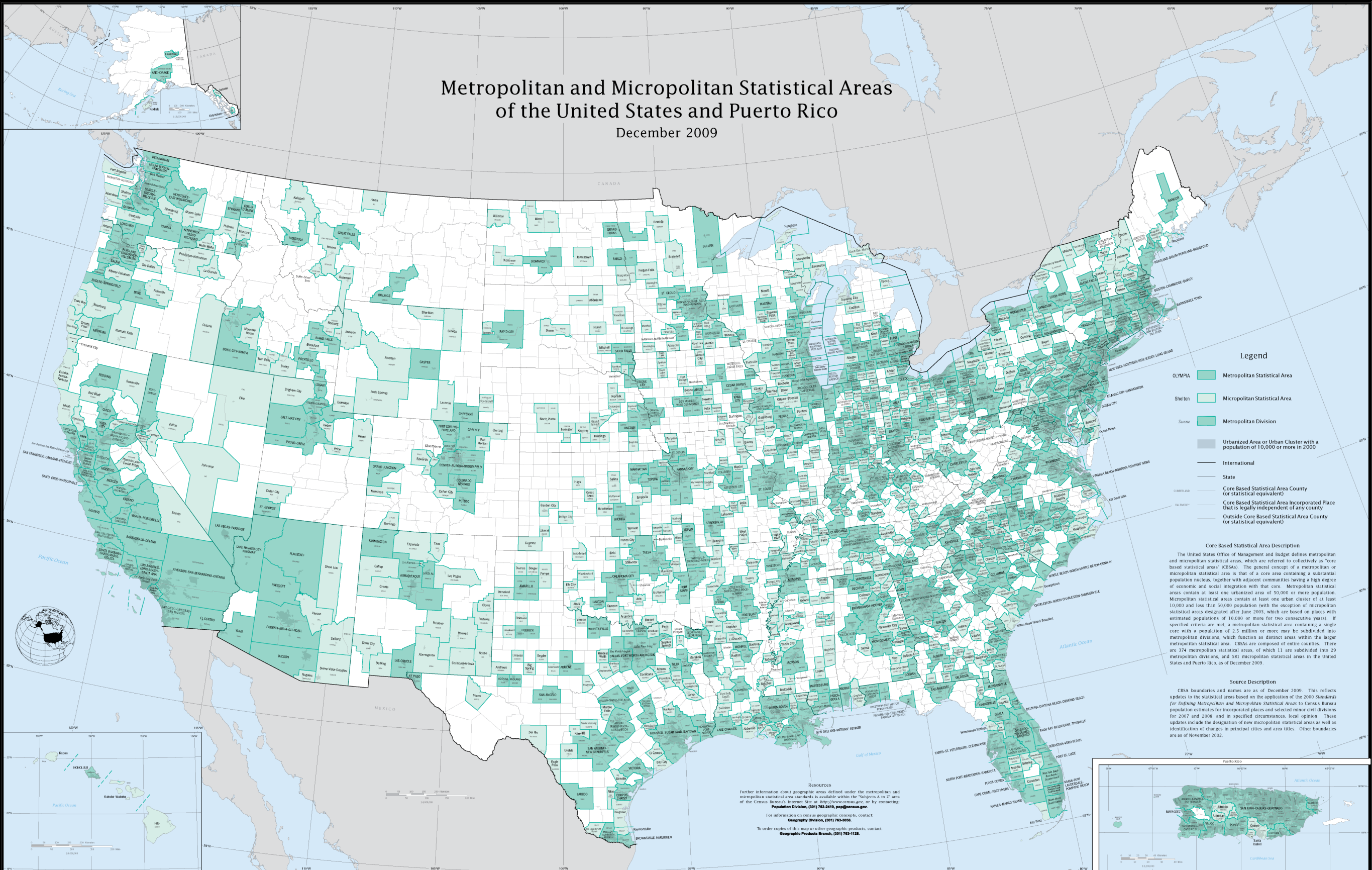


METROPOLITAN STATISTICAL AREA (MSA) VS MICROPOLITAN STATISTICAL AREA

- ▶ The US Census uses the term Metropolitan Statistical Area to identify a central city and all of its immediately interacting regions.
- ▶ An MSA has a minimum of 50,000 people in it.
- ▶ The US Census also uses the term Micropolitan Statistical Area that is an area of the surrounding counties integrated into a central city with a population of 10,000-50,000.

Metropolitan and Micropolitan Statistical Areas of the United States and Puerto Rico

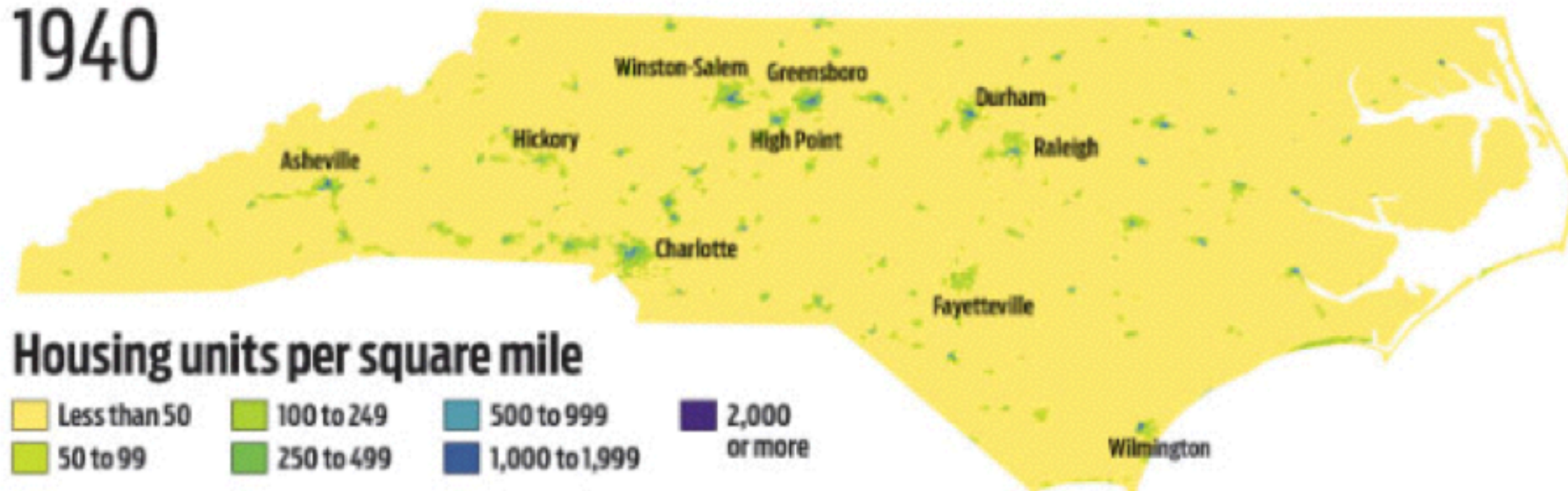
December 2009



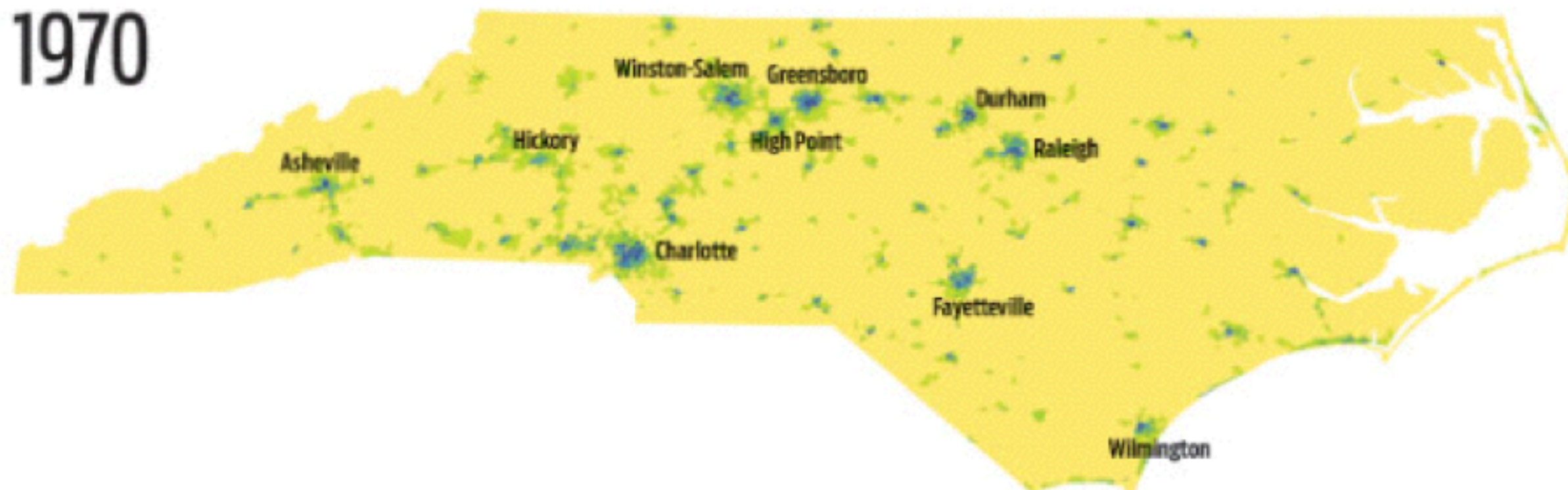
North Carolina's population footprint

A presentation by the Carolina Demography division of the Carolina Population Center at UNC Chapel Hill shows how the growth in state population and housing units since 1940 has been centered around North Carolina's three main urban hubs. By 2050, the projected housing unit growth will further intertwine the Charlotte, Triad and Triangle economies.

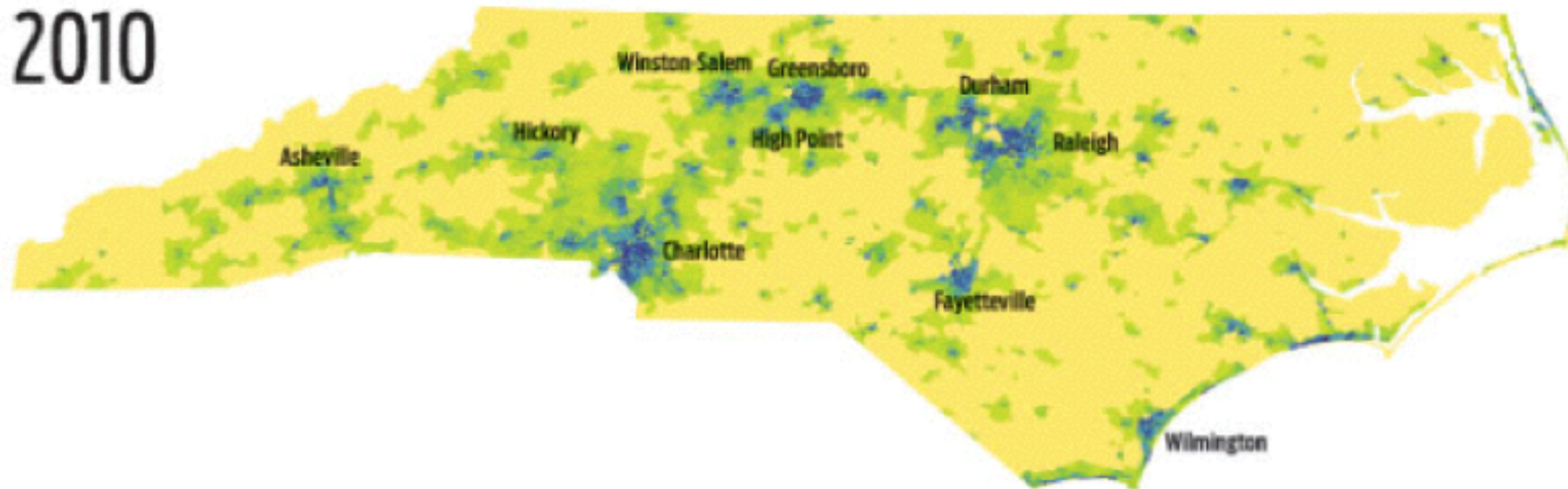
1940



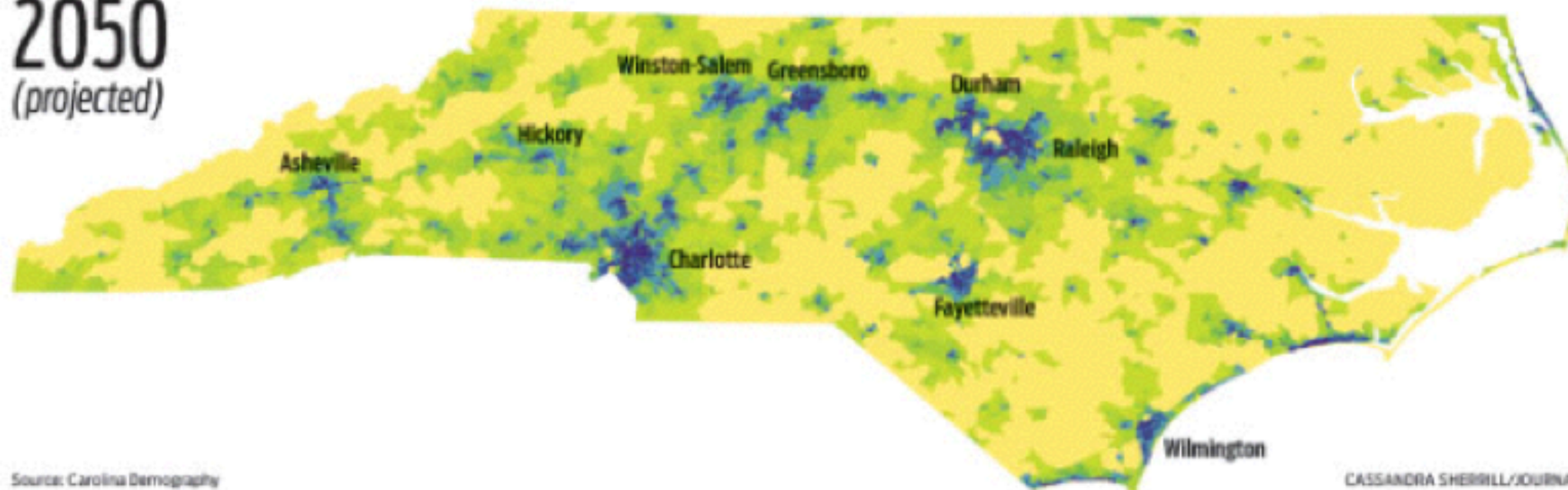
1970



2010



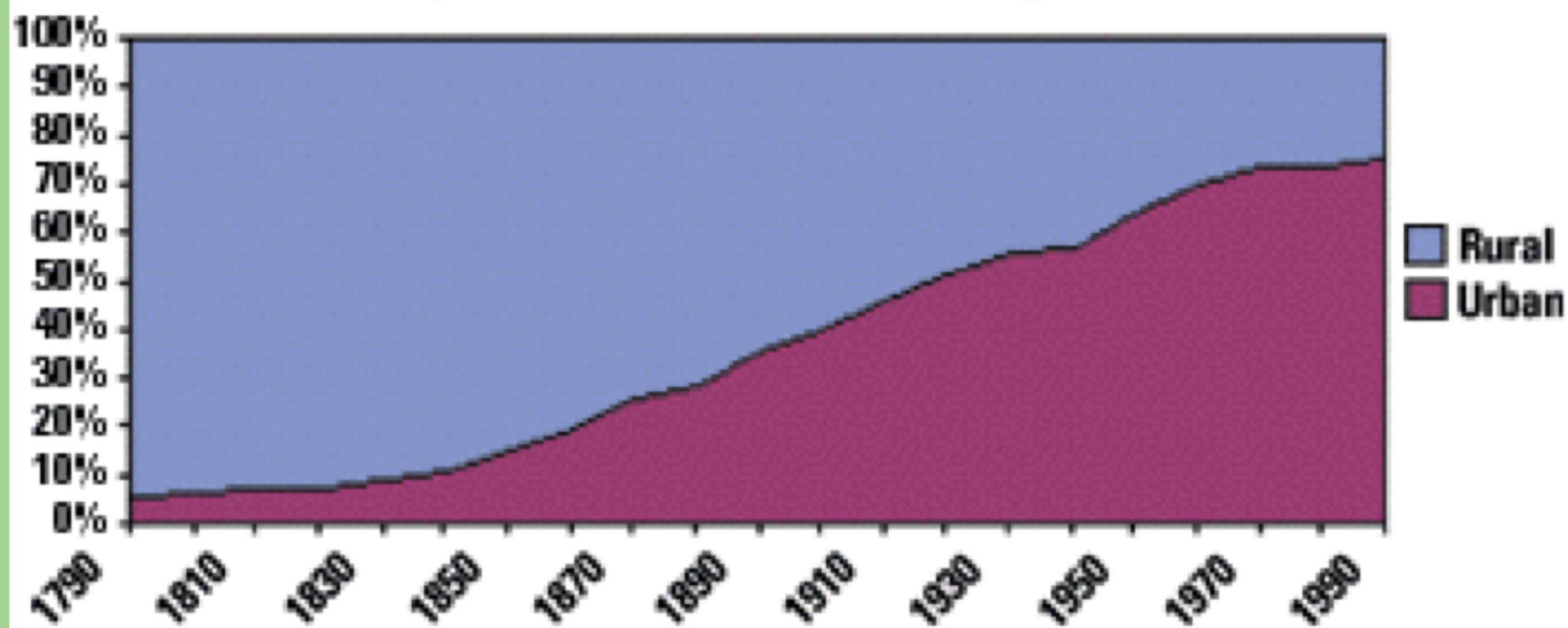
2050
(projected)



Source: Carolina Demography

CASSANDRA SHERRILL/JOURNAL

Urban Population as a Percentage of U.S. Total



RATE OF URBANIZATION VS LEVEL OF URBANIZATION

- ▶ Rate of Urbanization is the speed at which the population is becoming urban.
- ▶ Level of Urbanization is the percentage of people already considered urban.
- ▶ Example - level of urbanization in US is nearly 75% but the rate of urbanization is much lower than that of China which has a rapid rate of urbanization despite is low level of only 30%.

URBAN HEARTHS

Urban Hearth Areas are places where urbanization first developed. Several qualities are common among the places that were urban hearths:

- A dependable water supply;
- A long growing season;
- Domesticated plants and animals (supported by agriculture);
- Plenty of building materials;
- System of writing records.

[Urbanization and the Evolution of Cities](#)

WORLD CITIES FUNCTION AT THE TOP OF THE WORLD'S URBAN HIERARCHY AND DRIVE GLOBALIZATION

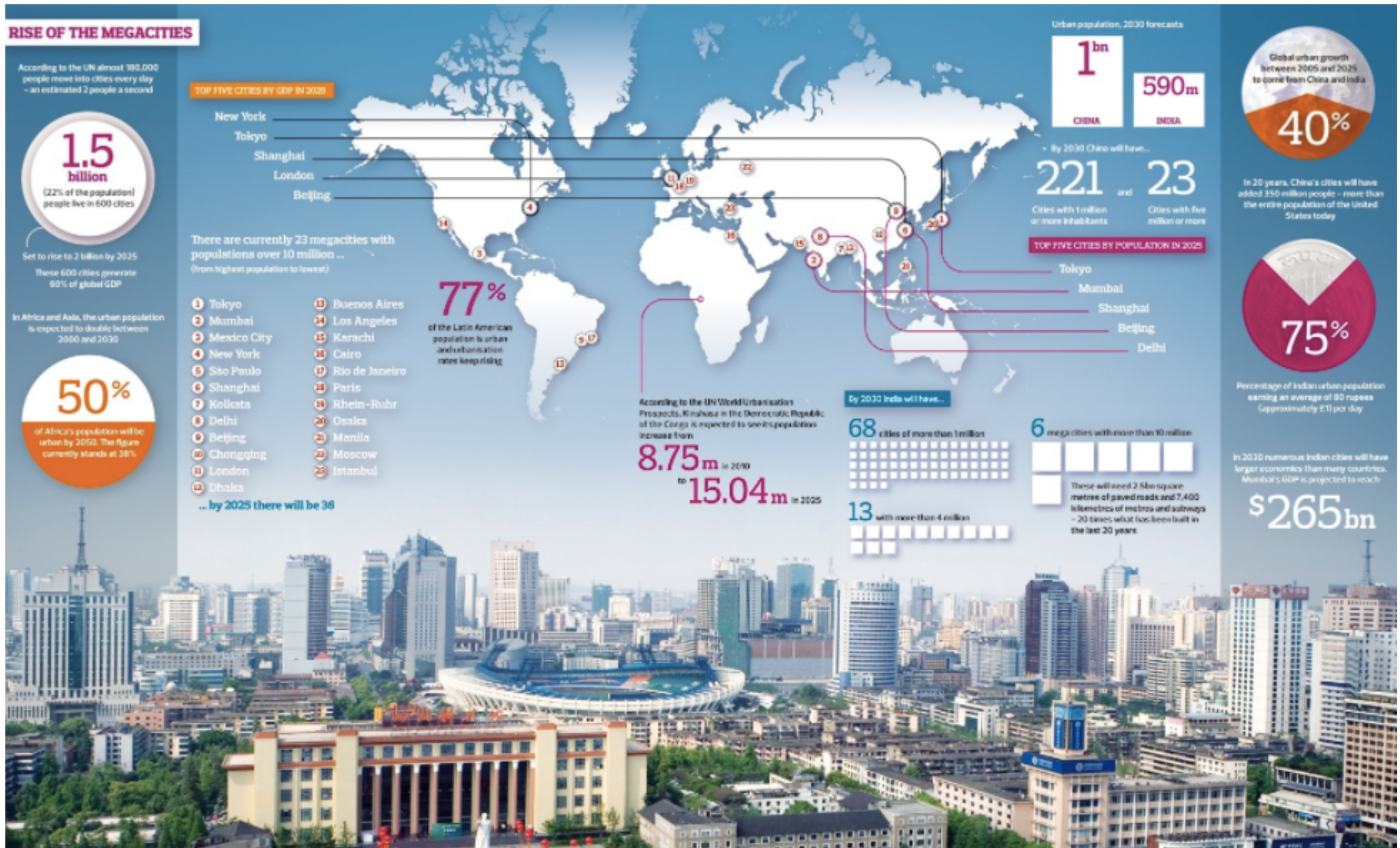
- ▶ A global city (also called world city) is a city deemed to be an important node point in the global economic system

| Rank | Global Metro Monitor Map (Brookings) | Global Financial Centres Index (Z/Yen) | Global City Competitiveness Index (<i>The Economist</i>) | Global Cities Index (A.T. Kearney) | City Prosperity Index (United Nations) |
|------|--------------------------------------|--|--|------------------------------------|--|
| 1 | Tokyo | New York | New York | New York | Vienna |
| 2 | New York | London | London | London | New York |
| 3 | Los Angeles | Hong Kong | Singapore | Paris | Toronto |
| 4 | Seoul | Singapore | Hong Kong | Tokyo | London |
| 5 | London | Zurich | Tokyo | Hong Kong | Stockholm |
| 6 | Paris | Tokyo | Sydney | Los Angeles | Helsinki |
| 7 | Osaka-Kobe | Seoul | Paris | Chicago | Dublin |
| 8 | Shanghai | Boston | Stockholm | Beijing | Oslo |
| 9 | Chicago | Geneva | Chicago | Singapore | Paris |
| 10 | Moscow | San Francisco | Toronto | Washington | Tokyo |

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| 3 | Los Angeles | Hong Kong | Singapore | Paris | Toronto |
| 4 | Seoul | Singapore | Hong Kong | Tokyo | London |
| 5 | London | Zurich | Tokyo | Hong Kong | Stockholm |
| 6 | Paris | Tokyo | Sydney | Los Angeles | Helsinki |
| 7 | Osaka-Kobe | Seoul | Paris | Chicago | Dublin |
| 8 | Shanghai | Boston | Stockholm | Beijing | Oslo |
| 9 | Chicago | Geneva | Chicago | Singapore | Paris |
| 10 | Moscow | San Francisco | Toronto | Washington | Tokyo |

URBANIZATION

WORLD CITIES PROVIDE SERVICES



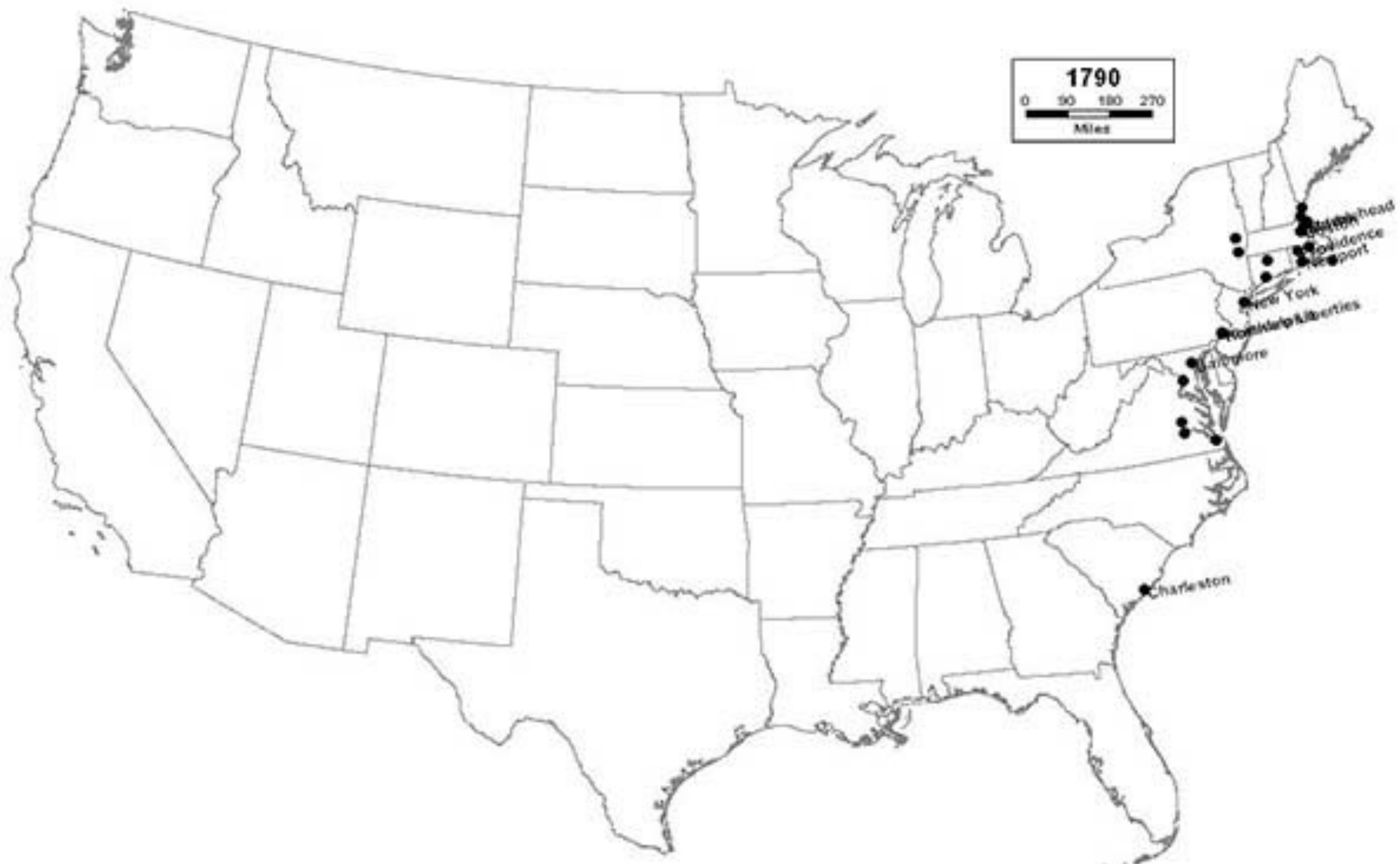
URBANIZATION

MEGACITIES & WORLD CITIES FACE ECONOMIC, SOCIAL, POLITICAL AND ENVIRONMENTAL CHALLENGES

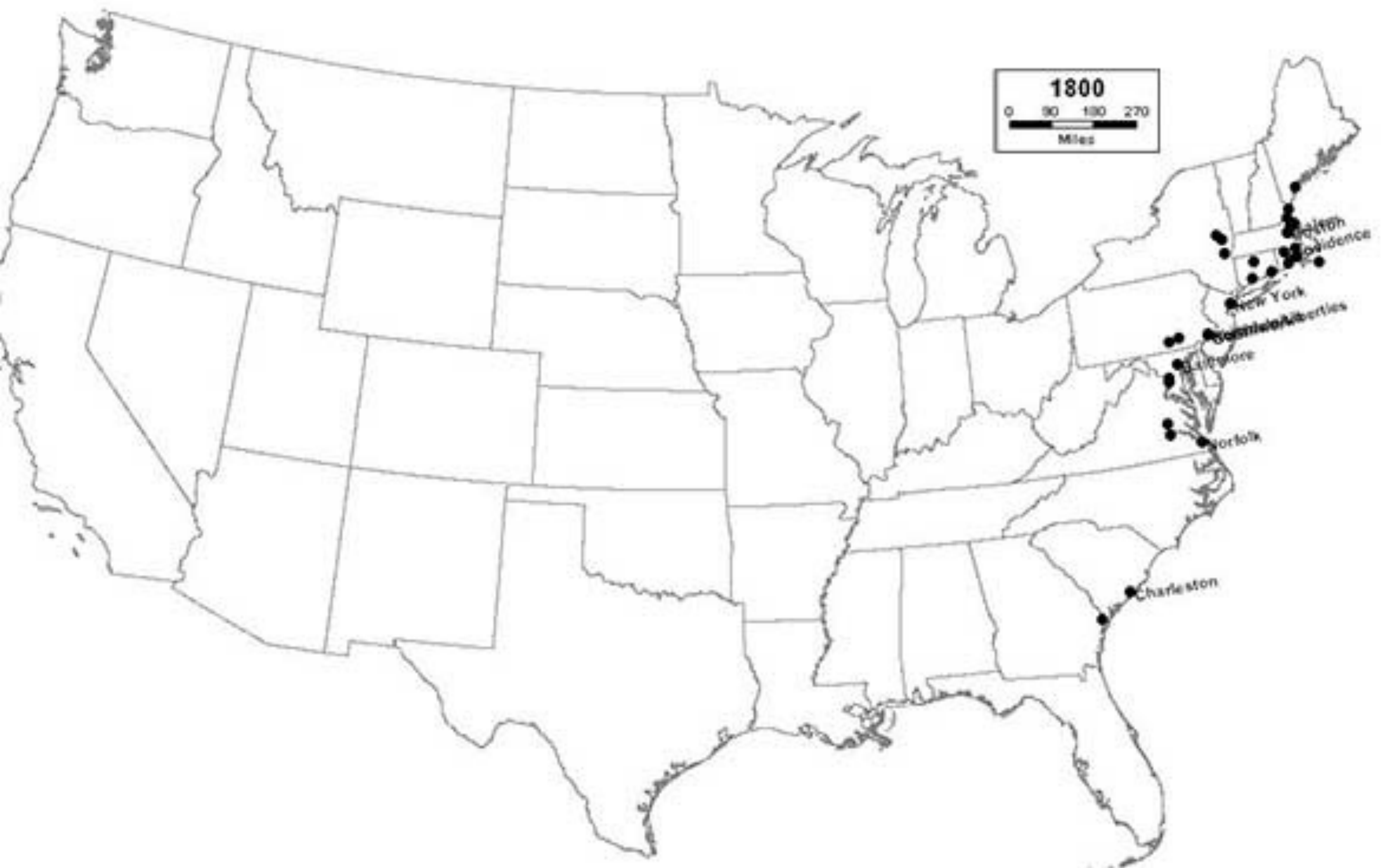
- ▶ [http://www.npr.org/
2012/07/08/156393366/kabul-a-
city-stretched-beyond-its-limits](http://www.npr.org/2012/07/08/156393366/kabul-a-city-stretched-beyond-its-limits)



1790



1800



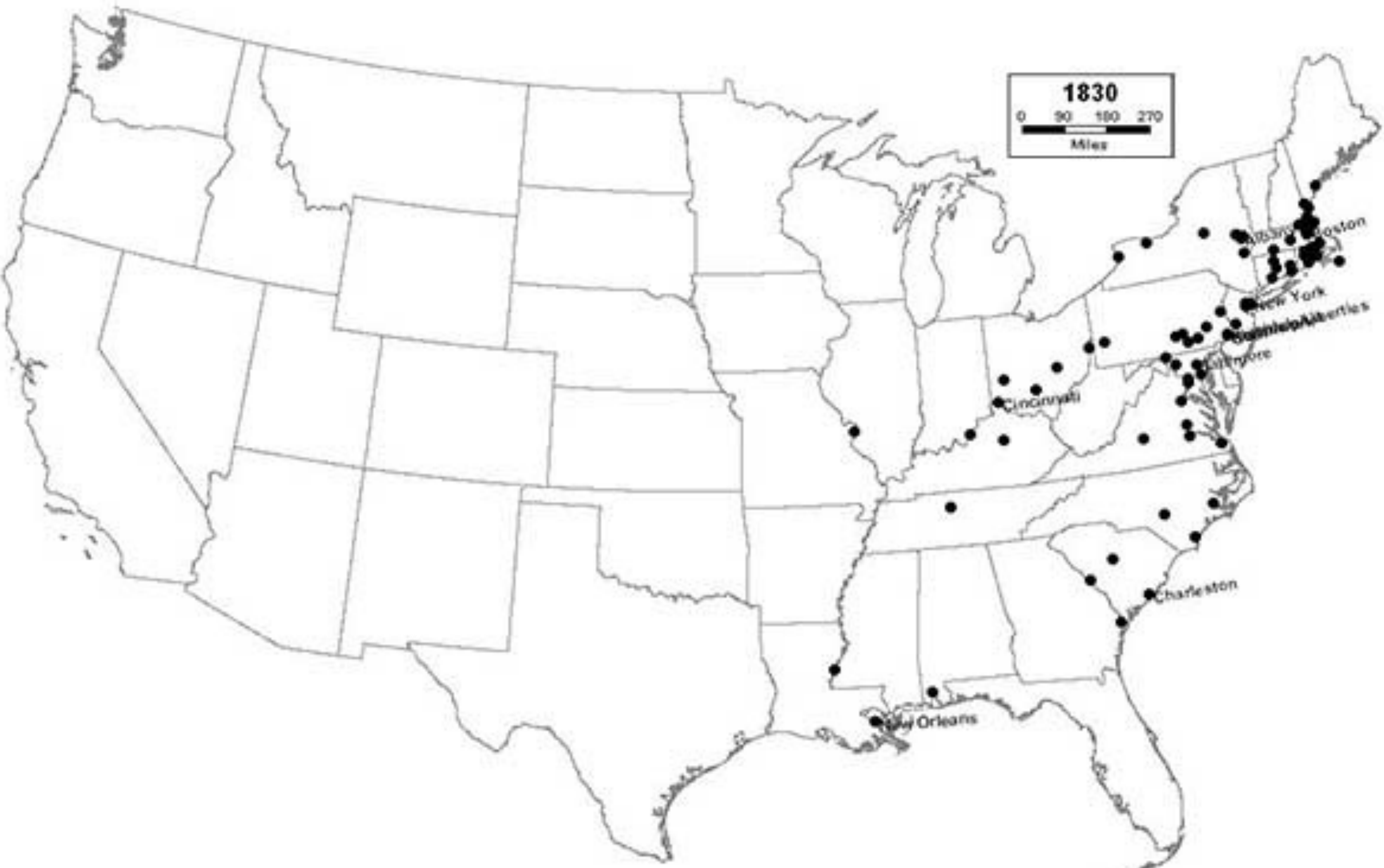
1810



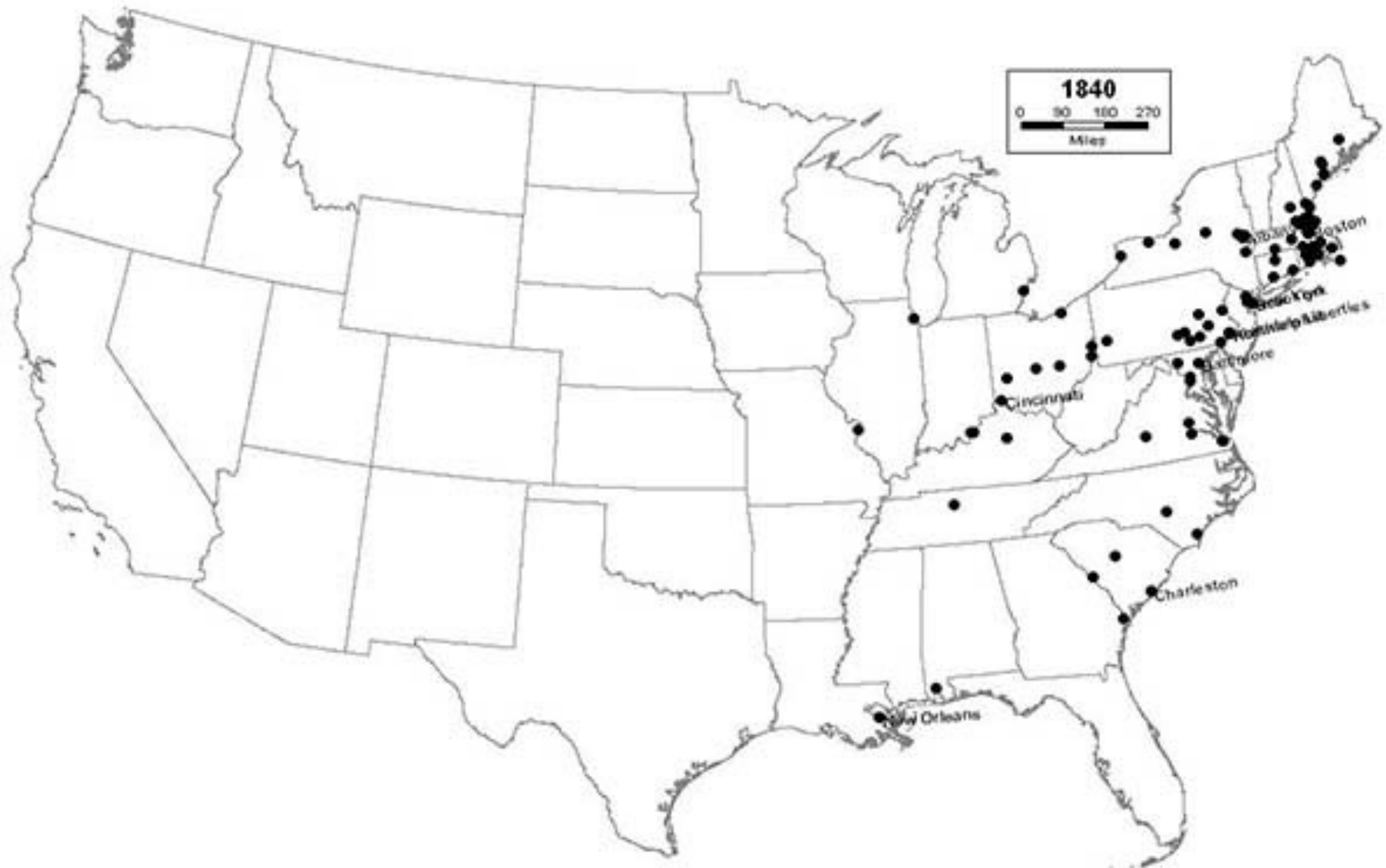
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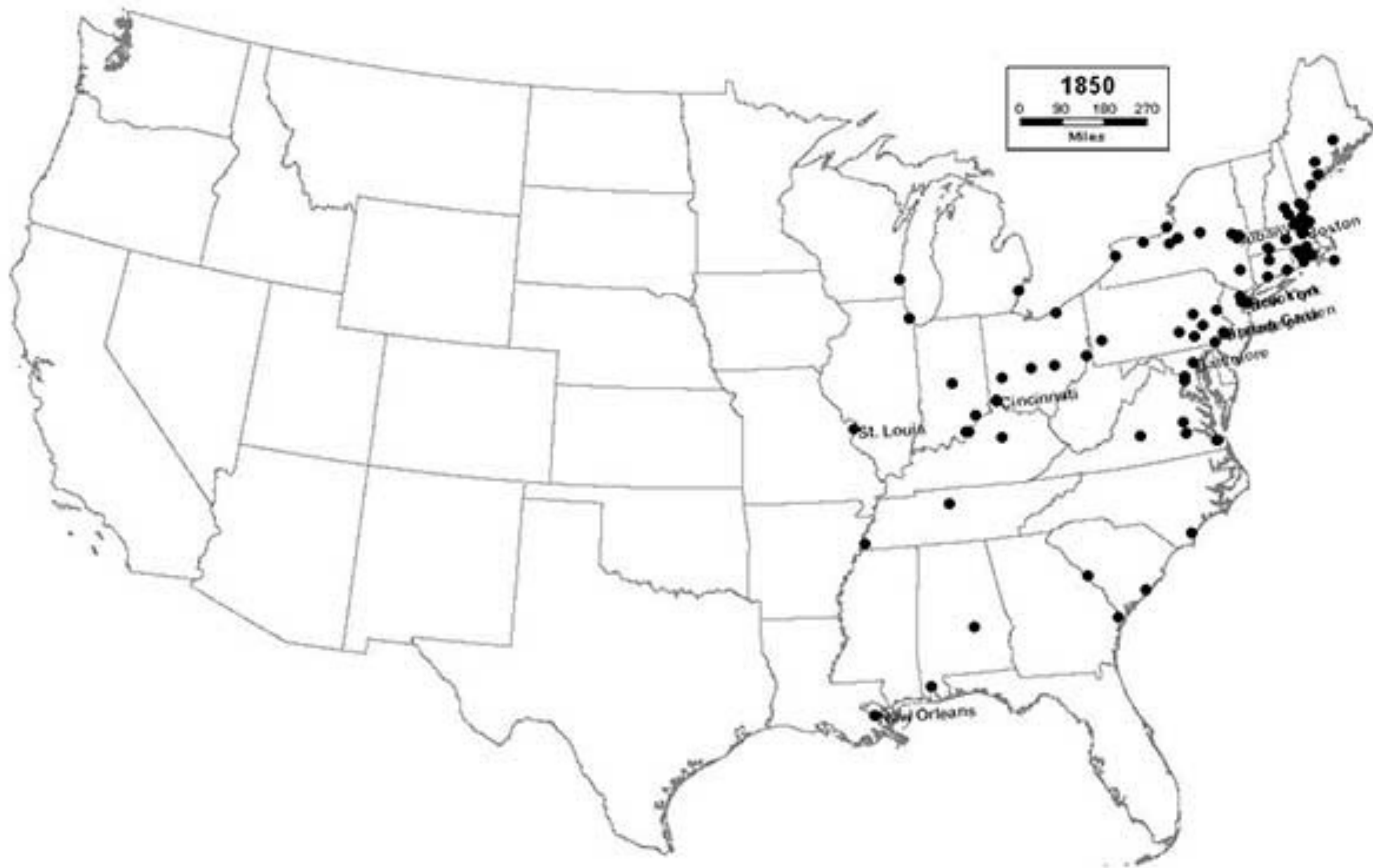
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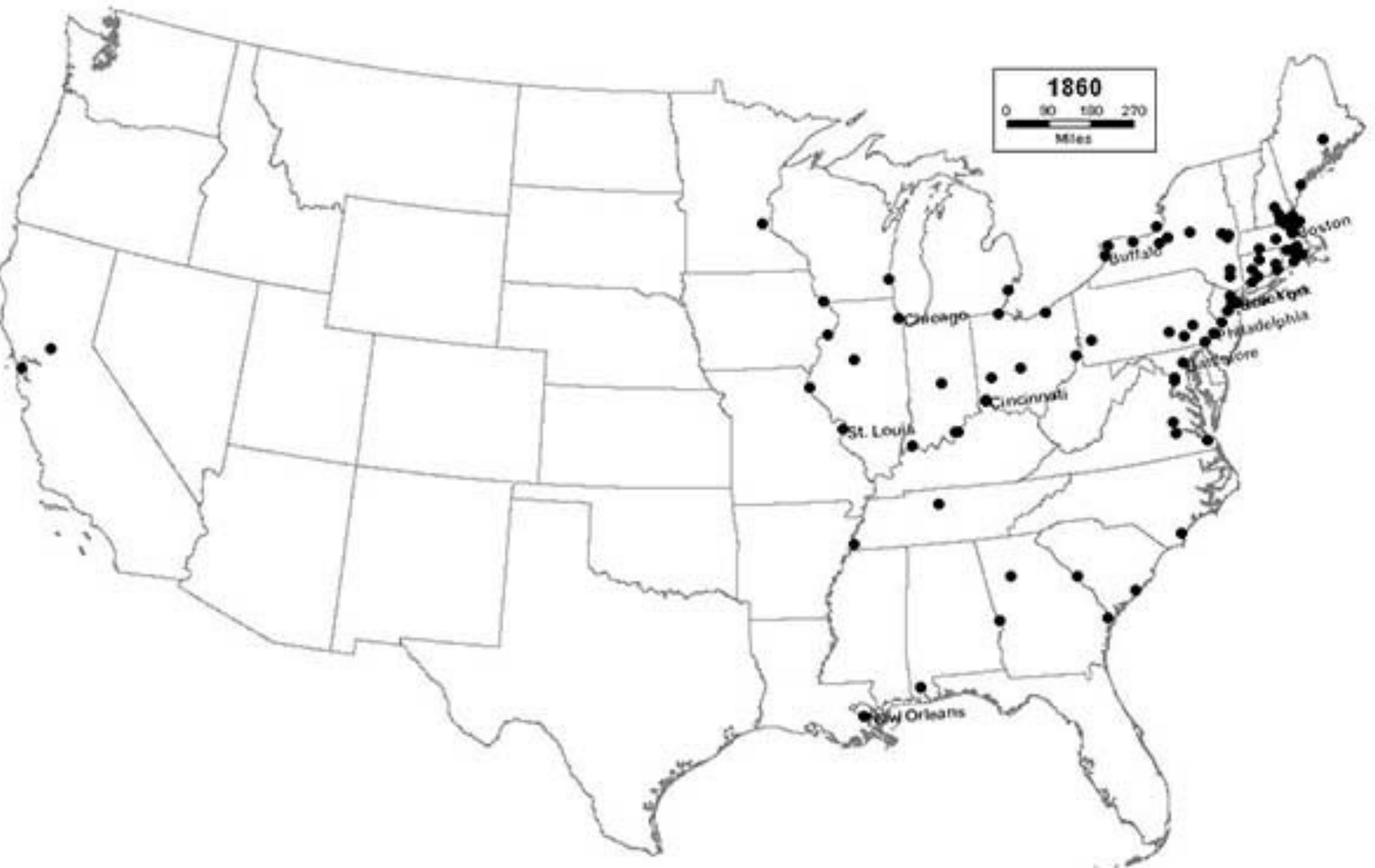
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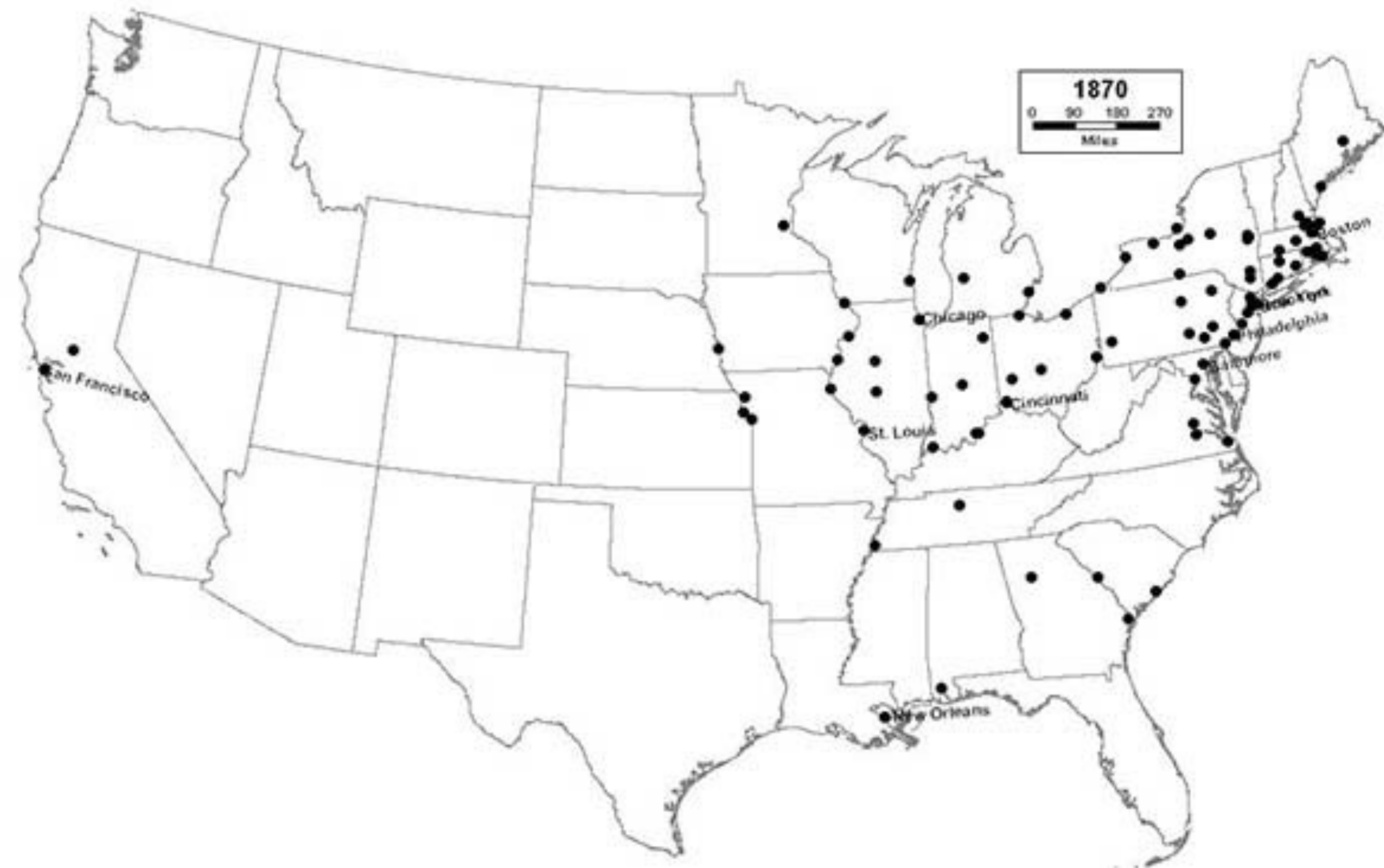
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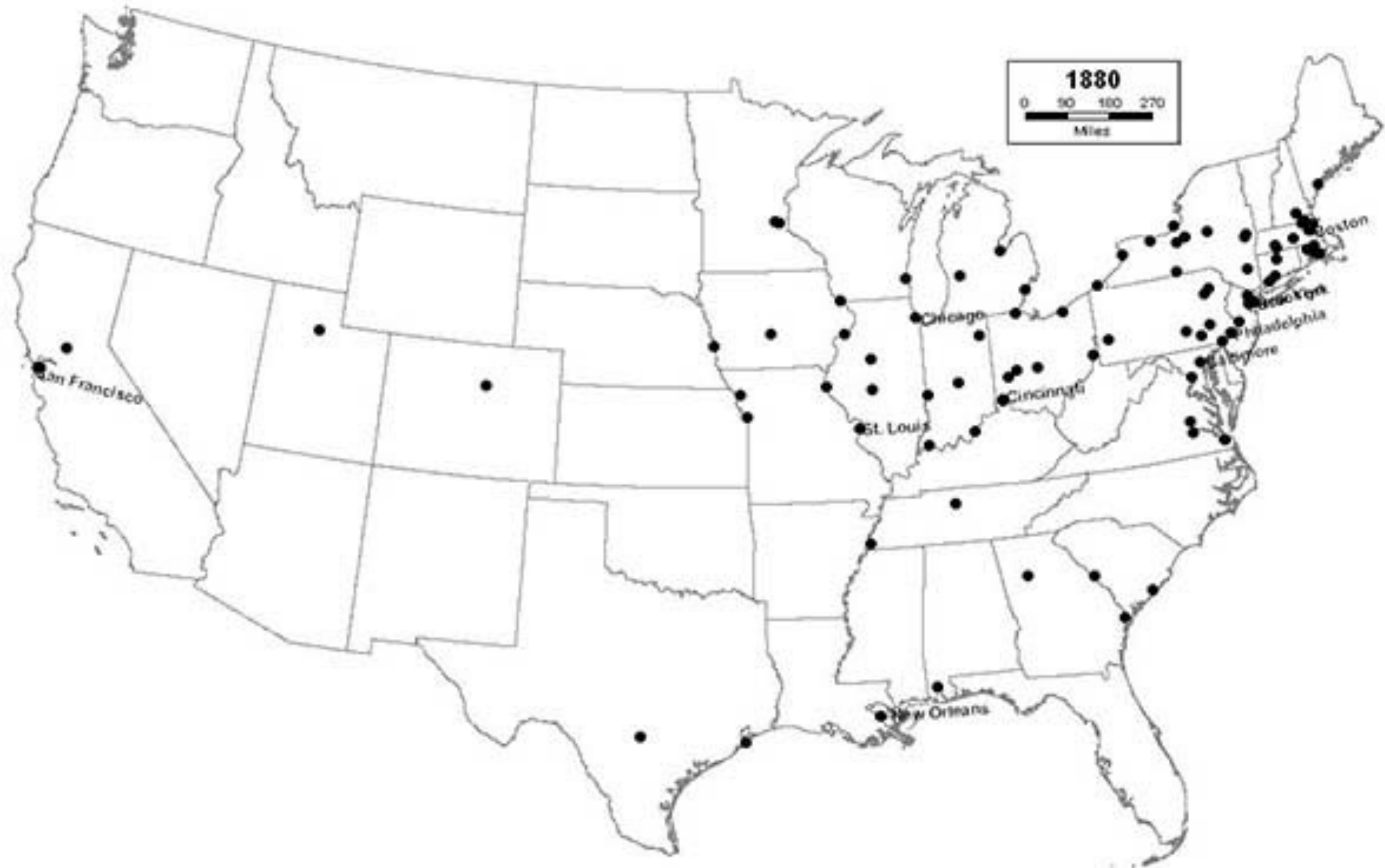
1860



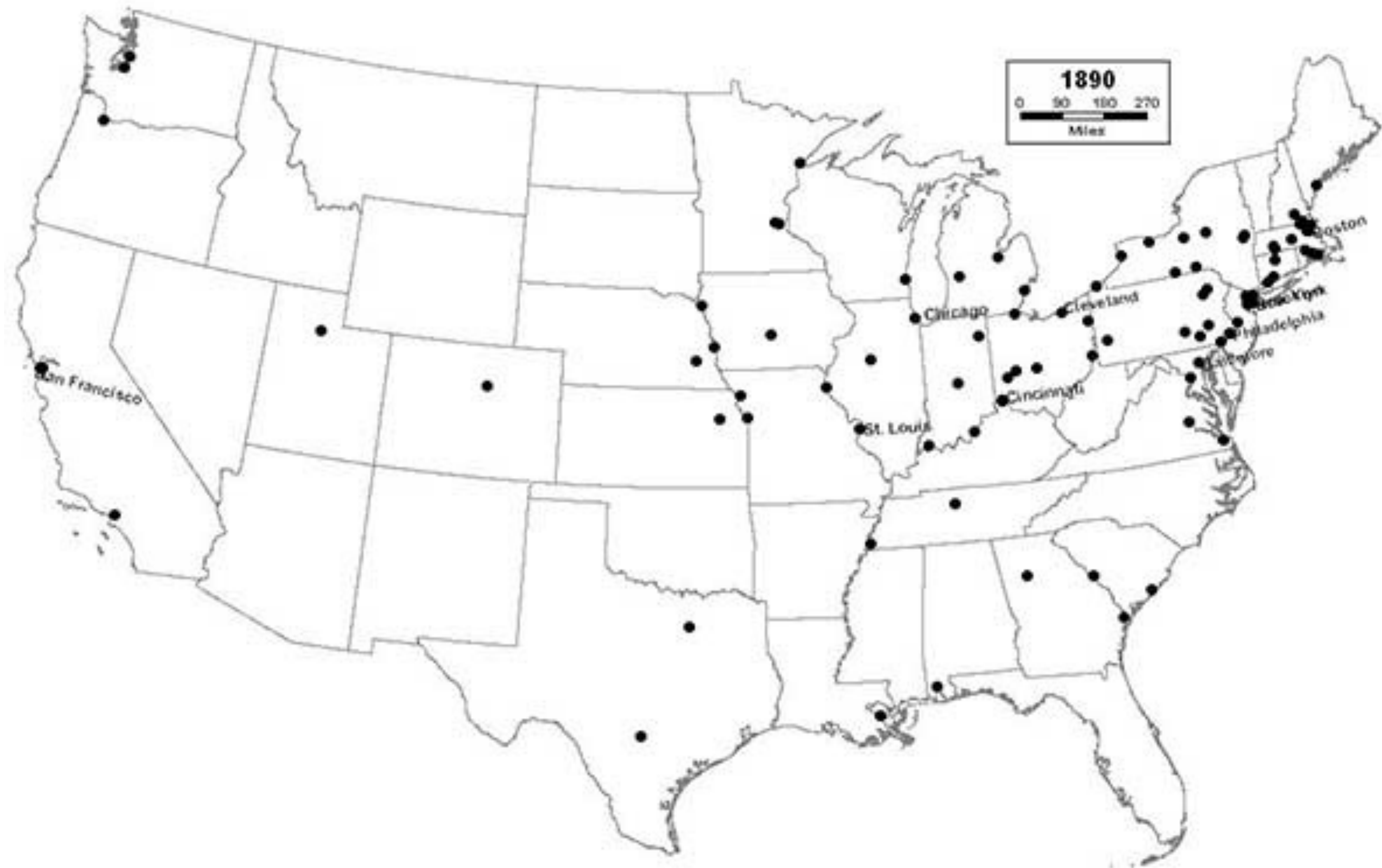
1870



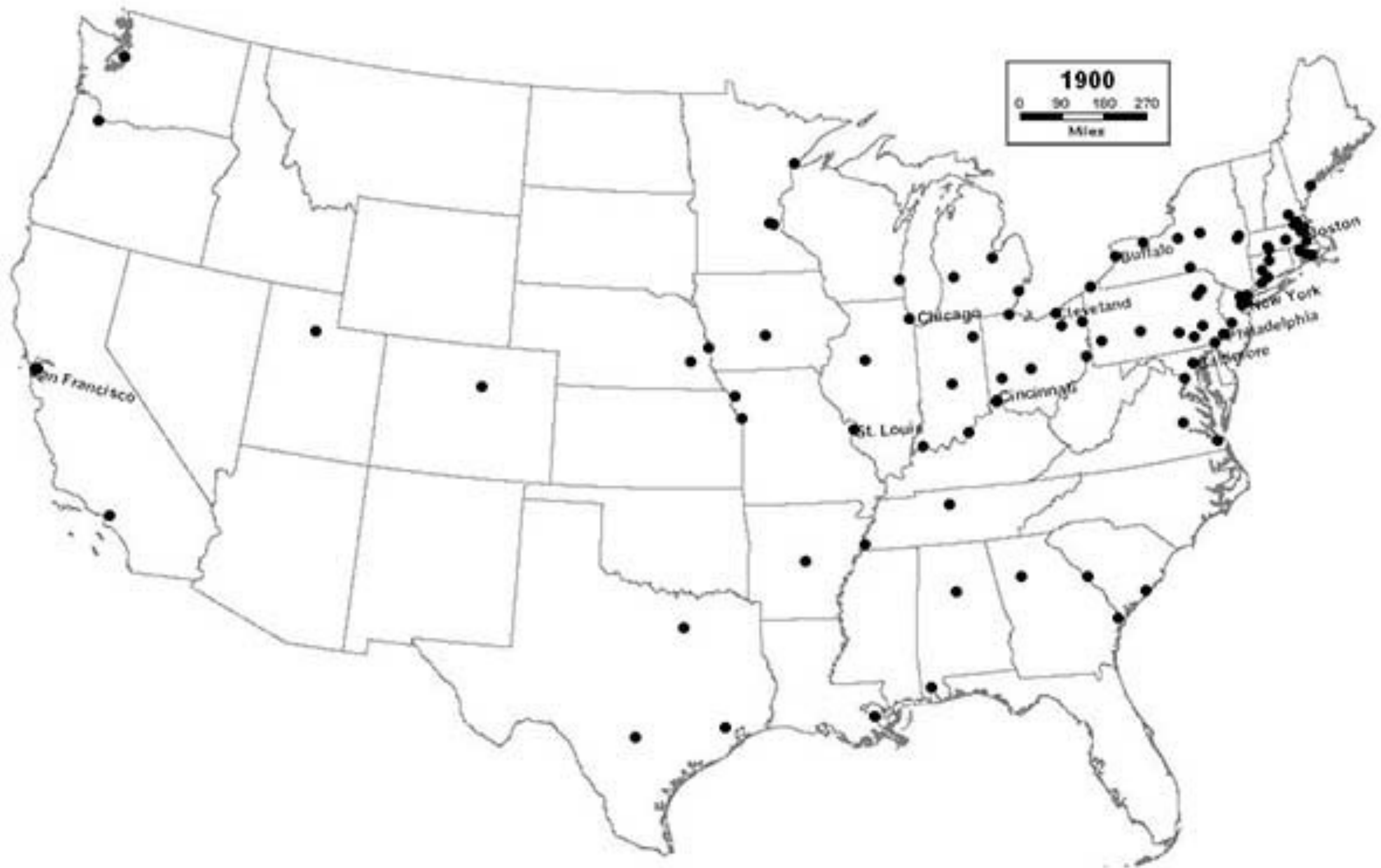
1880



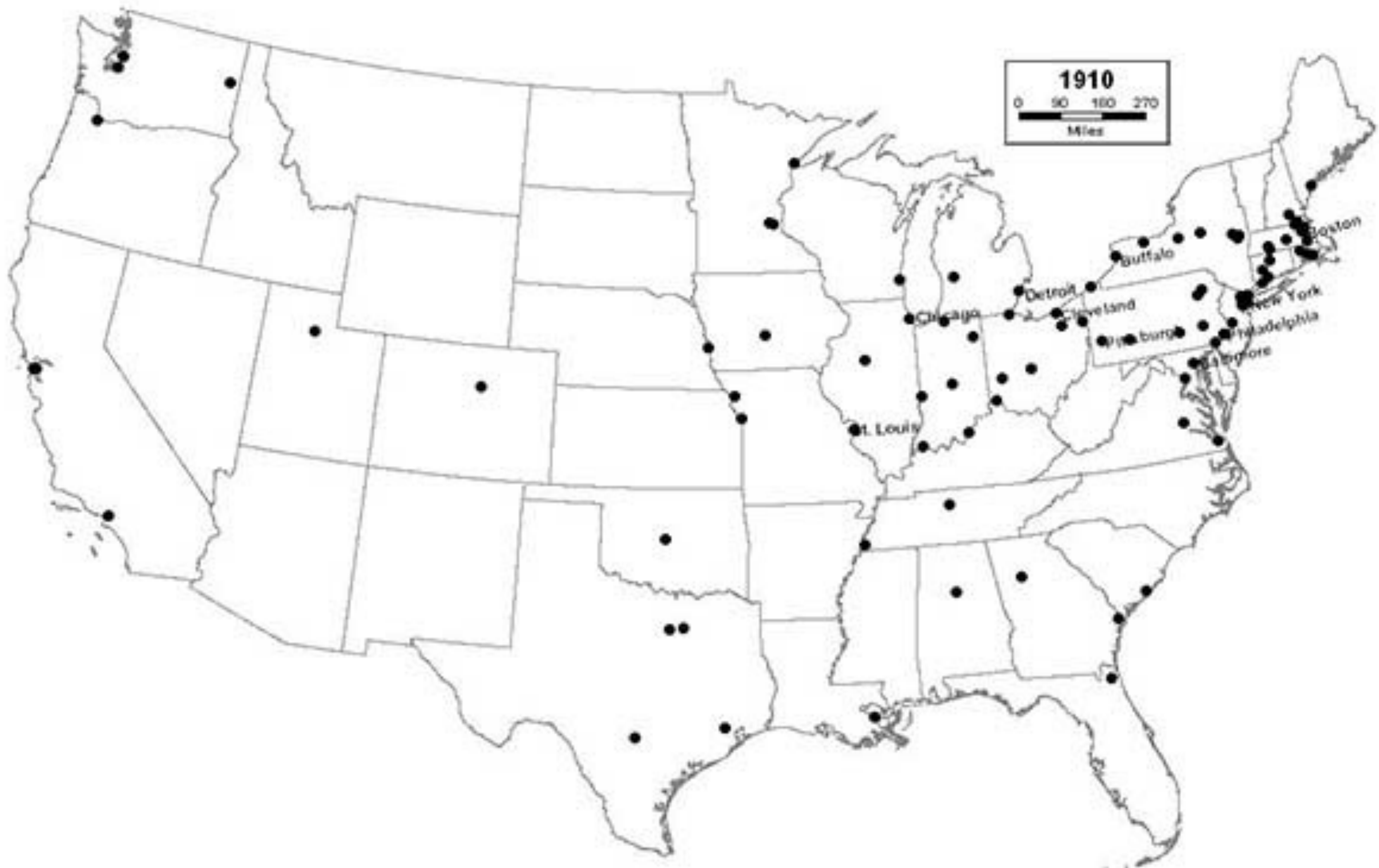
1890



1900



1910



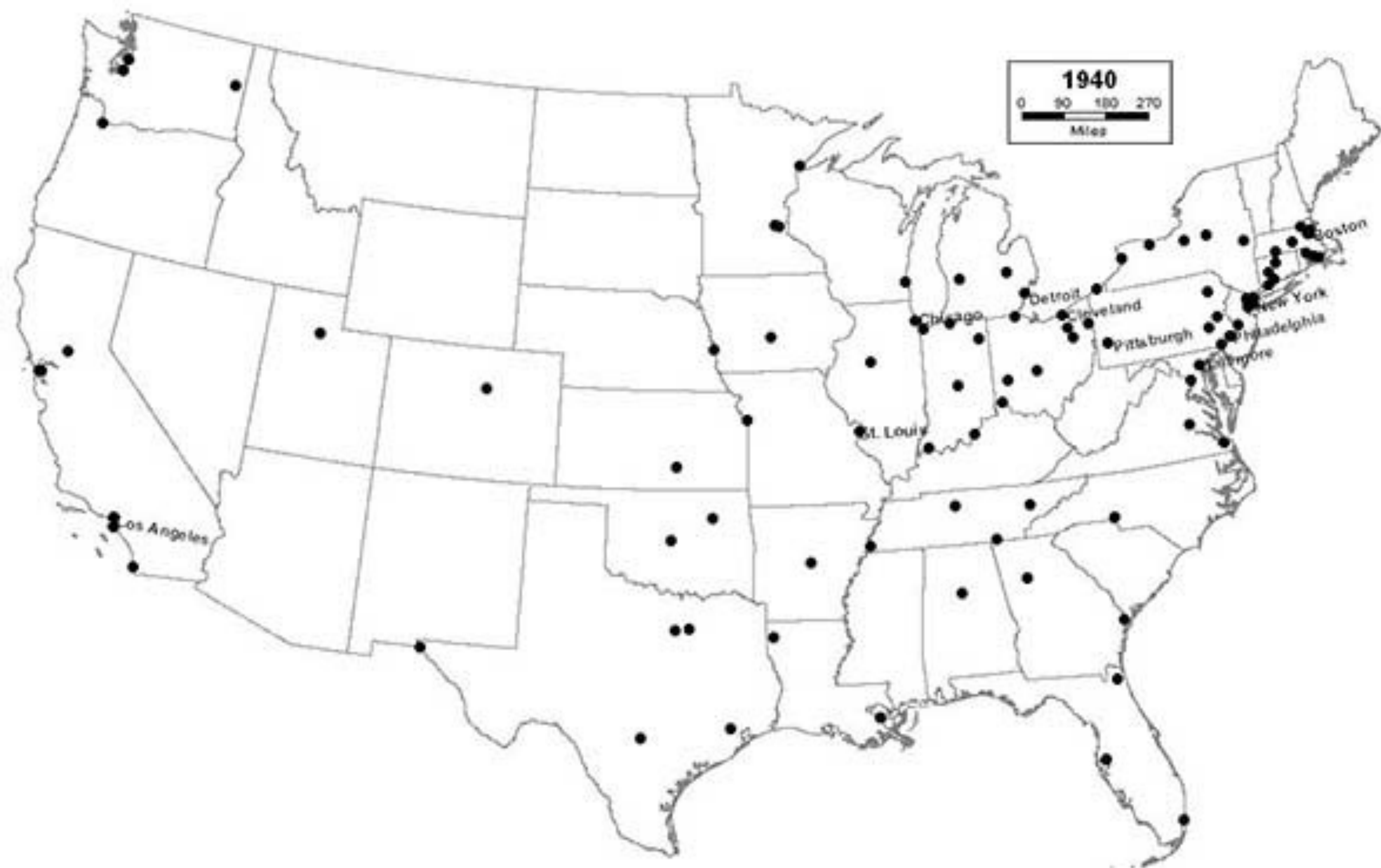
1920



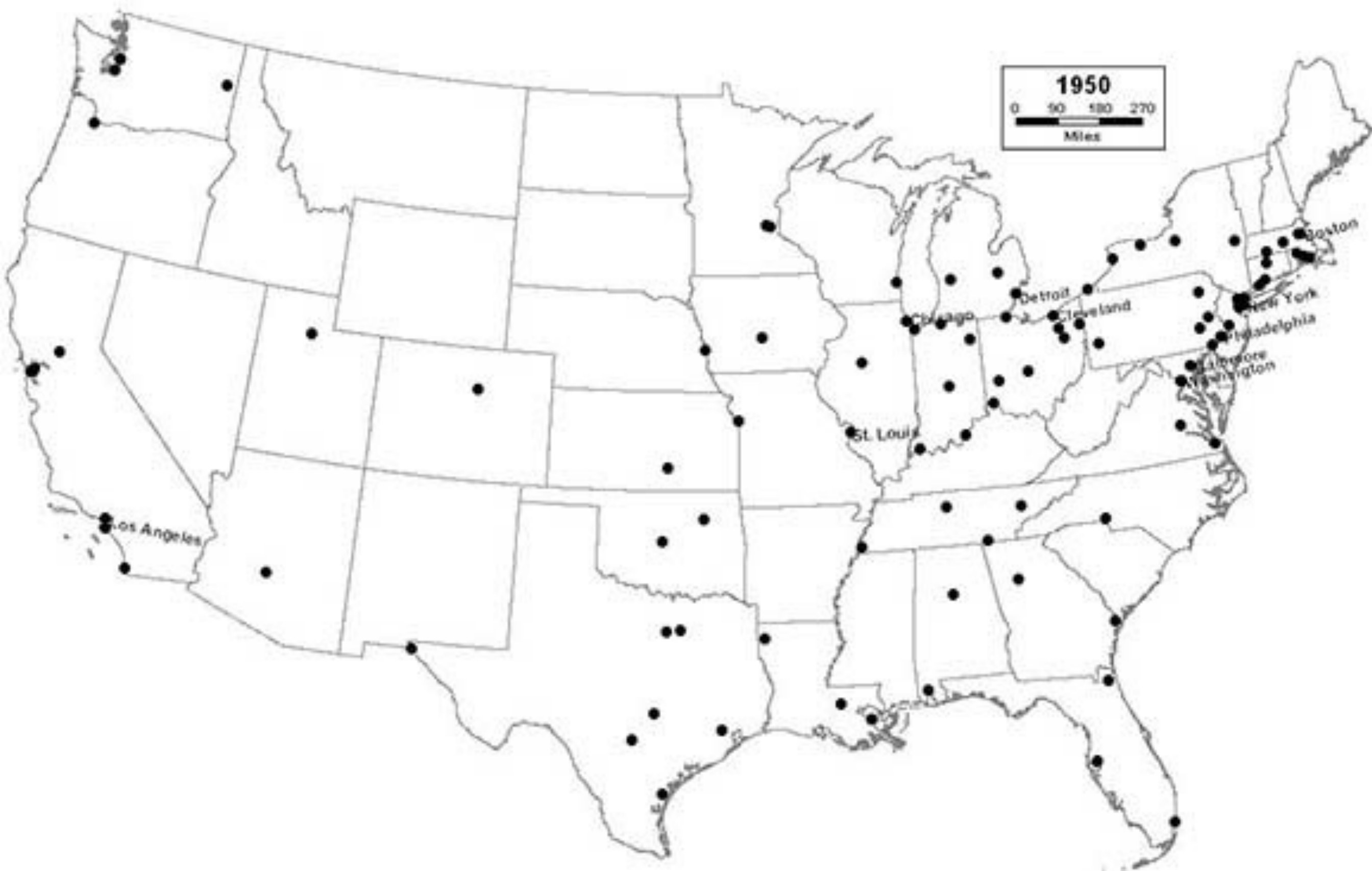
1930



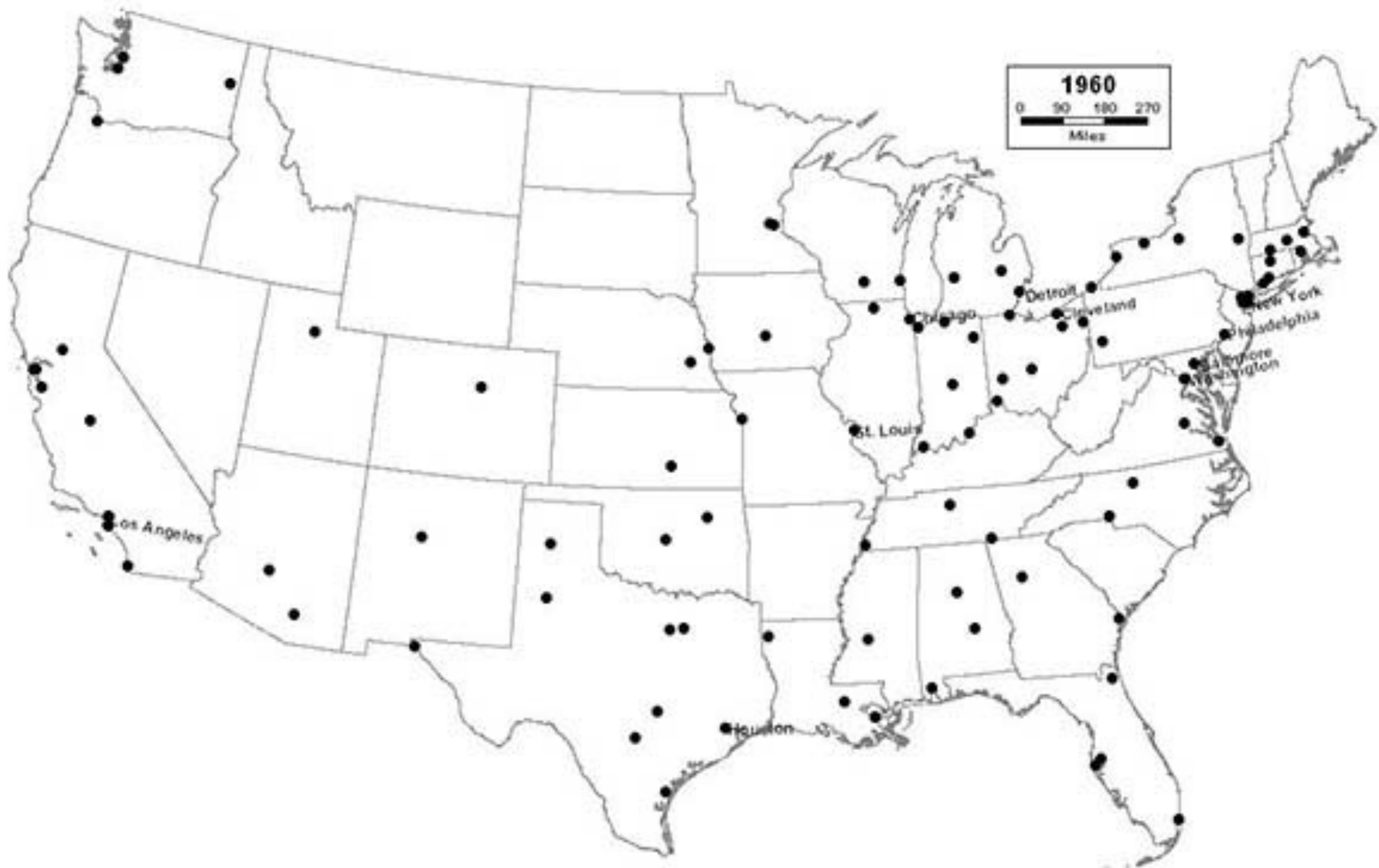
1940



1950



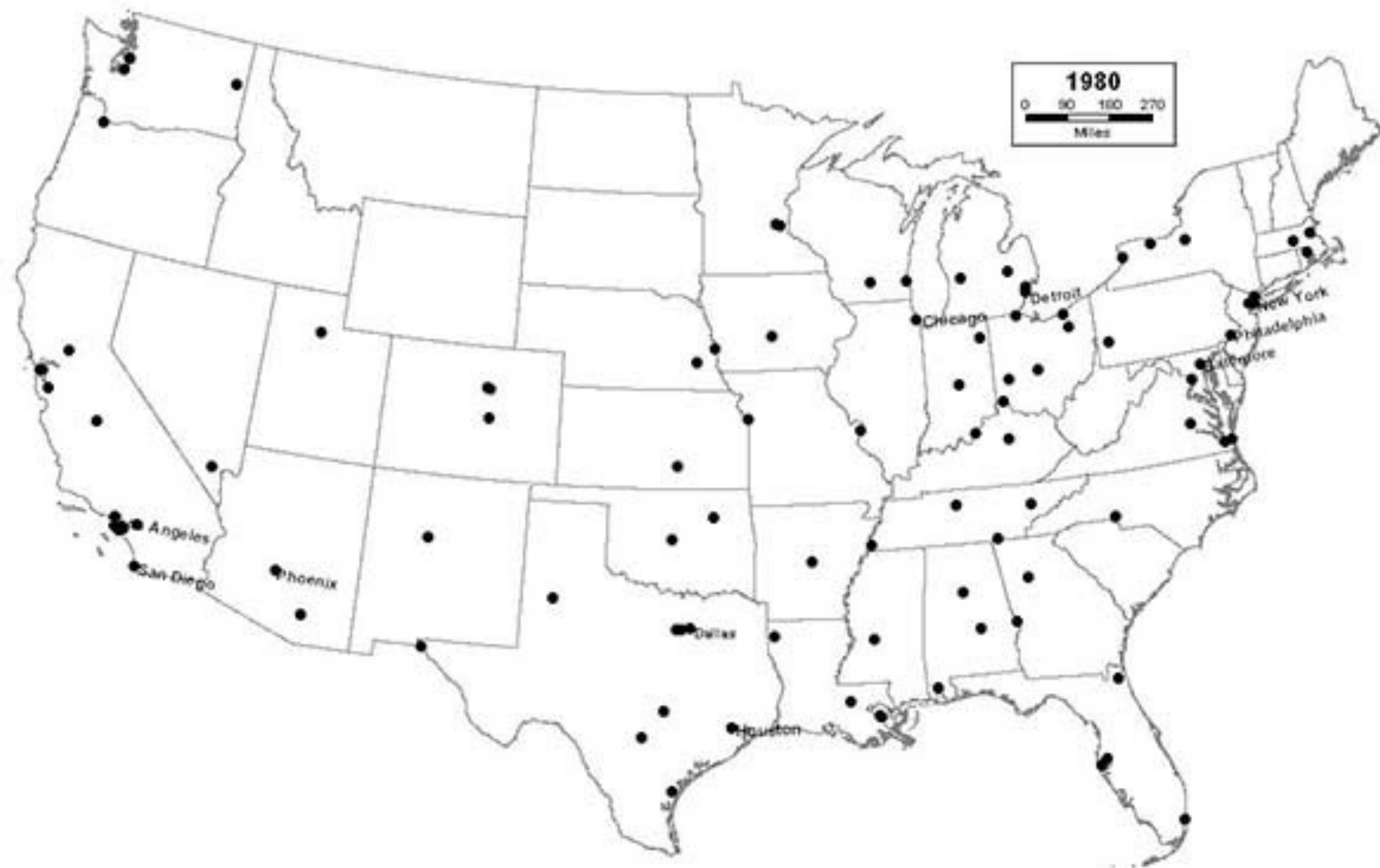
1960



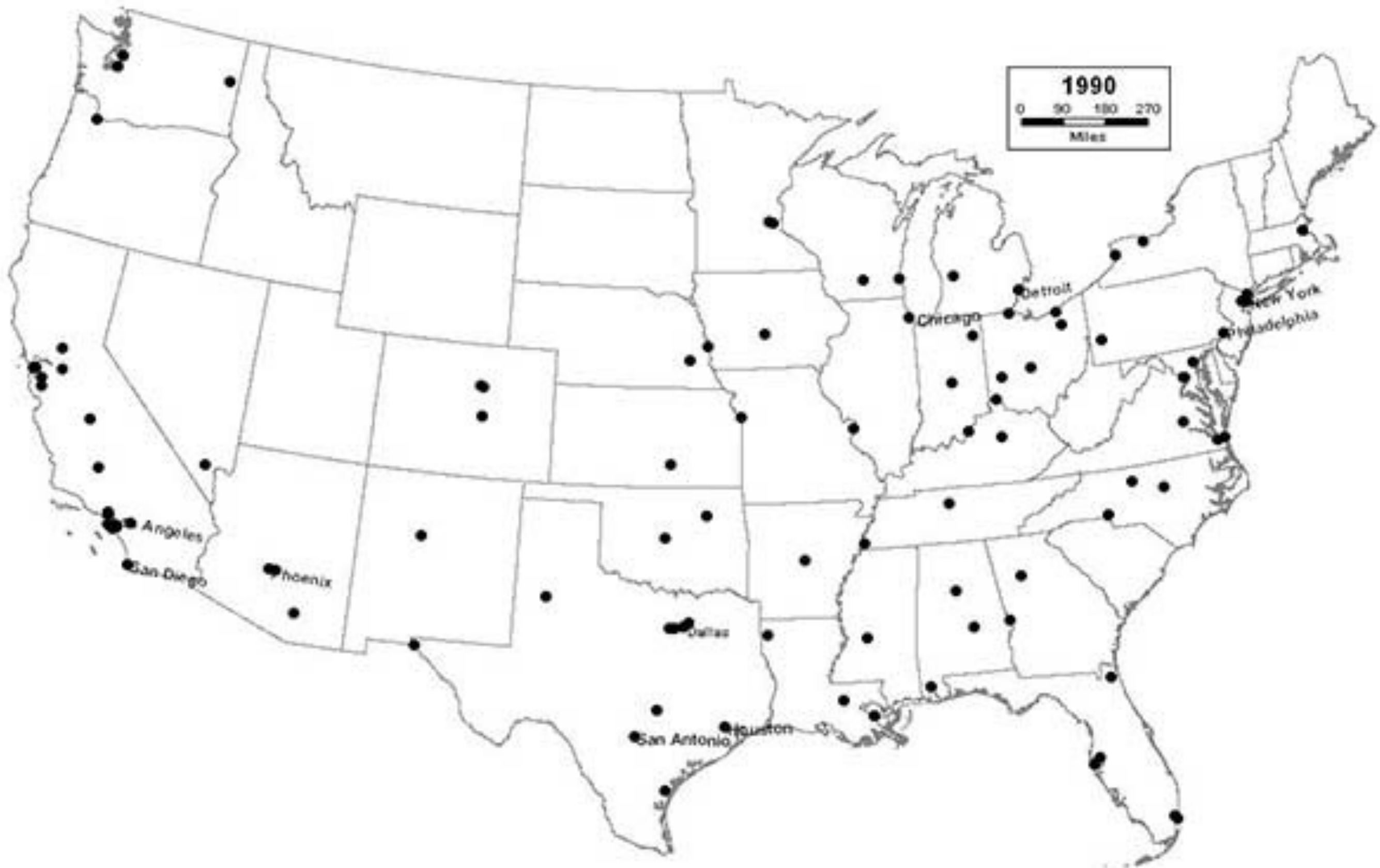
1970



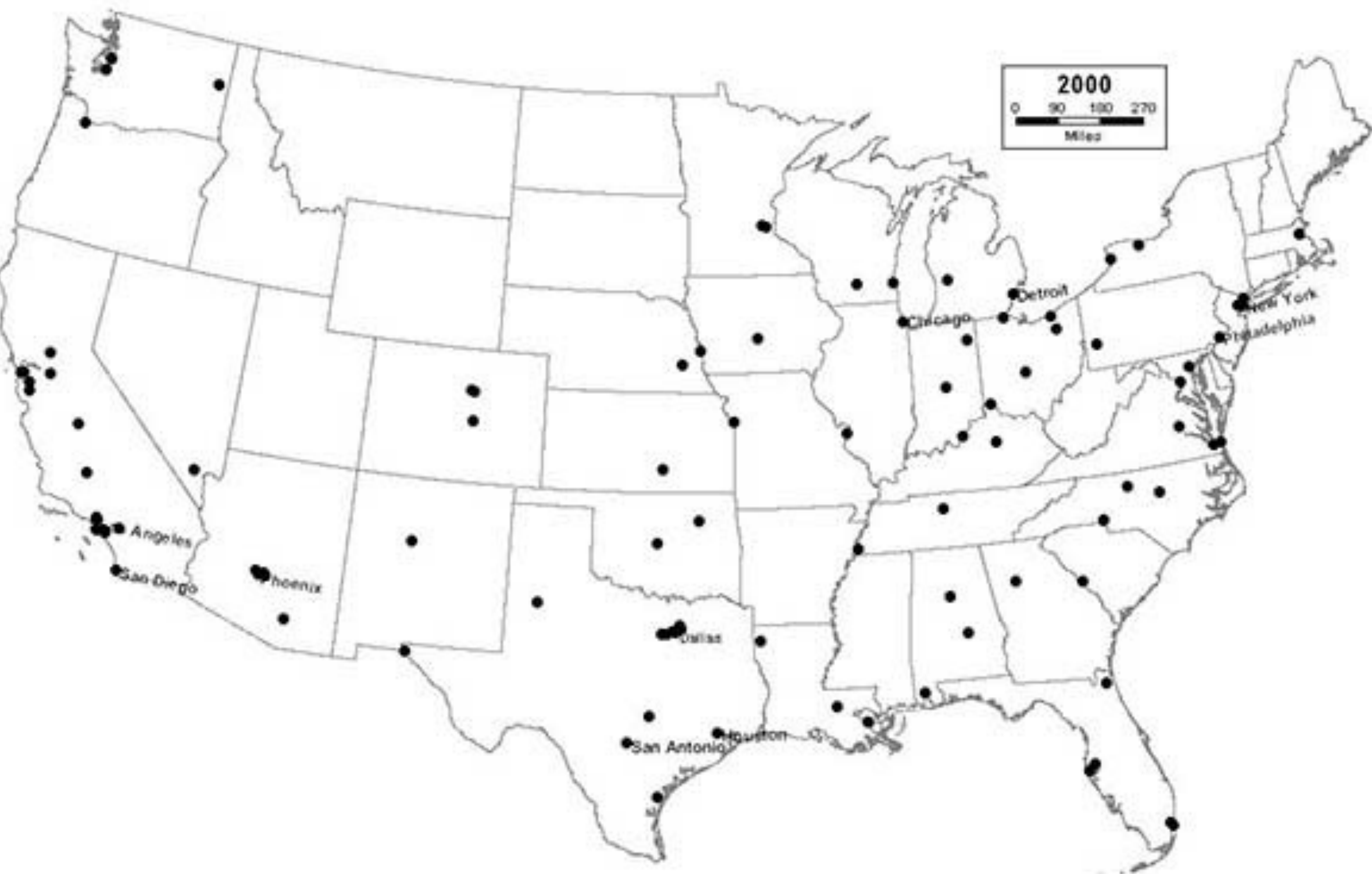
1980



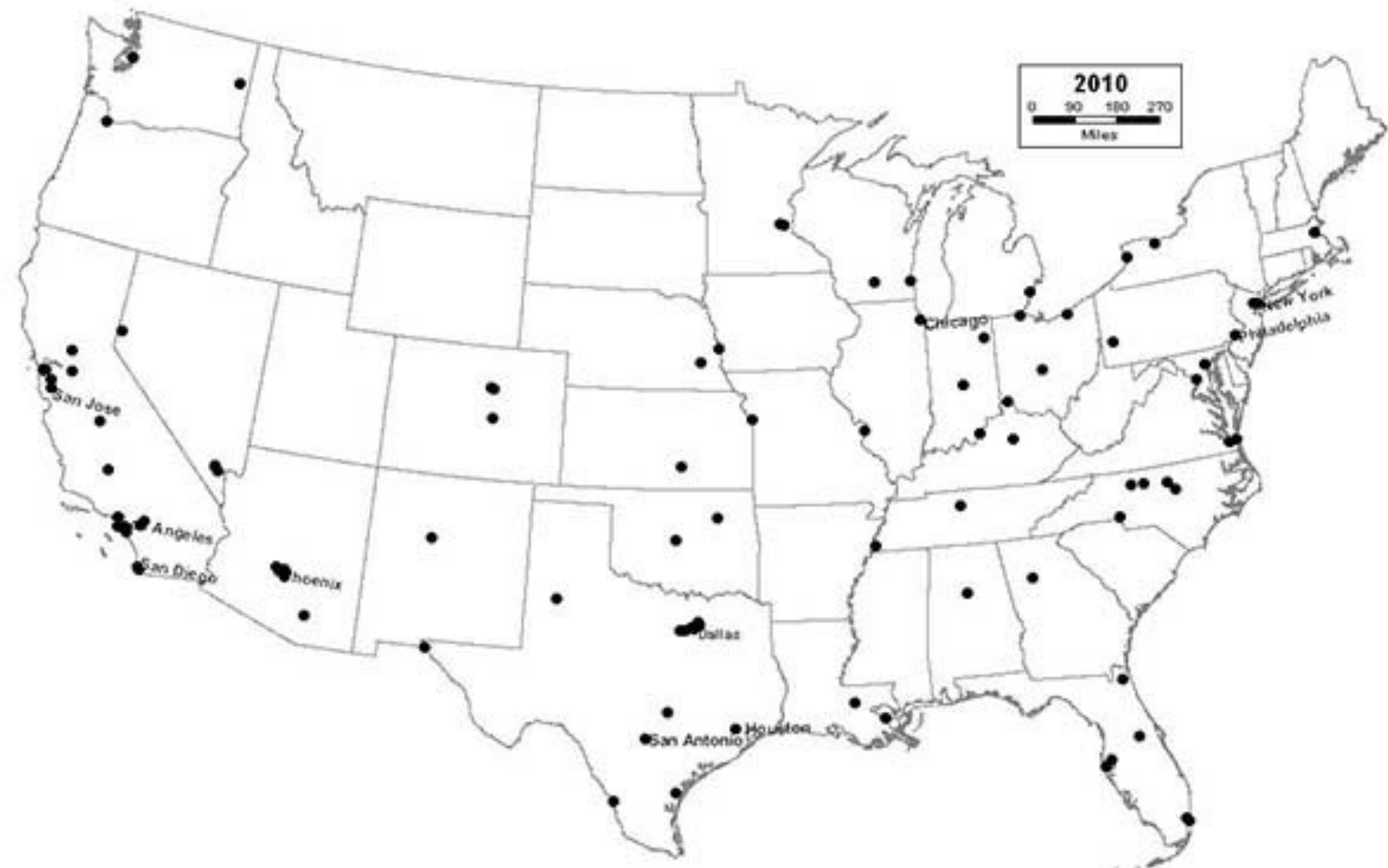
1990



2000



2010



SHOCK CITIES

This pattern of rapid growth led to urban spaces that were overwhelmed with the influx of urban in-migrants. **Shock cities are urban places experiencing infrastructural challenges related to massive and rapid urbanization.**

The challenging social, economic, and cultural changes included:

- Slums
- Hazardous pollution levels
- Deadly fires
- The growth of urban prostitution
- Exploitation of children

STRAINED INFRASTRUCTURE

- An important trend in modern urbanization is its diffusion to less developed parts of the world.
- Urbanization in less-developed countries is often focused on one or two cities rather than being spread evenly throughout.
- Large migration streams of young adults moving from rural to urban areas puts a high number of opportunity-seekers into already strained places.





SQUATTER SETTLEMENTS

- Unable to find housing, many new migrants **build squatter settlements** (barriadas, barrios, favelas, bidonvilles, bustees ...) - makeshift, unsafe housing constructed from any scraps they find on the land they neither rent nor own usually on the edge of the city.
- They have **few or no services**. Generally they lack schools, paved roads, telephones, or sewers. Electricity is stolen.



Squatter Cities





SQUATTER SETTLEMENTS

At first they do little more than camp on the land or sleep in the street. Families erect primitive shelters and as they find materials they add them to their shacks.

To improve housing conditions they can - move illegally into better-quality, vacant housing or rent slum housing illegally from a landlord because there is a lack of affordable housing in the city to accommodate the rural to urban migration.

- Percentage of people living in squatter settlements can range from 33% in Brazil to 85% in Ethiopia.

[The Places We Live Website](#)

Why is this a major
problem

Problem

What can be done
to fix it?

What will happen
if this problem
remains unchecked



Cities & Urban Land Use



Where are cities located? and Why?



Site and Situation

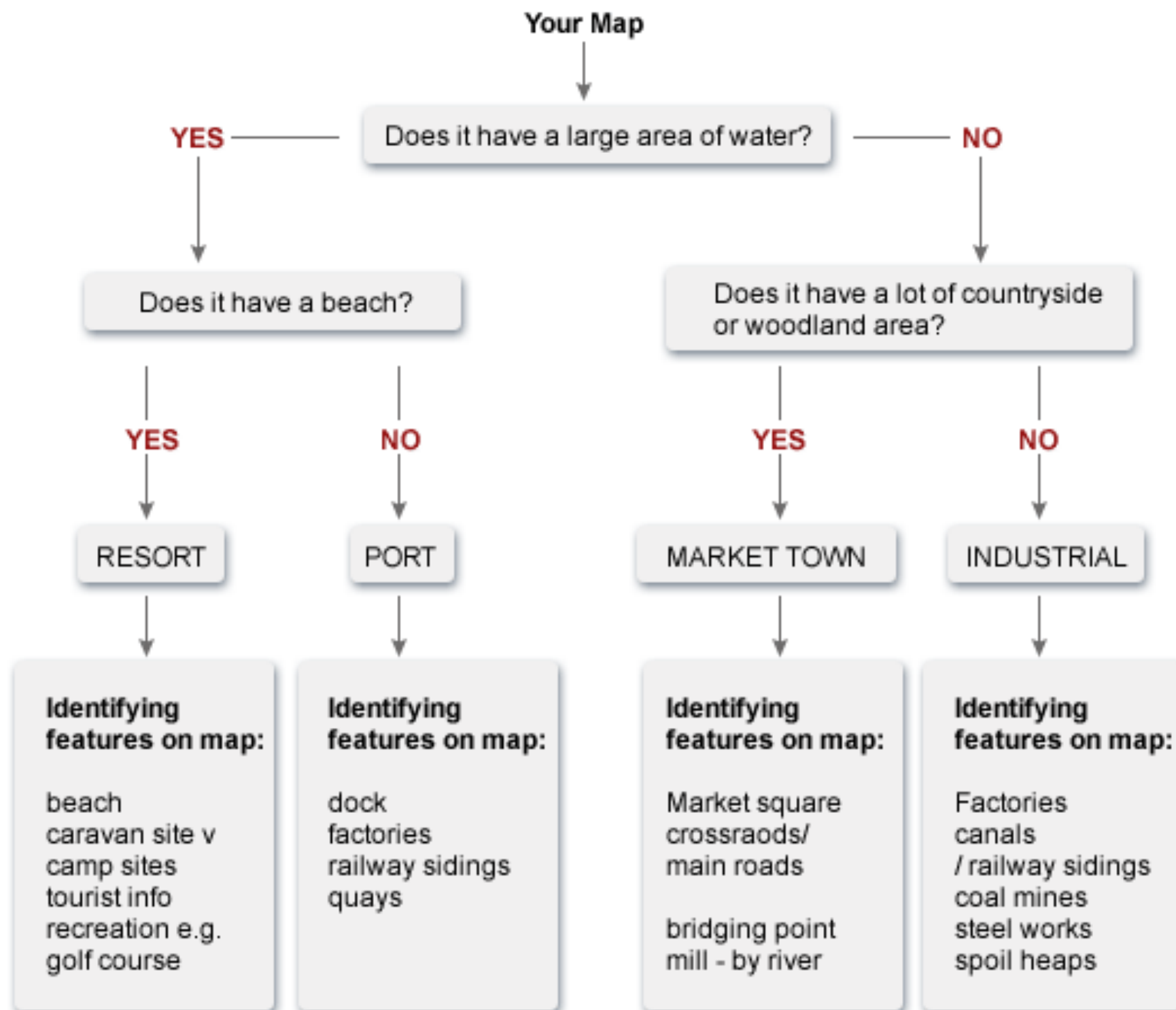
Site

- * absolute location of a city
- * a city's static location, often chosen for trade, defense, or religion.

Situation

- * relative location of a city
- * a city's place in the region and the world around it.

Map Analysis: Purpose of City



Links

On the web

- ▶ [Scalloway: Settlements revision](#)
- ▶ [Scottish Schools Info: Exam-style questions](#)
- ▶ [Quia: Standard Grade Geography quiz](#)



Theories



- As you travel from center city to the outskirts of the city, the cost of land-rents (bid-rents) usually
 - a. Go up
 - b. Stays the same
 - c. Goes down
 - d. Fluctuates according to regional factors
 - e. Goes up if the topography is flat, but goes down if the topography around the city is hilly



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Bid-Rent Theory

- the relationship between how much rent people are willing to pay for land given its distance from a specified point (usually the center of a city).





Multiplier Effects

- The phenomenon whereby **when a job is created in one sector** of the economy, **it leads to the creation of jobs in other economic sectors**;
 - for example, when new staff are hired at this University, they spend money in nearby establishments (bars, stores, churches, real estate offices, etc.)
 - creating jobs in those places, and they pay taxes that support road workers, assessors, county clerks, police departments, etc.
 - Multiplier effects are important for local and regional economies.



The Gravity Model



The Gravity Model

$$I_{ij} = \frac{P_i P_j}{D_{ij}^2}$$

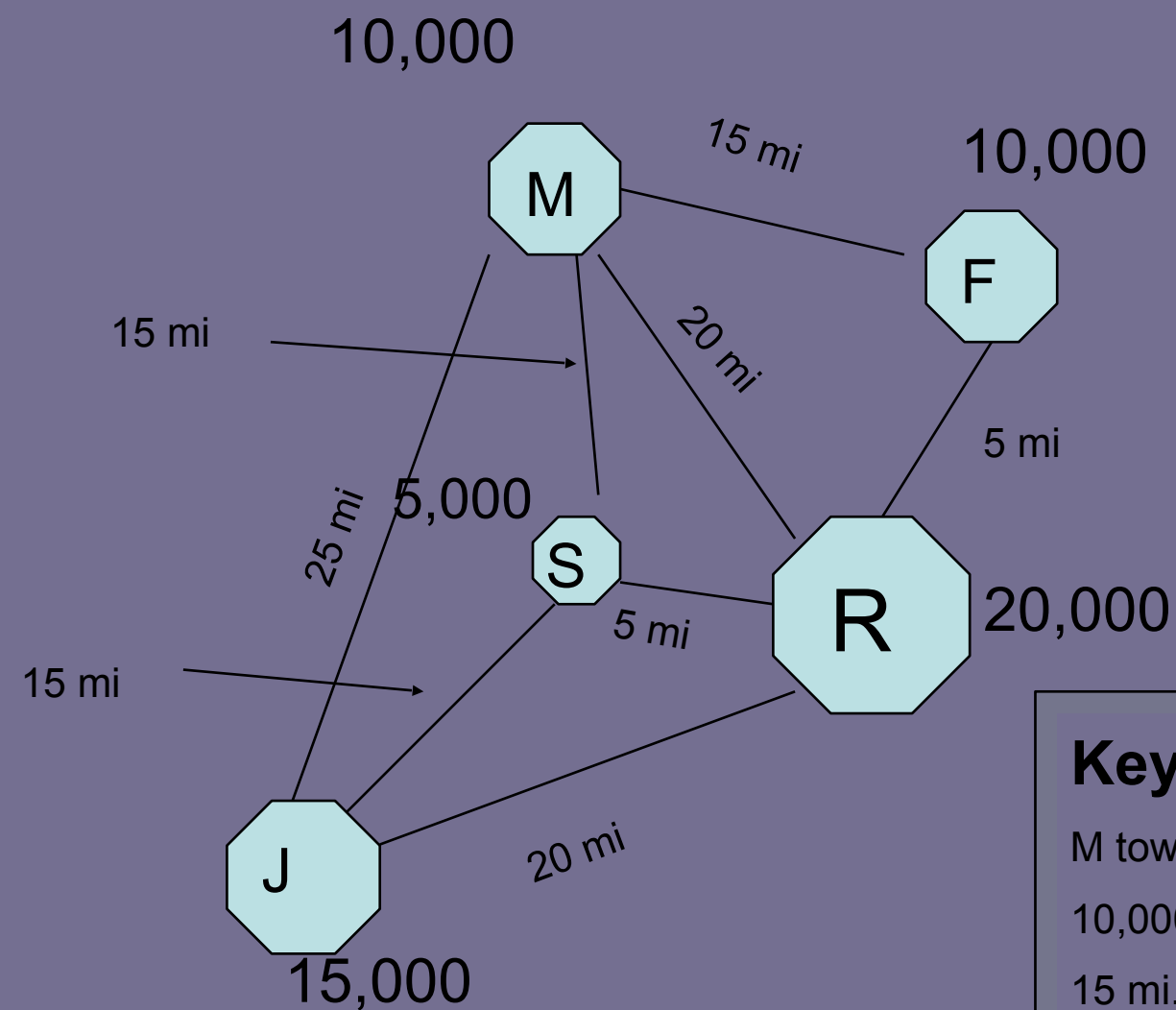
I_{ij} = interaction between place i and place j

P_i = population of place i

P_j = population of place j

D_{ij} = distance between place i and j

Applying the Gravity Model



1. Between which two towns will the greatest interaction occur?
2. Is interaction greater between M and R or between M and F?
3. Is interaction greater between M and S or between J and F?



Reilly's Law of Retail Gravitation

$$x_{ij} = \frac{d_{ls}}{1 + \sqrt{P_l / P_s}}$$

x = break point measured from the smaller of two centers

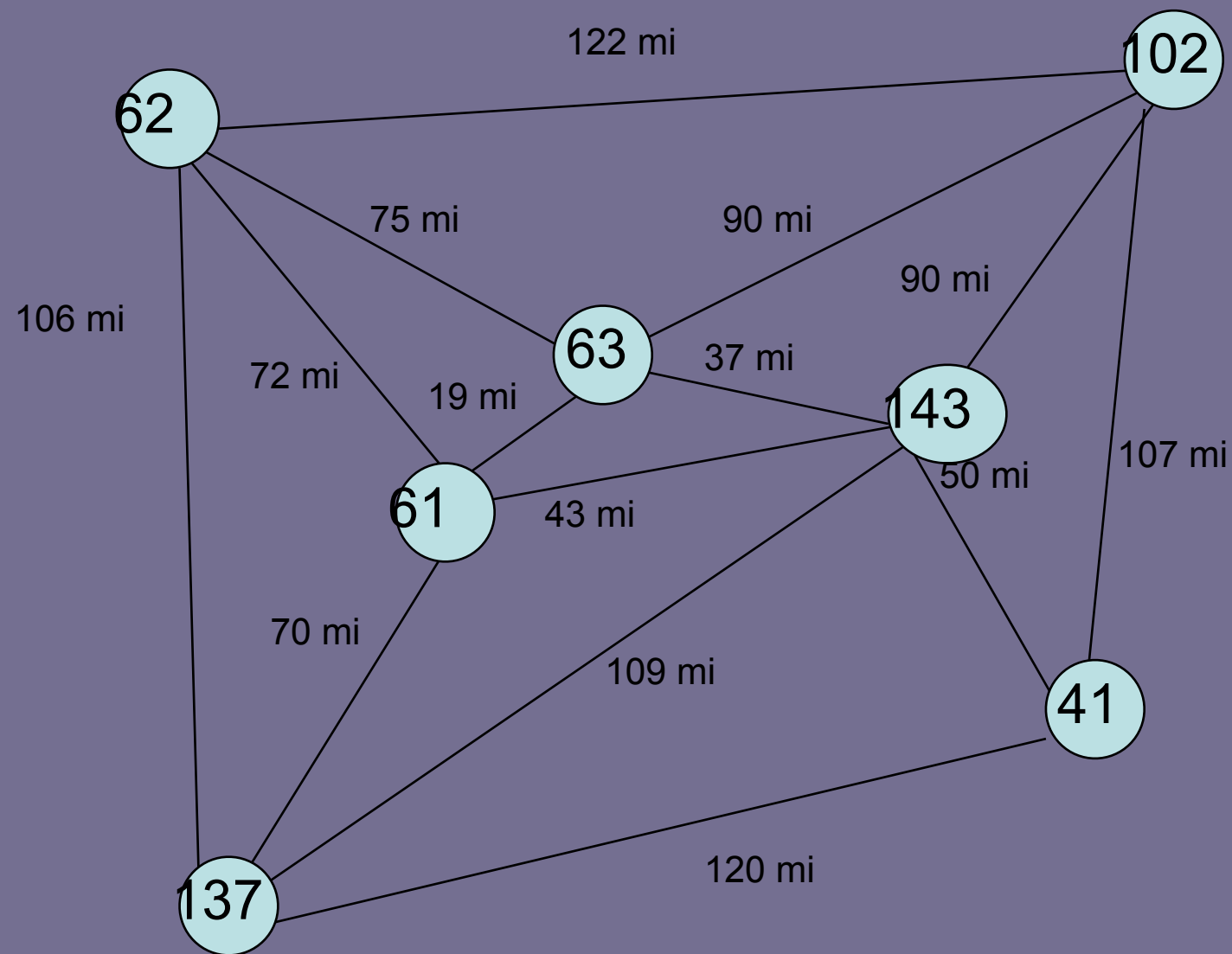
d_{ls} = total distance between two centers

P_l = size of larger center

P_s = size of smaller center

Predicting the Break Point

- Calculate the distance of the break points from the smaller of each pair of competing outlet malls, using the number of stores as a measure of attractiveness





Kernersville: Hanes Mall or Four Seasons?

- Hanes Mall to K'ville 14.7 miles
- K'ville to Four Seasons 14.3 miles
- Hanes Mall to Four Seasons 28 miles
- Hanes Mall: 200 stores
- Fours Seasons: 180 stores



Gravity Model

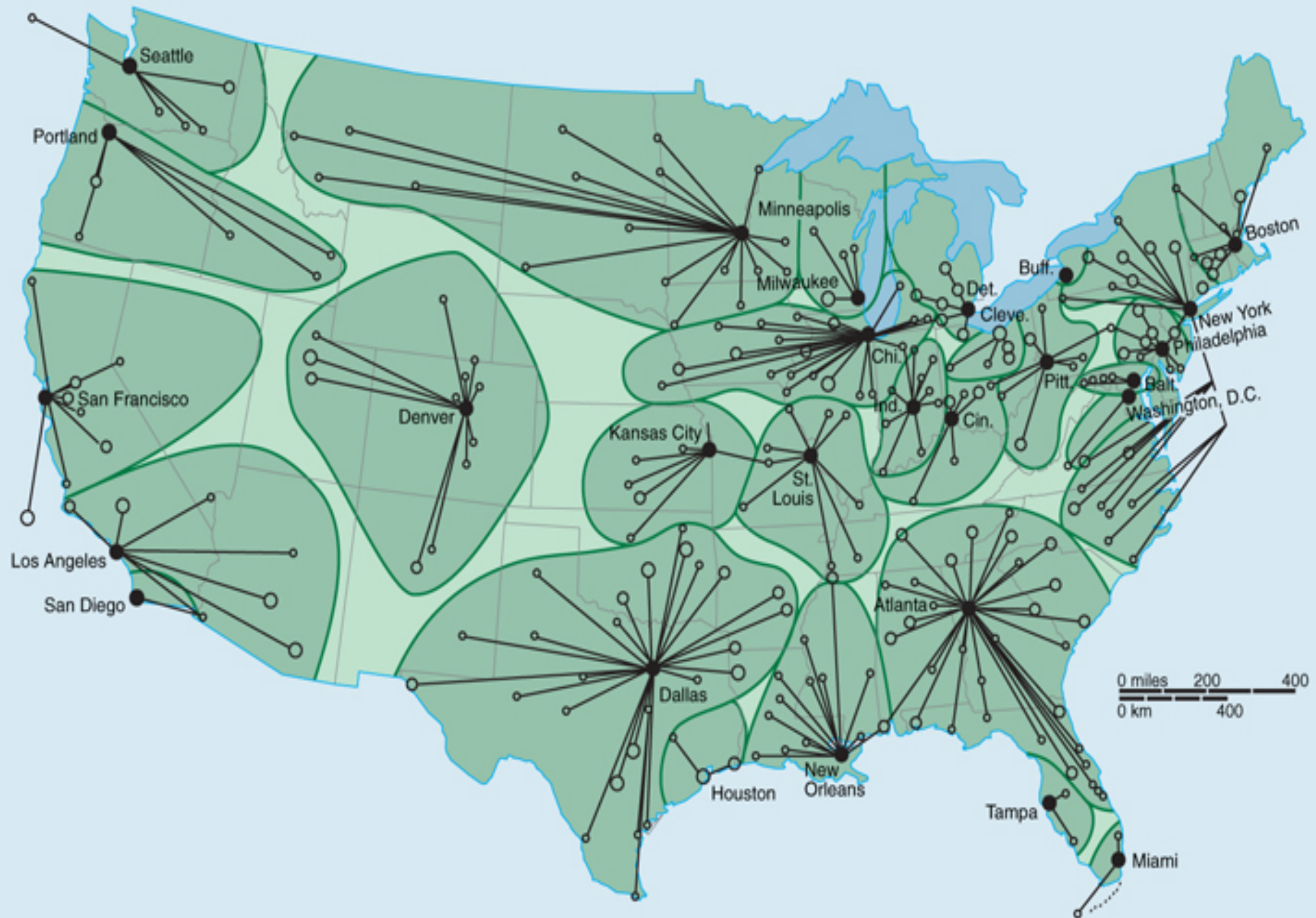
- Predicts the **optimal location** of a service is **directly related to the number of people** in the area and **inversely related to the distance** people must travel to access it



Gravity Model

- **Threshold** – number of people needed
- **Range** – distance willing to travel
- **Hinterland** (market area) – area surrounding a service from which customers are attracted
- The greater the interaction, the greater the distance can be between big cities.
- Why do stores ask for ZIP codes?





(b)

Redrawn by permission from Annals of the Association of American Geographers, John R. Borchert, vol. 62, p. 358, Association of American Geographers, 1972.

Population Distribution

Where do we live?
Where don't we live?



The population of the United States is not distributed evenly. Instead, we tend to bunch up in communities, leaving the spaces in between more sparsely inhabited. Most Americans live in or near cities; today 53 percent live in the 20 largest cities. 75 percent of all Americans live in metropolitan areas.

This map shows population density. The relative height of each major city reflects its population in 1990.

Source: U.S. Census Bureau

Go West. Nevada is the fastest growing state, followed by Arizona, Idaho, Colorado, and Utah.

Wyoming has the lowest population density of all states in the lower 48 with an average of five people per square mile.

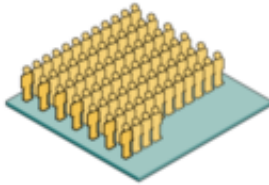
What happens in the empty spaces? Some of it is farming country. More than one quarter of America's crop land is used to grow corn. One third of what is produced is exported to other countries.

Chicago, the country's third largest city, has a population of about three million people. There are 21 states with populations smaller than this city.

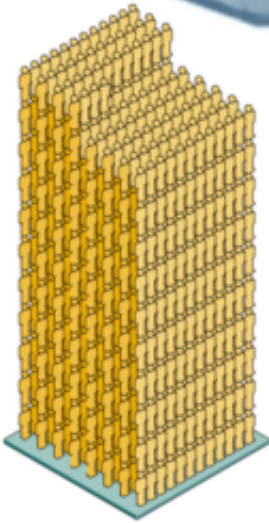
Largest metropolitan area includes New York City and portions of New Jersey and Long Island with a total population of 20 million.

Population density is highest in New York City, where there are 23,000 people per square mile.

Approximately one in nine Americans lives in the nation's most populous state—California. More than 15 million people live in the Los Angeles, Riverside, and Orange County metropolitan area.



Distributing our population evenly would put an average of 76 people per square mile.



New Jersey is the most densely populated state with an average of more than 1,000 people per square mile.



Alaska is a sparsely populated state with an average of one person per square mile.

Wet. Some states are full of water. For example, Louisiana includes more than 8,000 square miles of lakes and wetlands. That's an area bigger than Connecticut and Rhode Island combined.

Coastal areas are home to more than half the U.S. population.

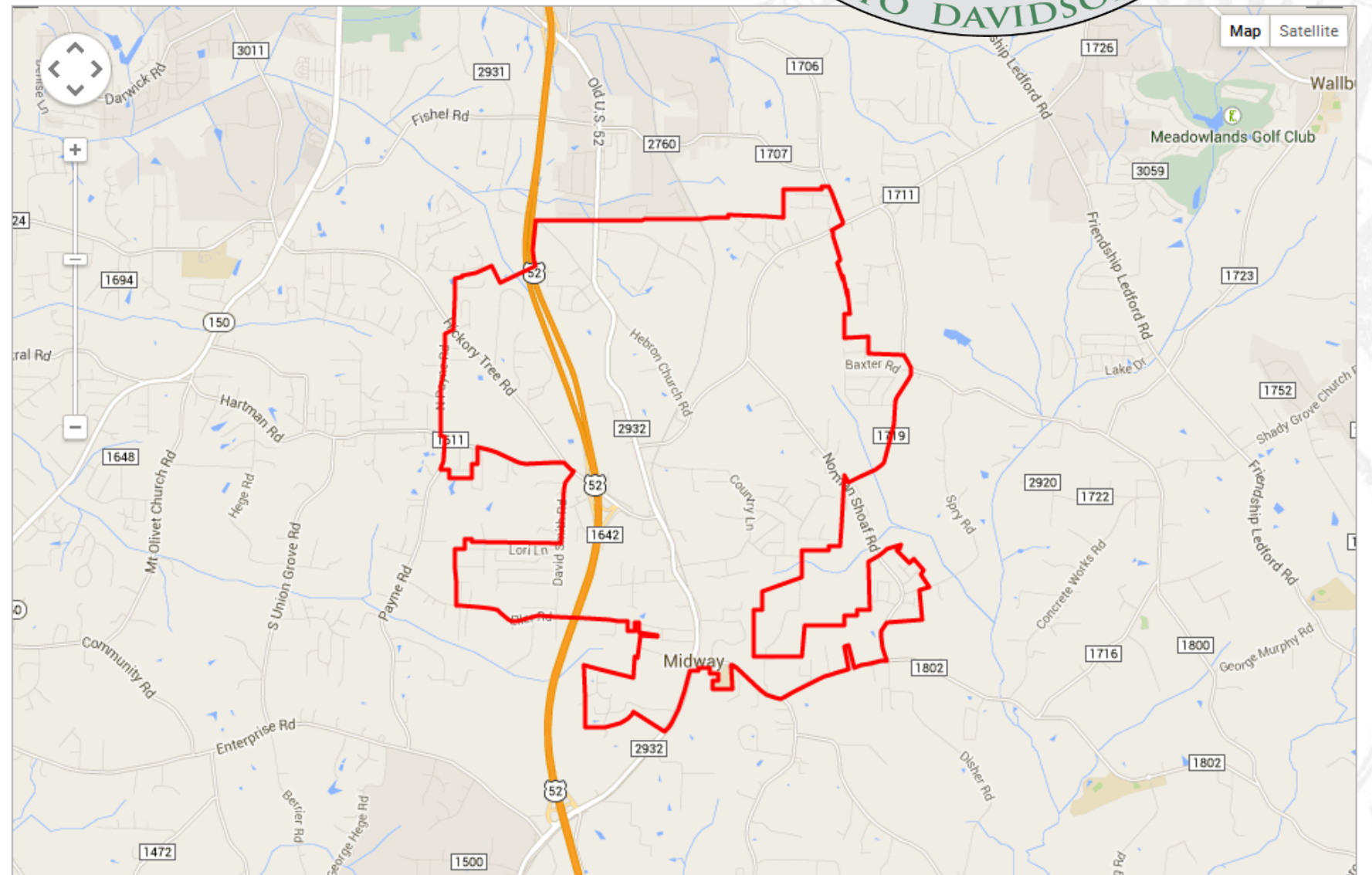
Gravity Model

- Small town services
 - gas,
 - groceries,
 - dentist
 - local attractions
- City services
 - Cancer centers
 - Professional sports teams
 - Specialty stores
 - International tourist attractions





Boundary Map and Geodata for the Town of Midway, N.C.



- Progressive Leadership



What Midway can offer you

- Ideal location along a major thoroughfare.
- Newly completed, state of the art water/sewer system.
- Recent core commercial business district & transportation plan.
- Low tax rate (.05 cents on every \$100 of property value)
- Safety & security in a serene community setting.
- Convenient to airport & railway hubs.
- A fast growing community consisting of a diverse population where American values & pride are exemplified.
- An abundance of churches, schools and friendly neighbourhoods.

Area Businesses

- | | | | |
|---------------------------|---------------------------|------------------------|------------------------|
| ◦ Walmart | ◦ CVS Drug | ◦ Pizza Hut | ◦ Sheetz |
| ◦ Cagney's Kitchen | ◦ Heavenly Cheesecakes | ◦ Babcock Furniture | ◦ Beverly's Florist |
| ◦ NewBridge Bank | ◦ Industrial Federal Bank | ◦ Dollar General | ◦ Marathon Gas Station |
| ◦ Pronto's Pizza | ◦ Dawg House Grill | ◦ Midway General Store | ◦ Midway Animal Clinic |
| ◦ Legacy Boarding Kennels | | | |

Area Churches

- | | | |
|---------------------------|-------------------------------------|---------------------------|
| ◦ Bethany Church | ◦ Bethlehem United Church of Christ | ◦ Brooks Temple |
| ◦ Midway Christian Church | ◦ Midway Baptist Church | ◦ Midway Methodist Church |
| ◦ Canaan Methodist Church | ◦ Saints Delite Church | ◦ Faith Alliance Church |
| ◦ Gates Church | | |



Central Place Theory

A vertical strip on the left side of the slide shows a nighttime view of the Empire State Building and other city lights, reflecting in water at the bottom.

Central Place Theory

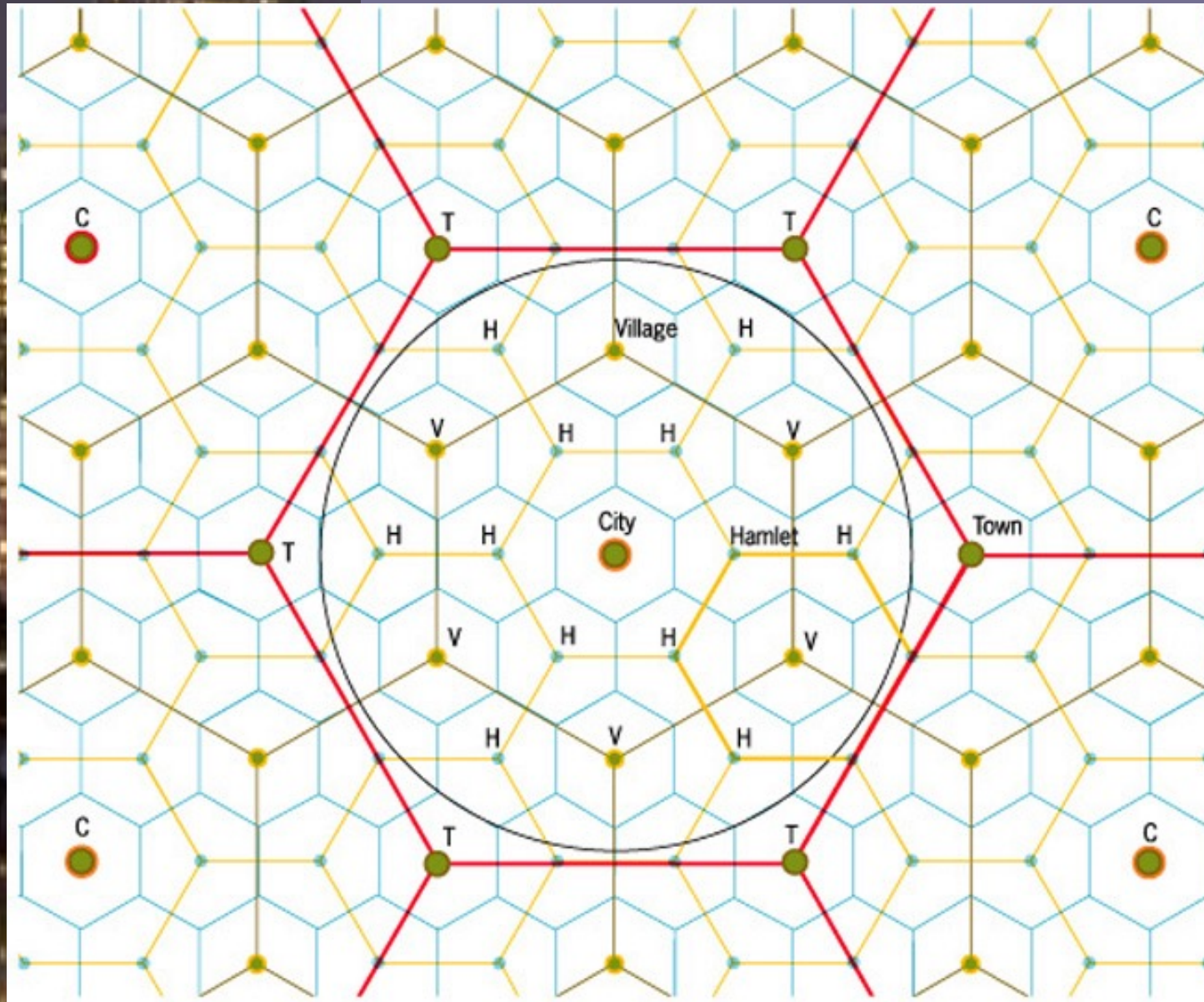
- by Walter Christaller in the 1930's
- Assumed
 - region would be flat with no physical barriers
 - Soil fertility would be equal
 - Population and purchasing power would be even
- Utilizes hexagons, rather than circles
- Studies confirm the distribution of cities, towns, & villages are tied to trade areas, population size and distance

A vertical strip on the left side of the slide shows a nighttime view of the Empire State Building and other city lights, with reflections visible in water at the bottom.

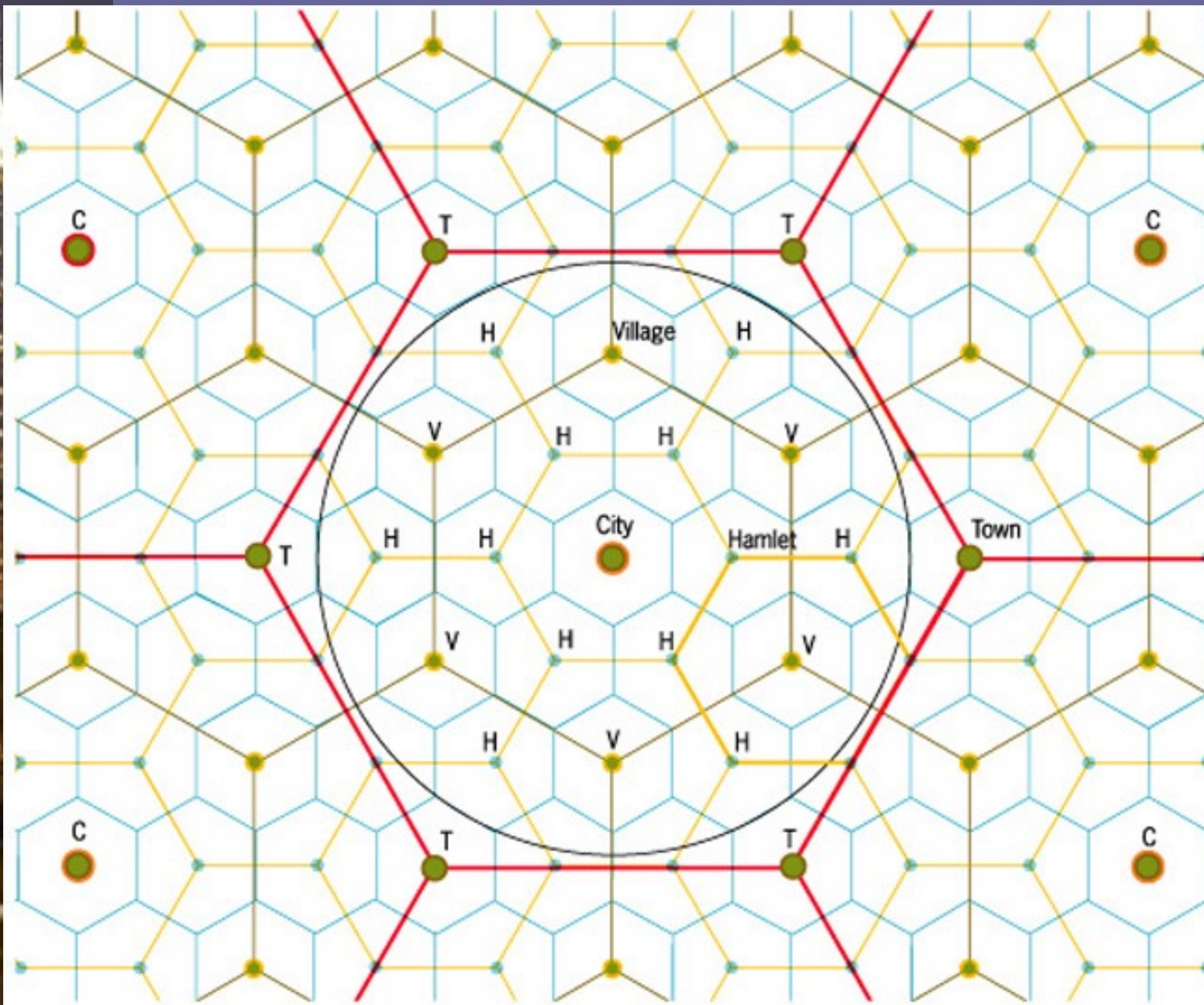
Central Place Theory

- “Explains the distribution of services, based on the fact that settlements serve as centers of market areas for services; larger settlements are fewer and farther apart than smaller settlements and provide services for a larger number of people who are willing to travel farther” Rubenstein

Central Place Theory



C = city – large pop. , lg hinterland, more specialization, higher centrality, cbd, & commercial areas
T = town – may have a bank, hospital, school, library, a hinterland of villages
V = village – several dozen services (specific items stores, competing brand gas stations)
H = hamlet – small cluster of farmers houses with basic services (gas station, general store, coffee shop)



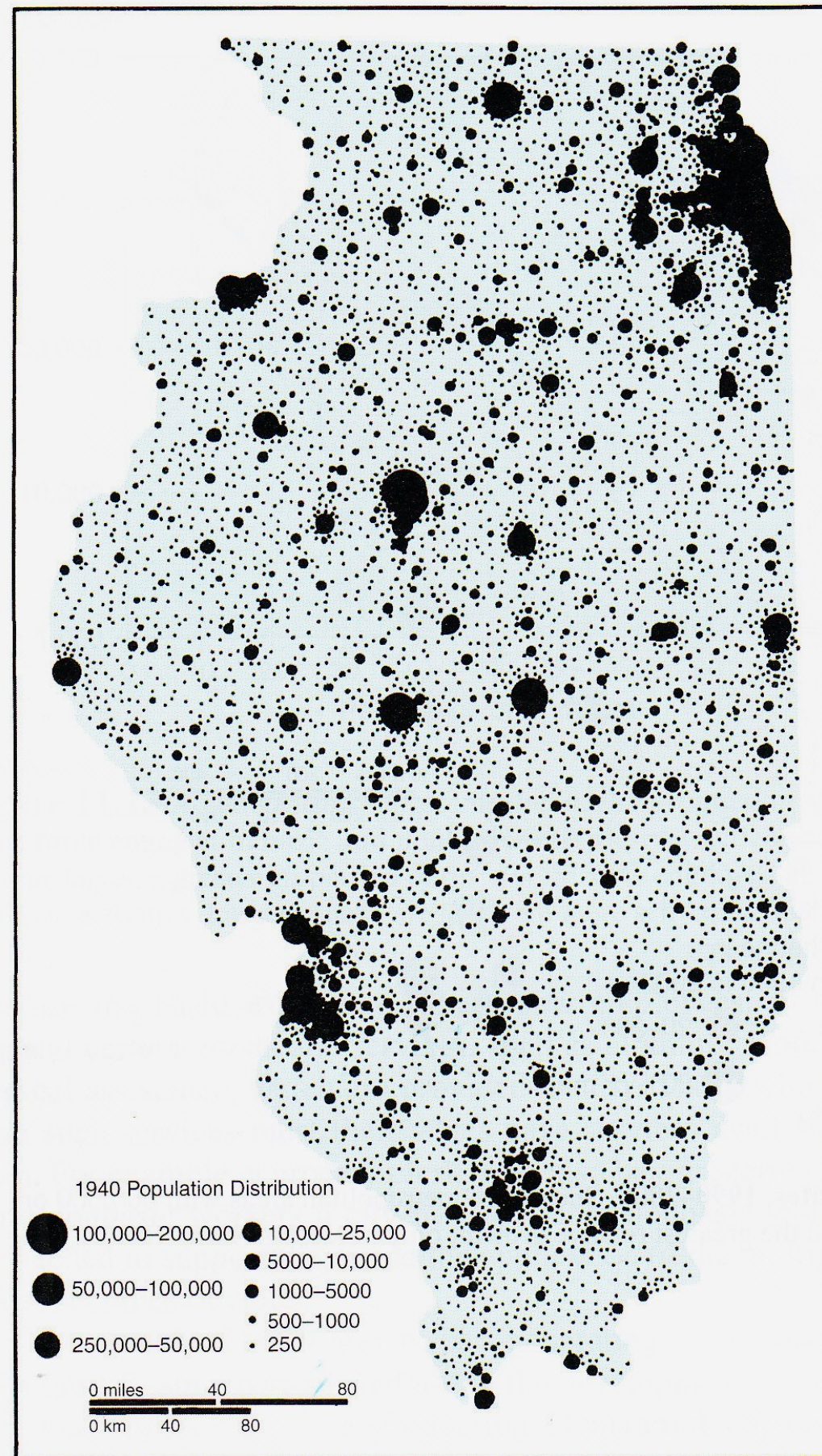
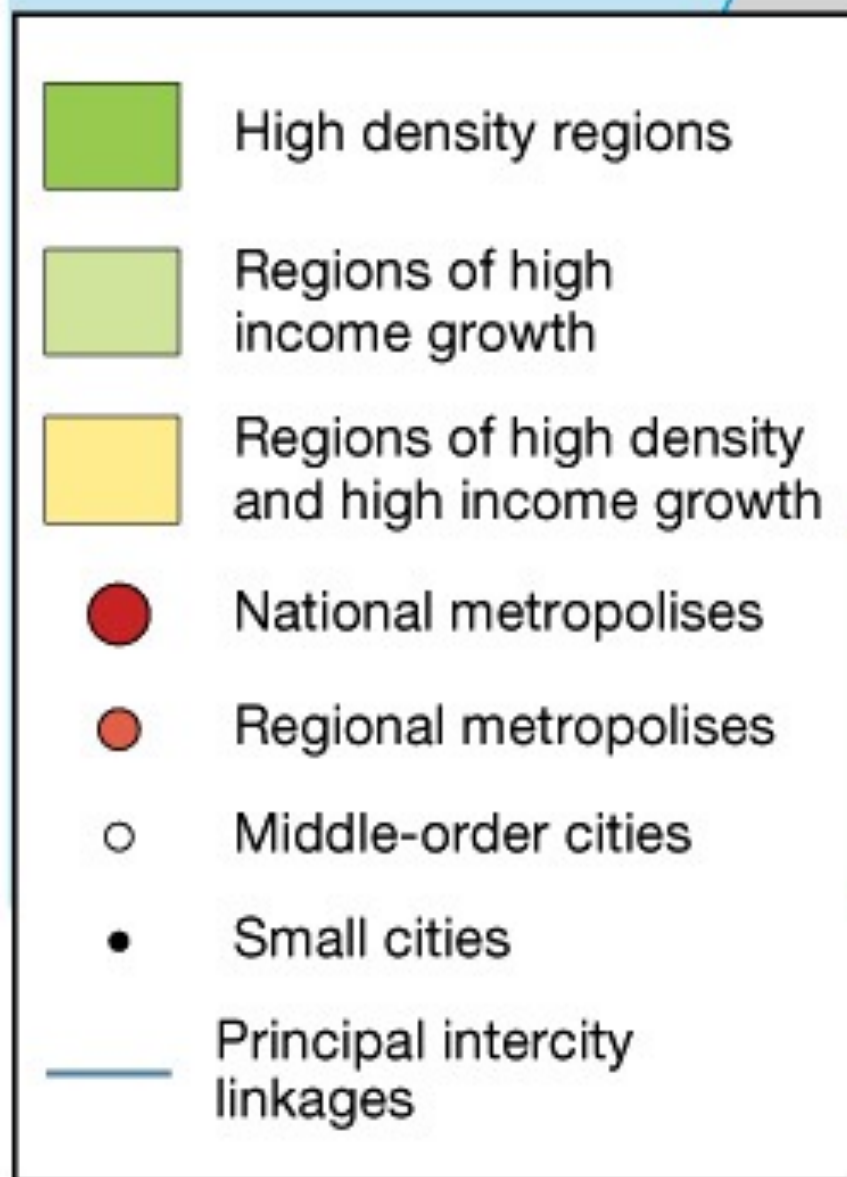
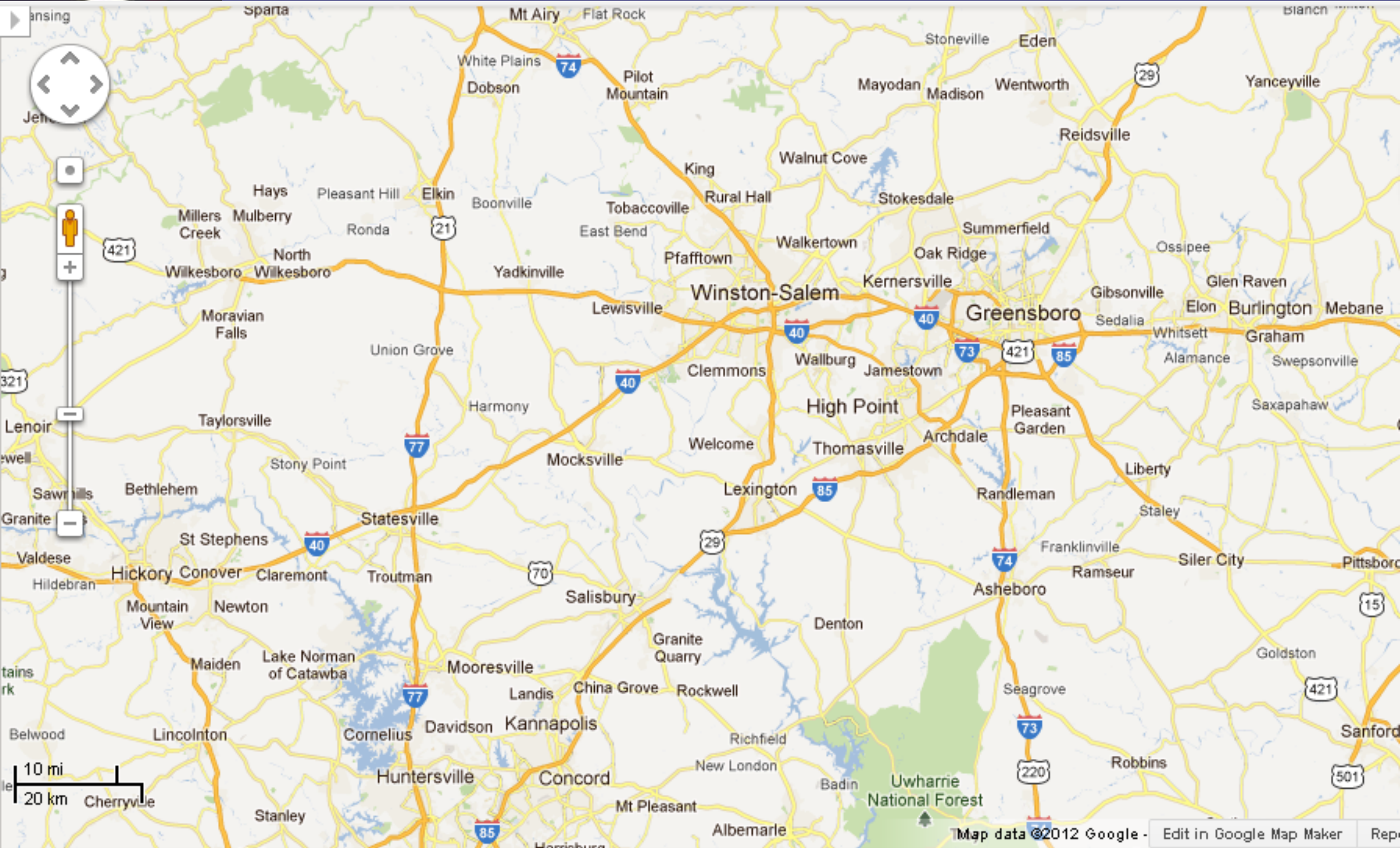
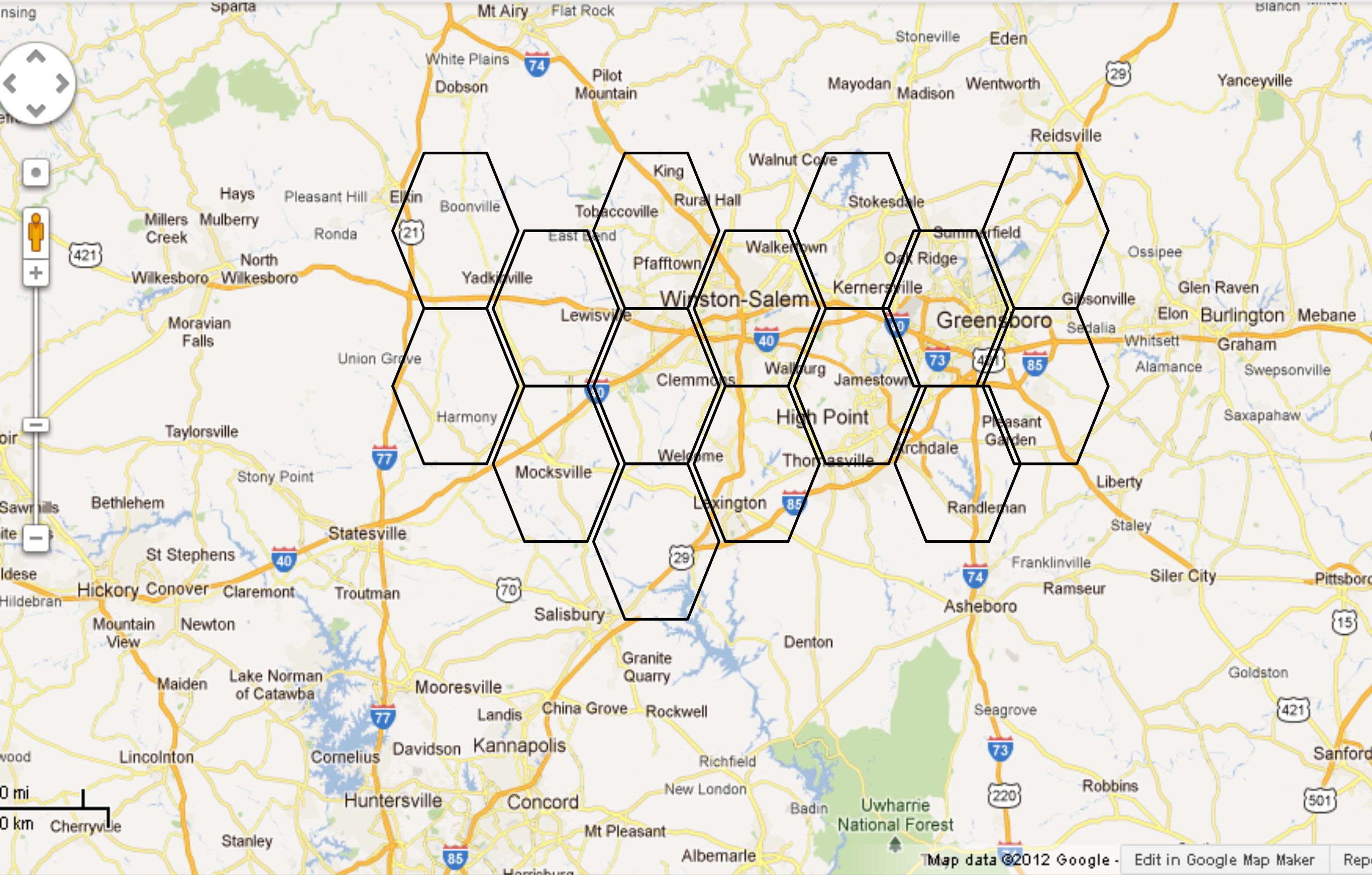


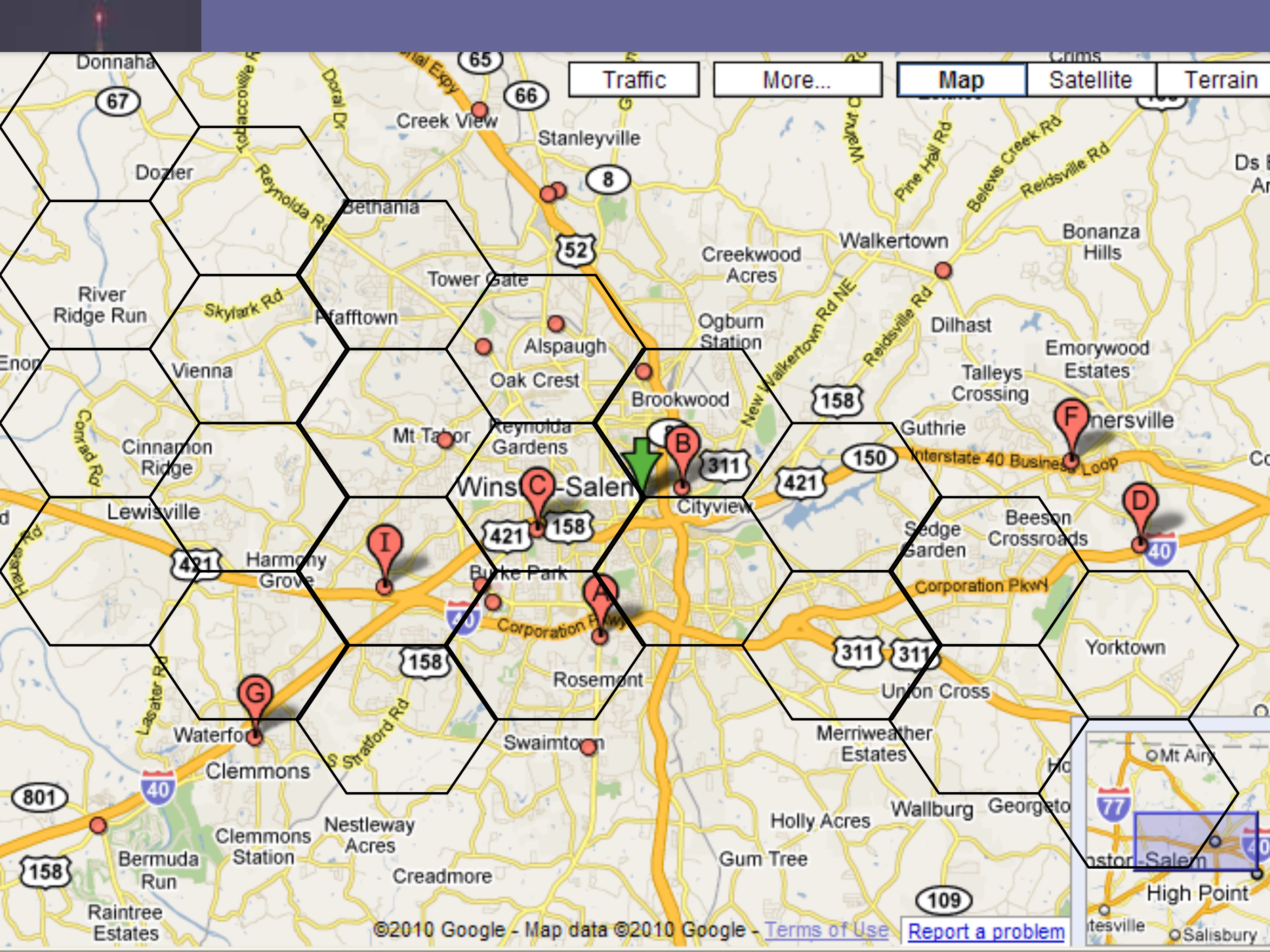
Figure 11.15 Urban alignments in Illinois. Railroads preceded settlement in much of the Anglo American continental interior, and urban centers were developed—frequently by the railroad companies themselves—as collecting and distributing points expected to grow as the farm populations increased. Located at constant 8-to 10-kilometer (5-to 6-mile) intervals in Illinois, the rail towns were the focal points of an expanding commercial agriculture. The linearity of the town pattern in 1940, at the peak of railroad influence, unmistakably marks the rail routes. Also evident are such special-function clusterings as the Chicago and St. Louis metropolitan districts and the mining towns of Southern Illinois. In addition to the linear and cluster patterns, the smallest towns show the uniform distribution characteristic of the “central places” discussed on page 383.

Central Place Theory in Spain









Traffic

More...

Map

Satellite

Terrain



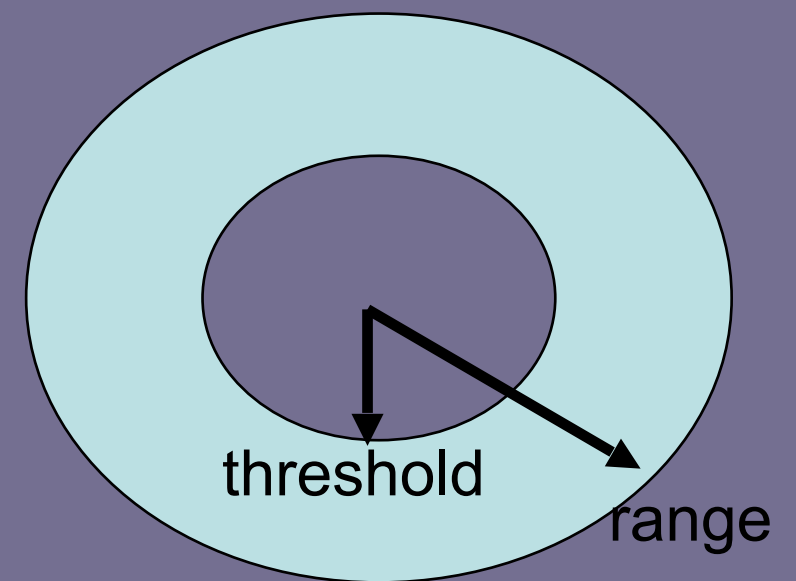
A vertical strip on the left side of the slide shows a nighttime view of the Empire State Building and other city lights, reflecting in water at the bottom.

Central Place Theory

- For example: Sunbelt Phenomenon
- Past 4 decades migration from N & NE to S & SW
- Therefore, Atlanta, Dallas & Phoenix became headquarters of larger regions
- Charlotte, Tampa, San Antonio & Tucson took secondary status
- Nice central place theory image fellman 380

Central Place Theory

- The theory explains the size and spacing of cities that specialize in selling goods and services. The two basic concepts:
 - Threshold - the minimum market needed to bring a firm or city selling goods and services into existence and to keep it in business
 - Range – the average maximum distance people will travel to purchase goods and services

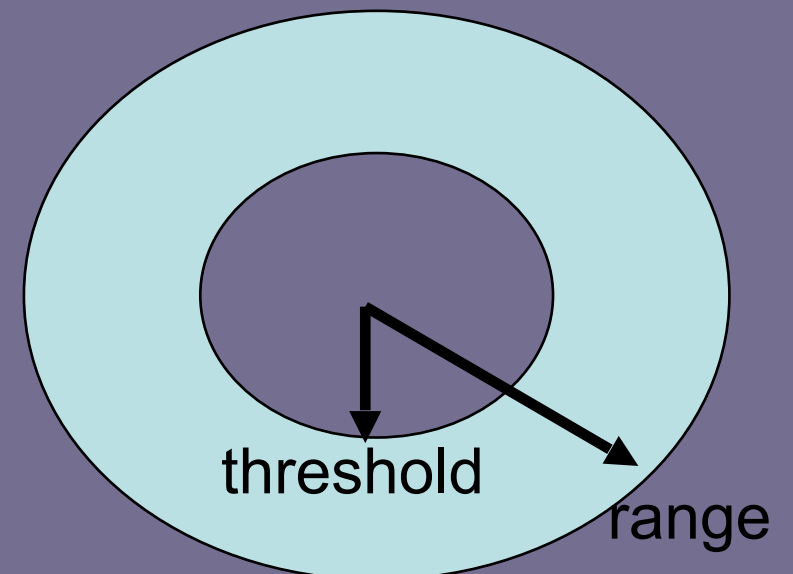


Central Place Theory

- Normally, the threshold is found within the range. As the diagram shows. **Can you think of examples from the past in Europe and from the US today in which the range is larger than the threshold yet businesses thrive and market towns temporarily come alive?**

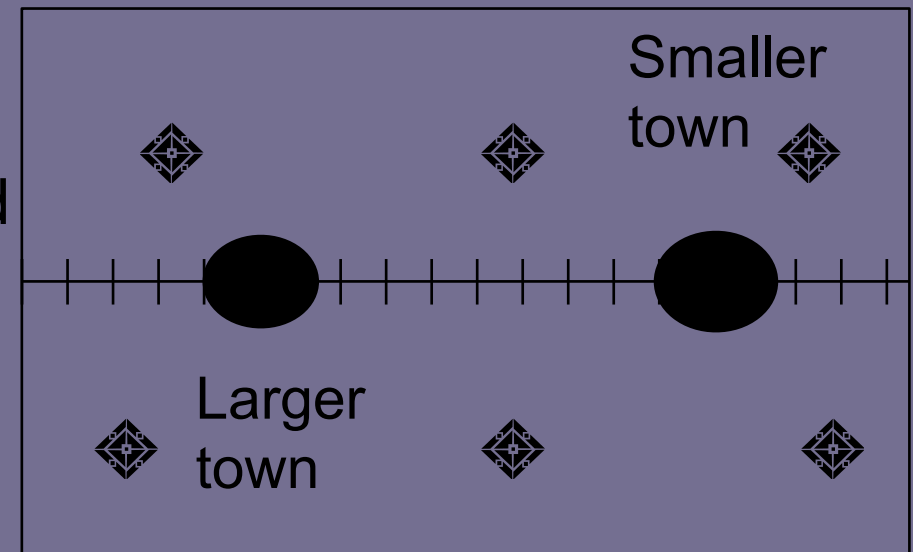
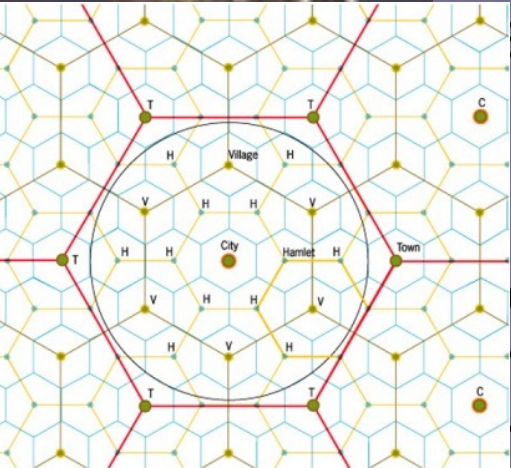
1. Itinerant merchants in medieval Europe who would sell their wares in a different town each day or two to “collect” sufficient “ranges” to meet or, hopefully, exceed their “household” (market) to keep their business going

2. In the US, multi-million dollar businesses have insufficient thresholds because the range for their products are too small; hence, professional athletic teams and popular entertainers with their high income demands travel throughout the country collecting “ranges.” Already in the 19th century, catalog companies, like Sears, were already “annihilating” space, as does the internet now.

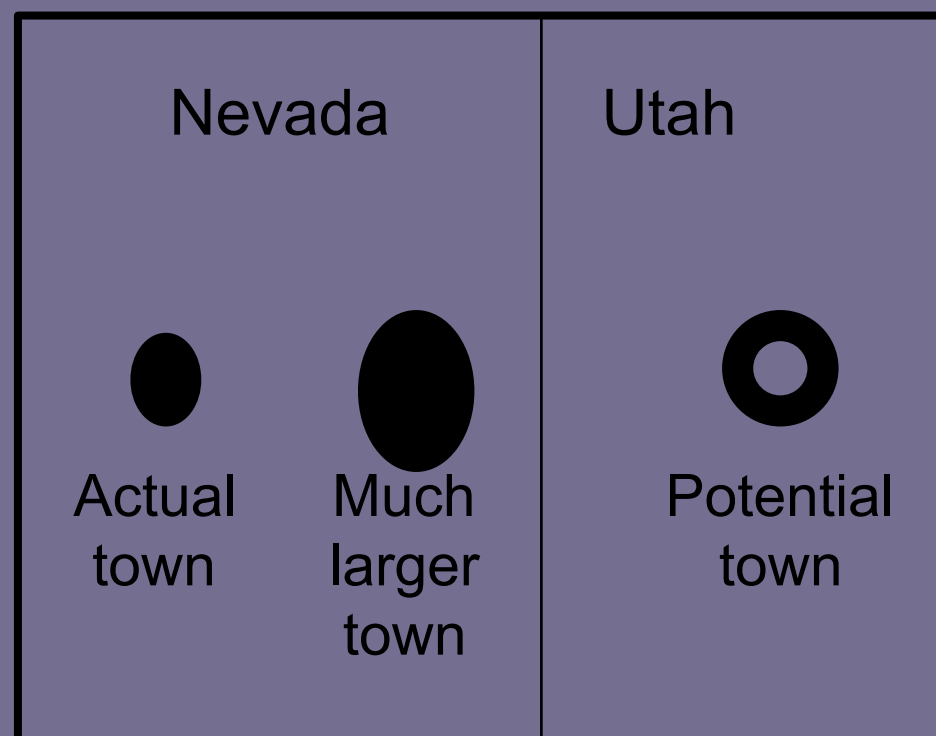




The market principle predicts evenly spaced cities; but the transportation and political principles modify these regularities.



With the transportation principle, towns that are not on major transportation routes are smaller than expected from the market principle. Transportation routes, such as a railroad in this illustration, attract business and allow new and larger towns to develop along the railroad. Rivers, canals, and highways, especially interstate highways, also reflect the transportation principle.



Political principle – Political boundaries also “distort” the even spacing of cities.

Why is the city on the Nevada side of the Nevada-Utah border larger?





Sketch a map of your city or town and the cities or towns nearby. Make a list of goods and services available in each of these towns. Do the ideas about central places presented in this section of the chapter apply to your region?



How are Cities Organized, and How do they Function?

Functional Zonation

The division of the city into certain regions (zones) for certain purposes (functions).

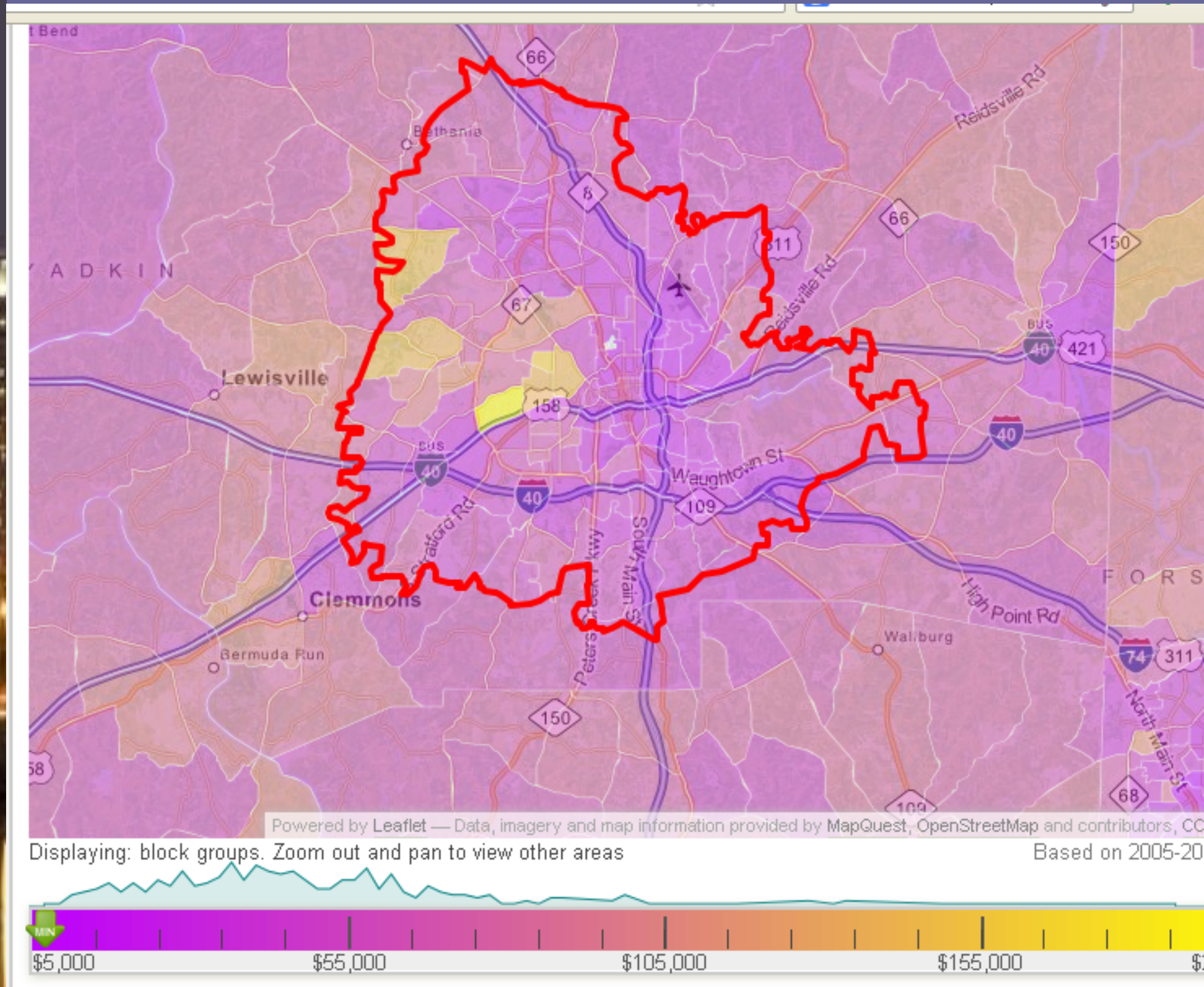


Zones of the City

- Central business district (CBD)
- Central City (the CBD + older housing zones)
- Suburb (outlying, functionally uniform zone outside of the central city)
- <http://bcs.wiley.com/he-bcs/Books?action=mininav&bcsId=5266&itemId=0470484799&assetId=207882&resourceId=20033>



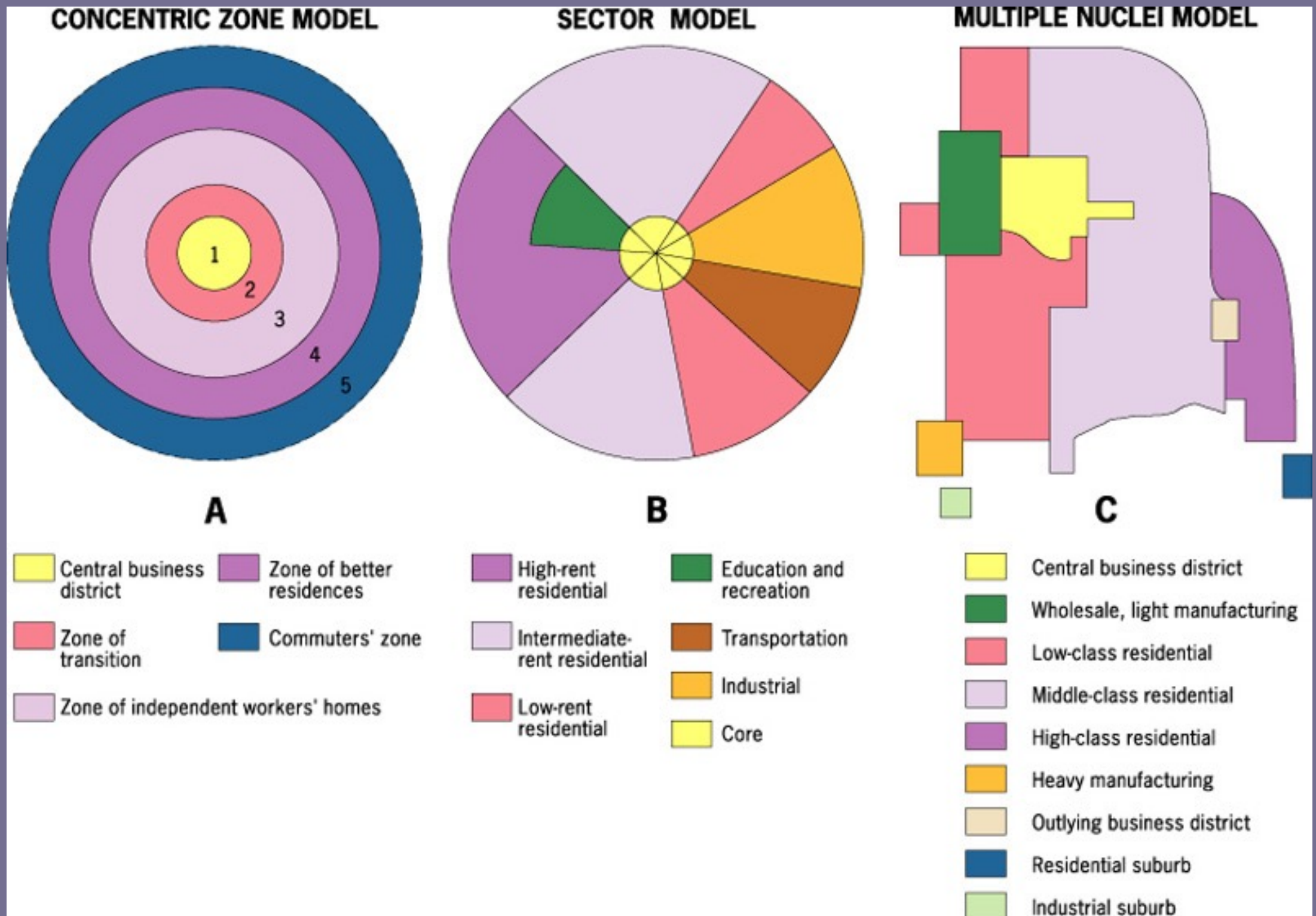
If your address determined your income, where would you choose to live?





- http://www.bbc.co.uk/bitesize/standard/geography/settlement/structure_models/revision/1/

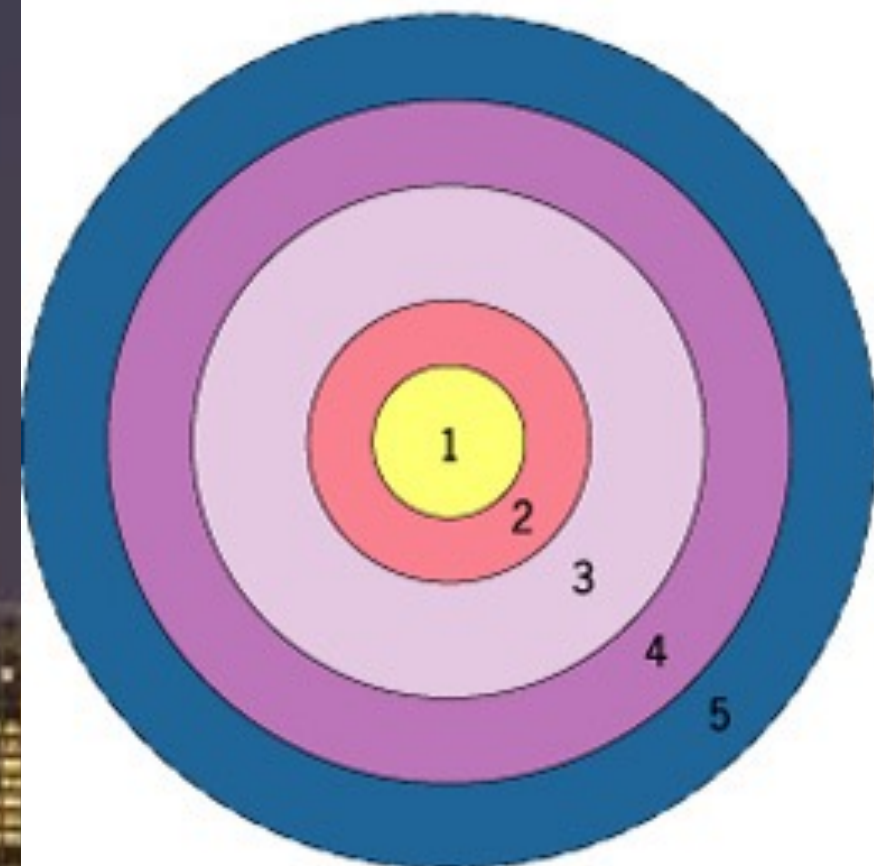
Models of Internal Structure of Cities



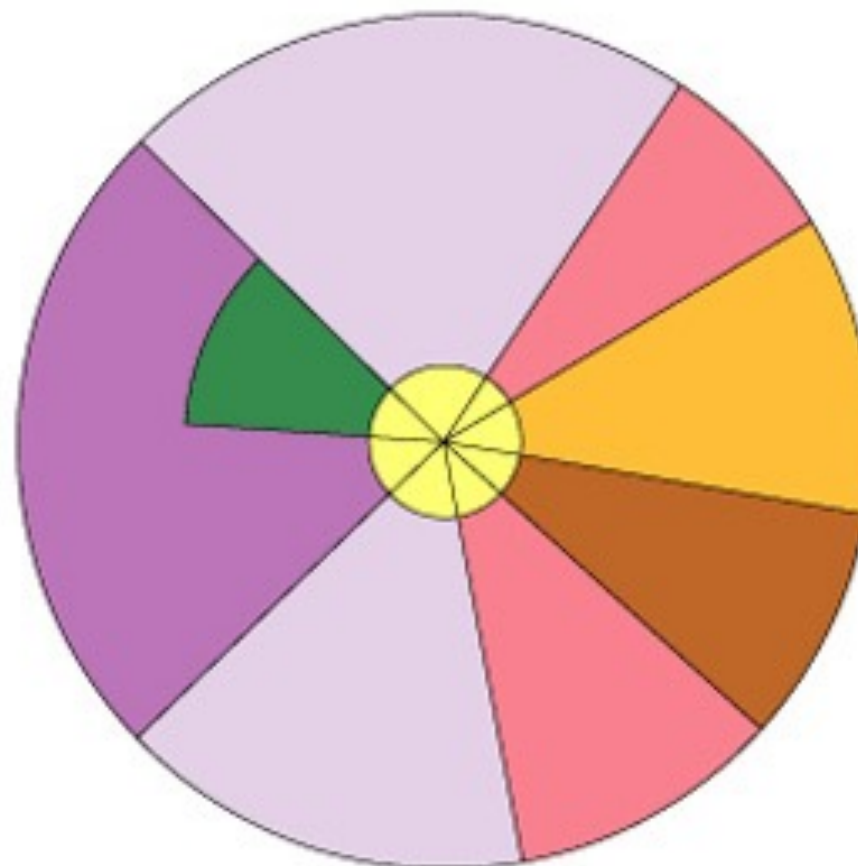
CONCENTRIC ZONE MODEL

SECTOR MODEL

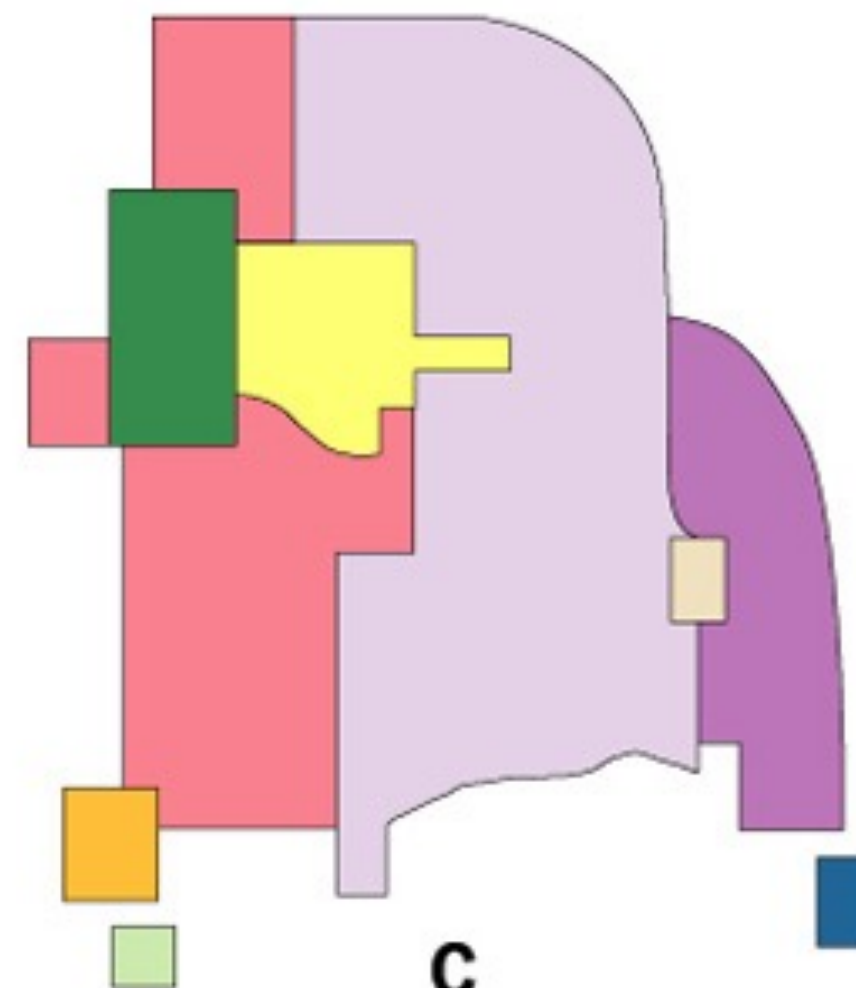
MULTIPLE NUCLEI MODEL



A



B



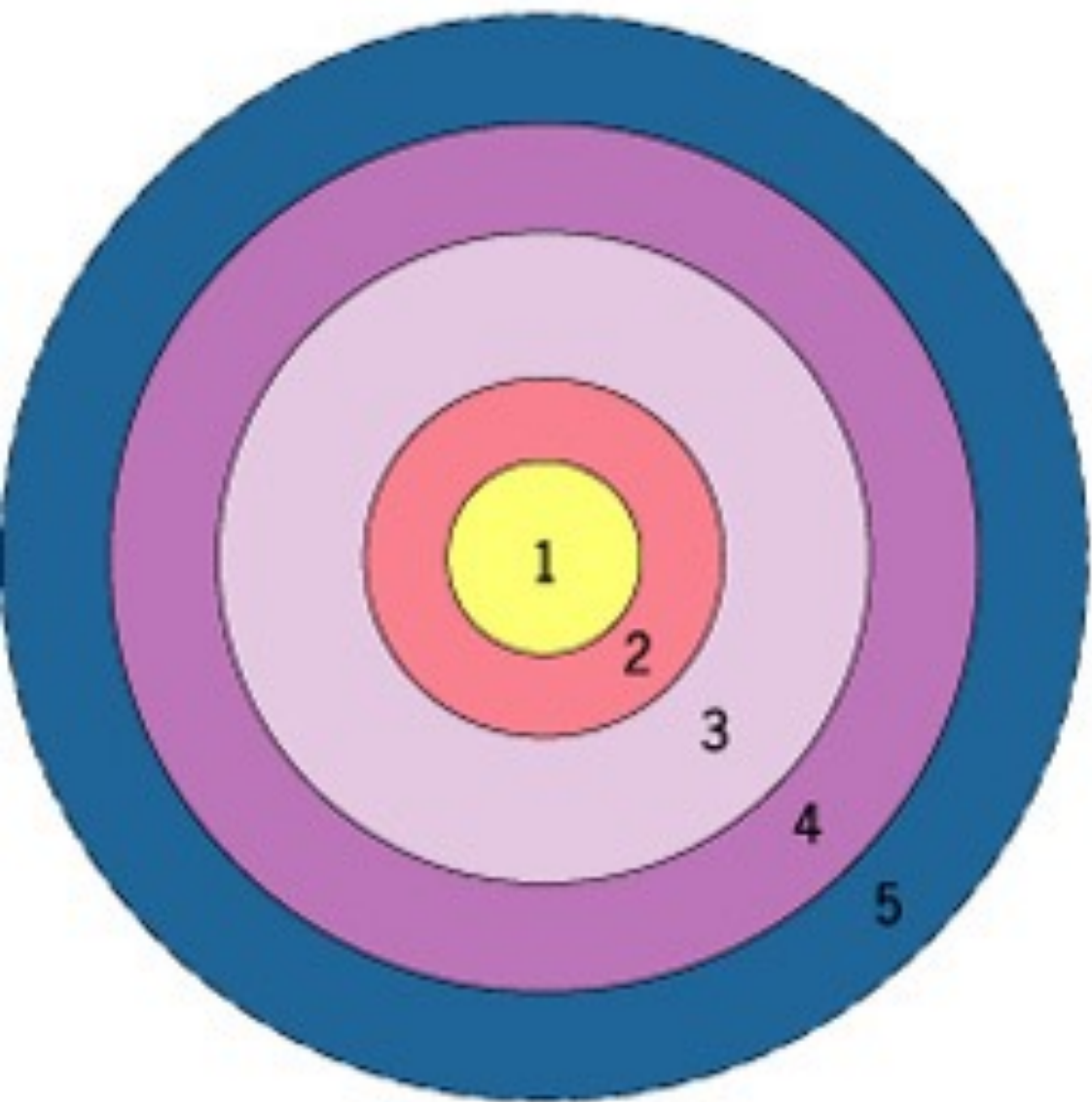
C

- | | |
|------------------------------------|---------------------------|
| Central business district | Zone of better residences |
| Zone of transition | Commuters' zone |
| Zone of independent workers' homes | |

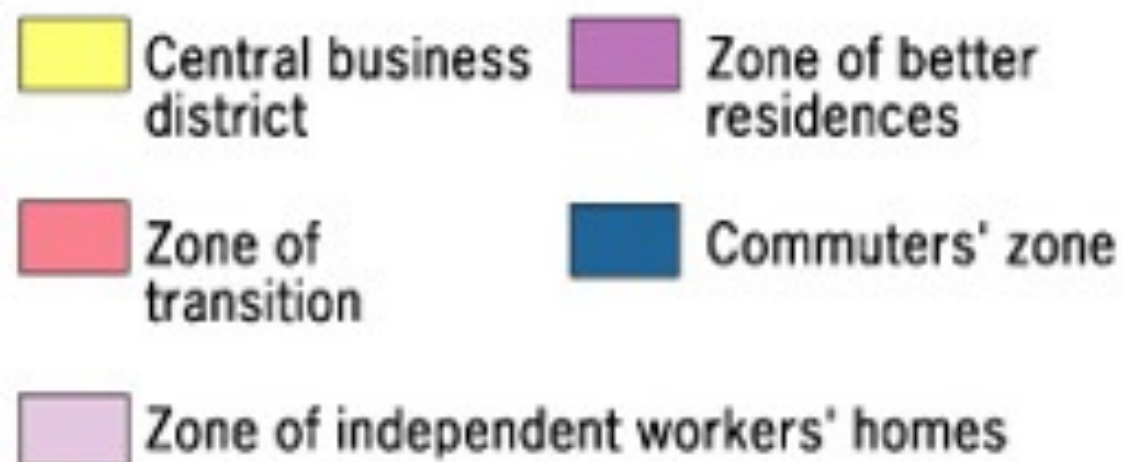
- | | |
|-------------------------------|--------------------------|
| High-rent residential | Education and recreation |
| Intermediate-rent residential | Transportation |
| Low-rent residential | Industrial |
| Core | |

- | |
|--------------------------------|
| Central business district |
| Wholesale, light manufacturing |
| Low-class residential |
| Middle-class residential |
| High-class residential |
| Heavy manufacturing |
| Outlying business district |
| Residential suburb |
| Industrial suburb |

CONCENTRIC ZONE MODEL



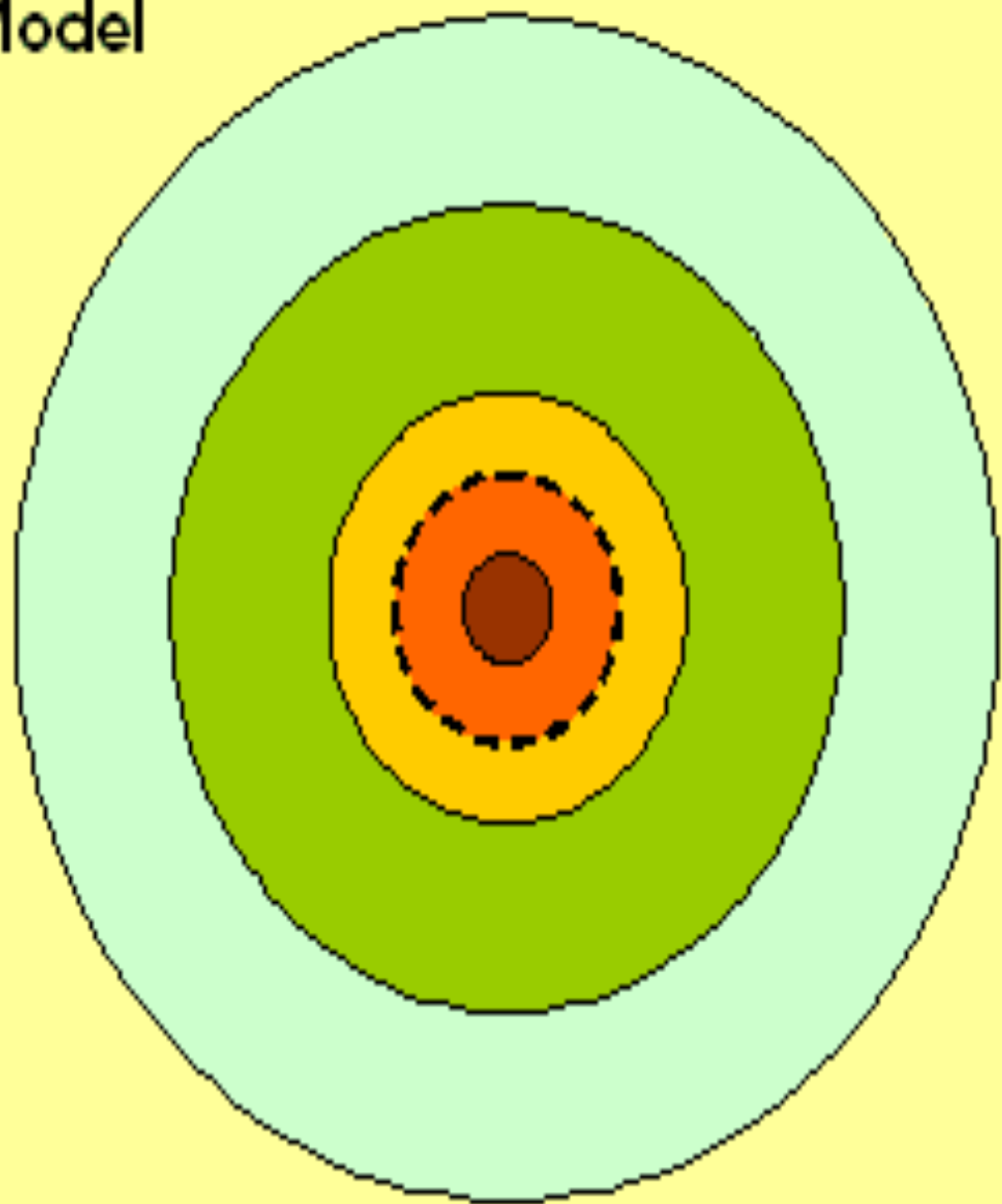
A



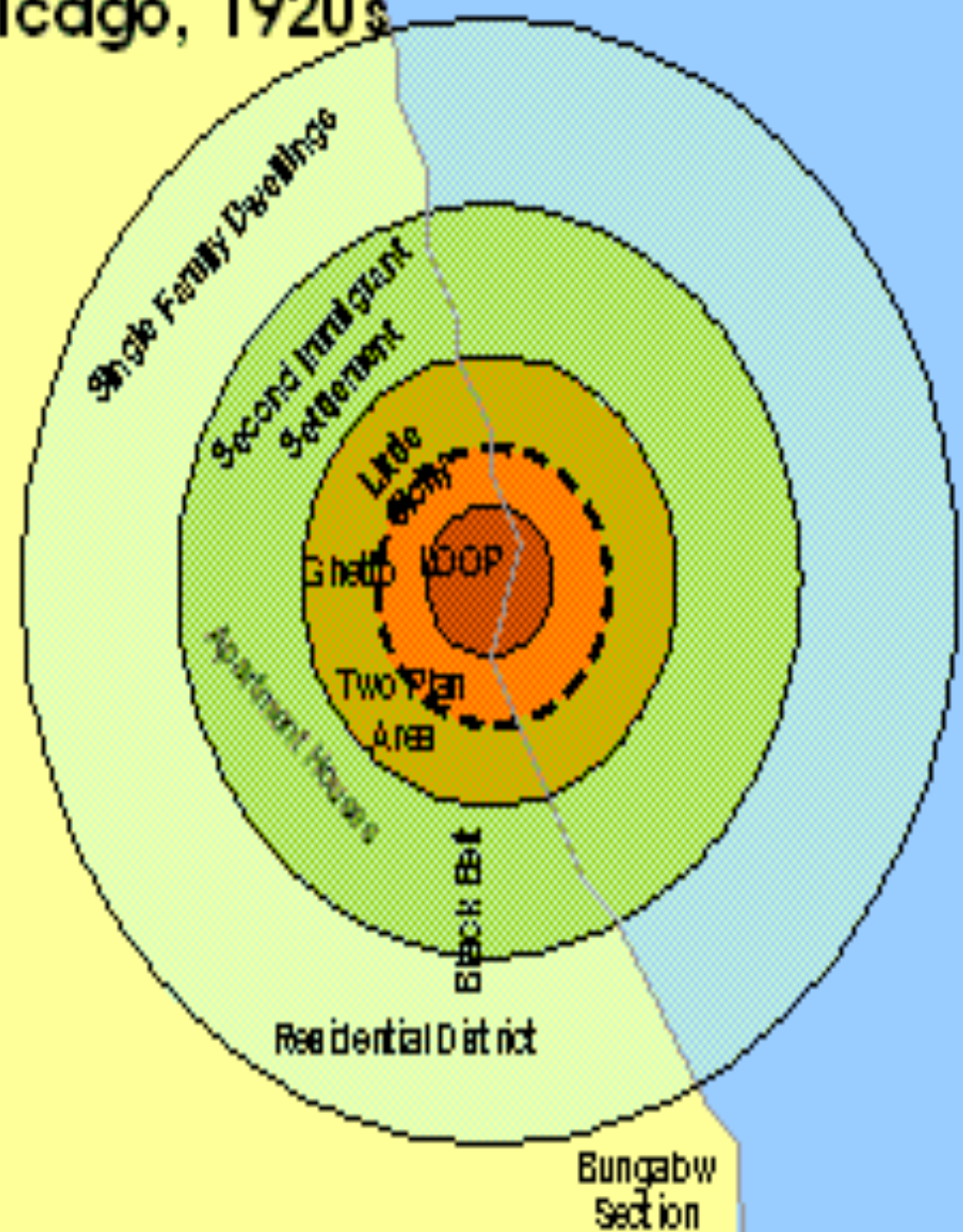
Concentric Zone Model

- Created by E.W. Burgess in 1925
- Developed in rings – reflecting waves of immigrants
- used Chicago as his model
- Most European cities developed this way (pre-auto)

Model



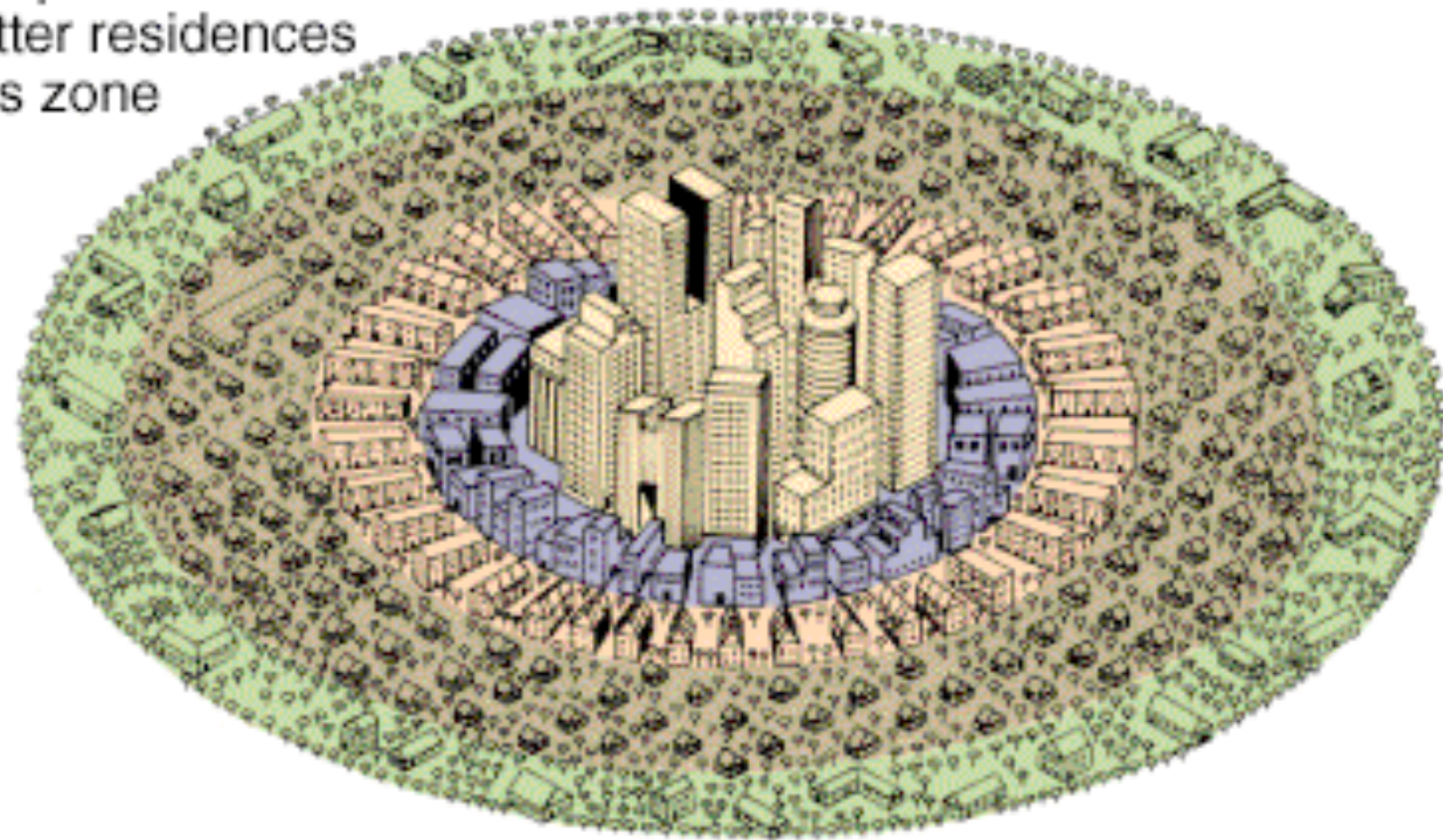
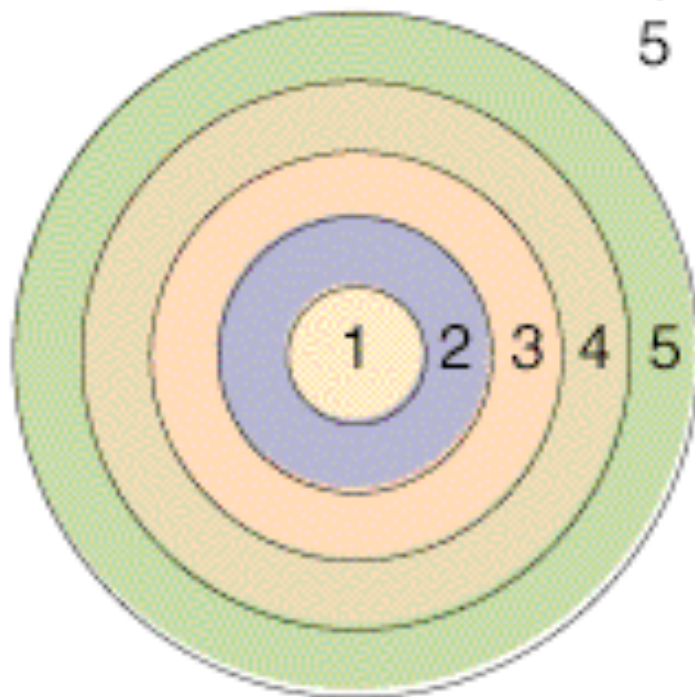
Chicago, 1920s



- | | |
|--|---|
|  I - Loop (downtown) |  IV - Working class zone |
|  II - Factory zone |  V - Residential zone |
|  III - Zone of transition |  VI - Commuter zone |

Concentric Zone Model

- 1 Central business district
- 2 Zone of transition
- 3 Zone of independent workers' homes
- 4 Zone of better residences
- 5 Commuter's zone



Chicago CBD

**Immigrant
workers'
housing, early
1900s**



**Gold Coast downtown for
North Side; Loop for
South Side**



Industrial zones



Older residential

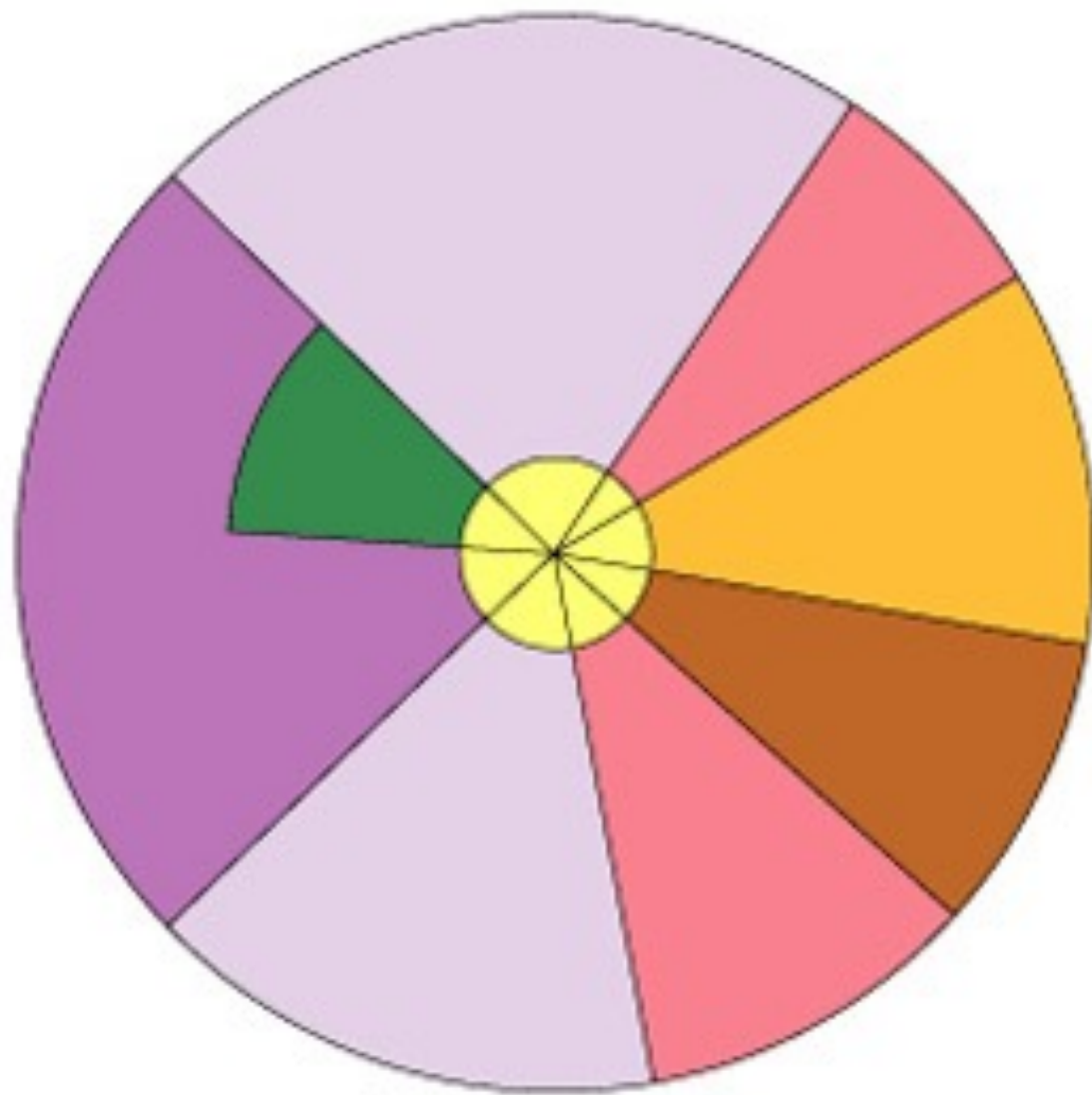
Suburbanization (Commuters' zone)



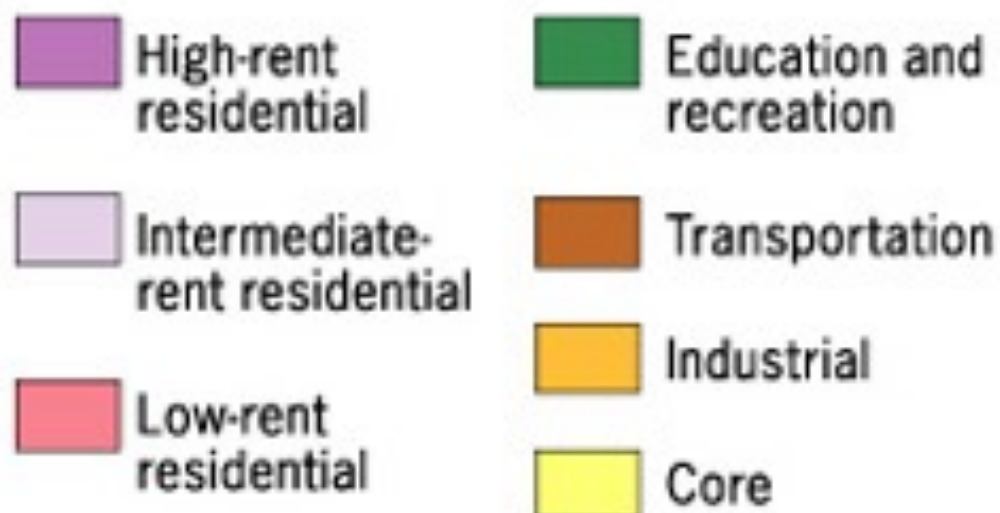
**G.I. Bill
homes**



SECTOR MODEL



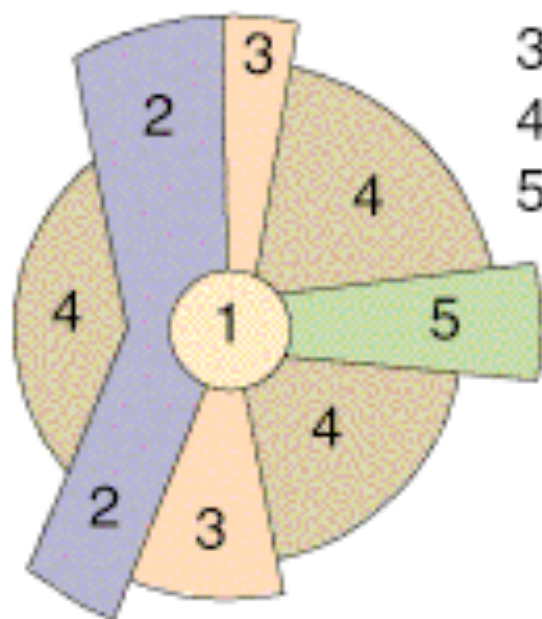
B



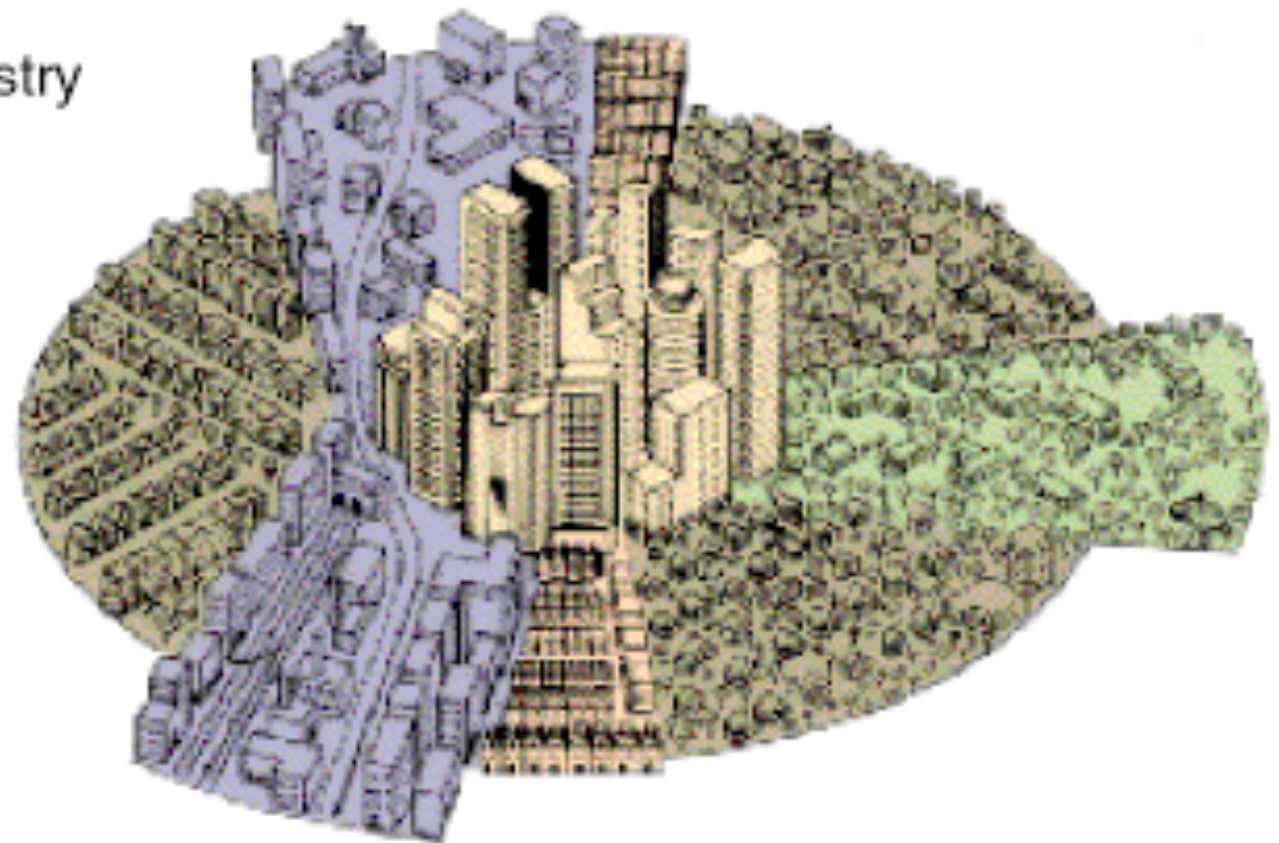
Sector Model

- Created by Homer Hoyt in 1939
- Wedges break out – not purely concentric
- Focused on residential patterns explaining where the wealthy chose to live

Sector Model (1939)



1. Central business district
2. Transportation and industry
3. Low-class residential
4. Middle-class residential
5. High-class residential



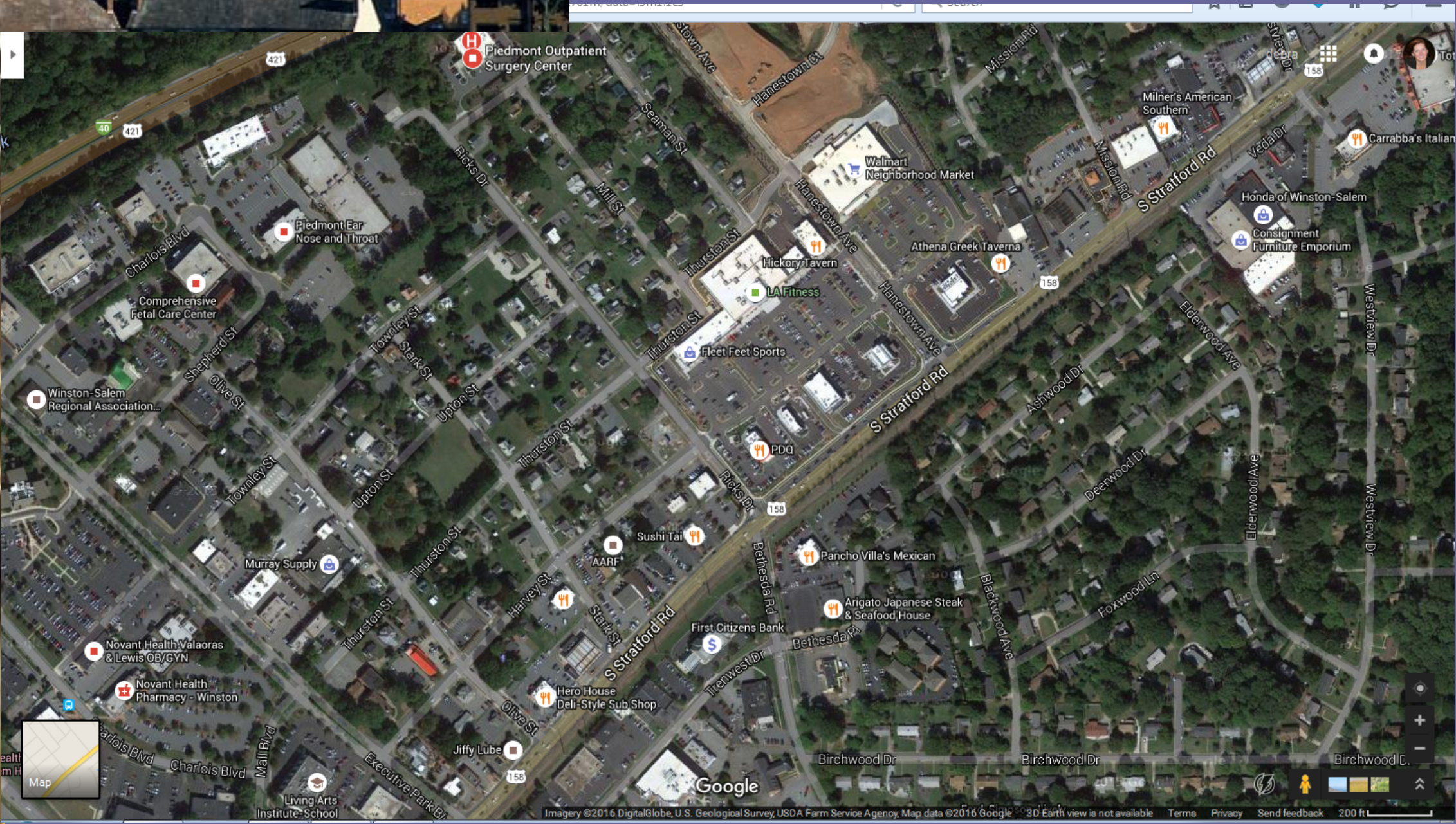
Sectors (not rings)
attractive for certain activities;
Spread along rail lines



FRQ



Factory Housing



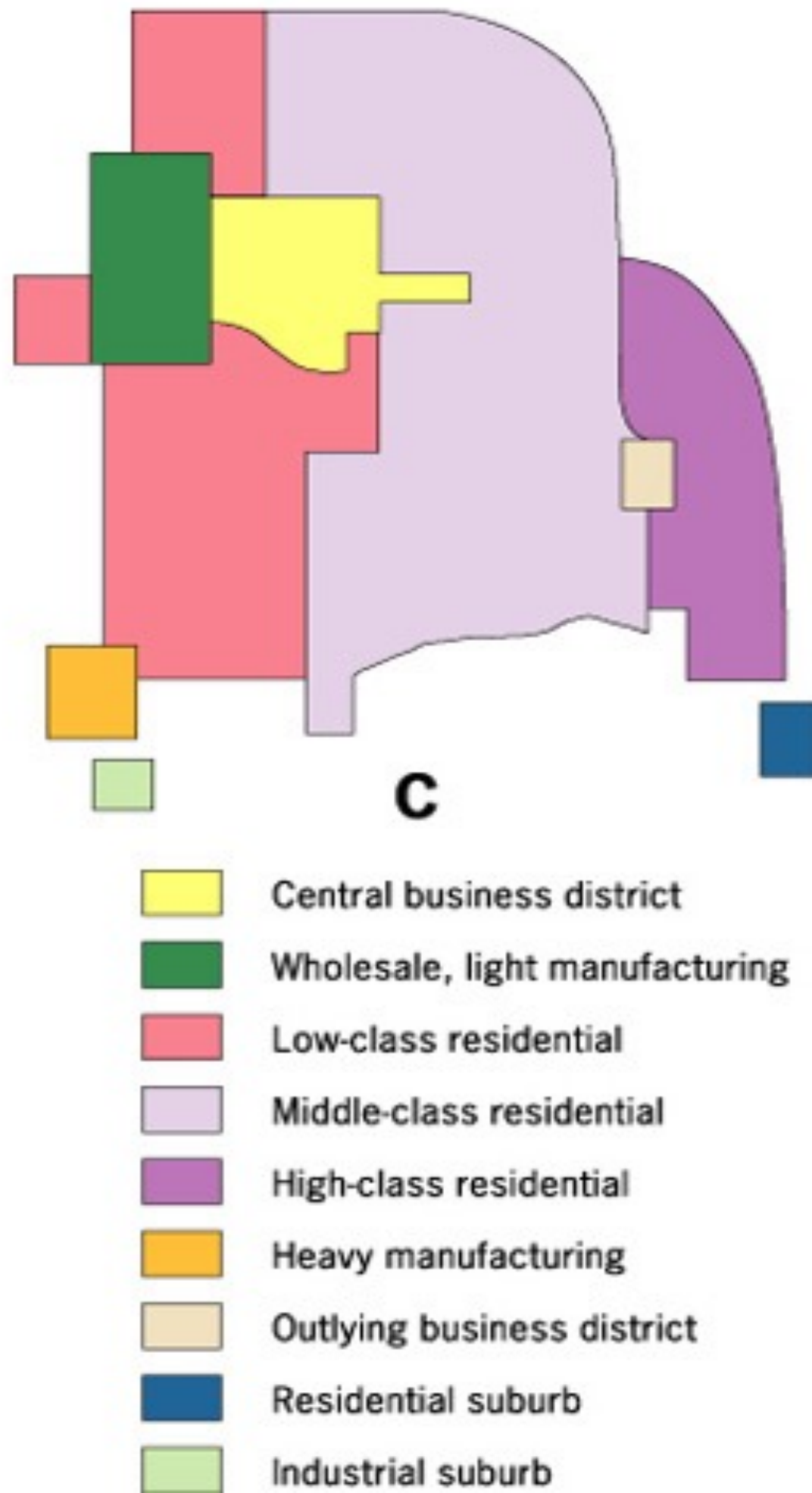


- Which of the following characteristics do the Burgess Model & Hoyt Model have in common?
 - a. Both show that the poorest residents live on the city's outskirts
 - b. Both show heavy manufacturing located near the city's center
 - c. Both show that the wealthiest residents live on the city's outskirts
 - d. Both show that middle-class residents live midway between the city's center and the city's outskirts
 - e. Both show only one central business district (CBD)



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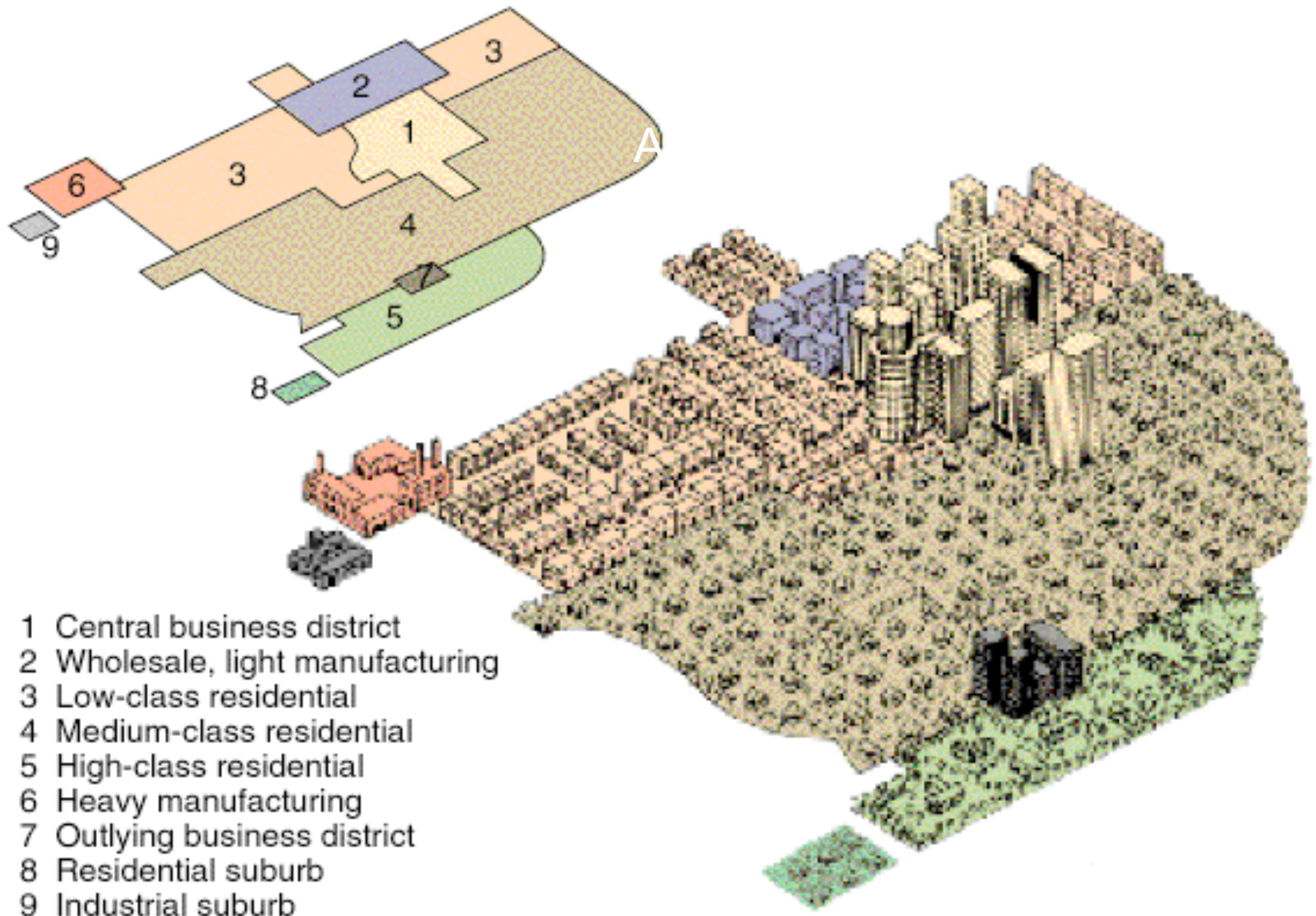
MULTIPLE NUCLEI MODEL



Multiple Nuclei Model

- Created by C.D. Harris & E.L. Ullman in 1945
- The CBD was losing dominance
- This model accounts for new modes of transportation like cars.

Multiple Nuclei Model



GEOGRAPHIC APPLICATIONS OF THE MODELS

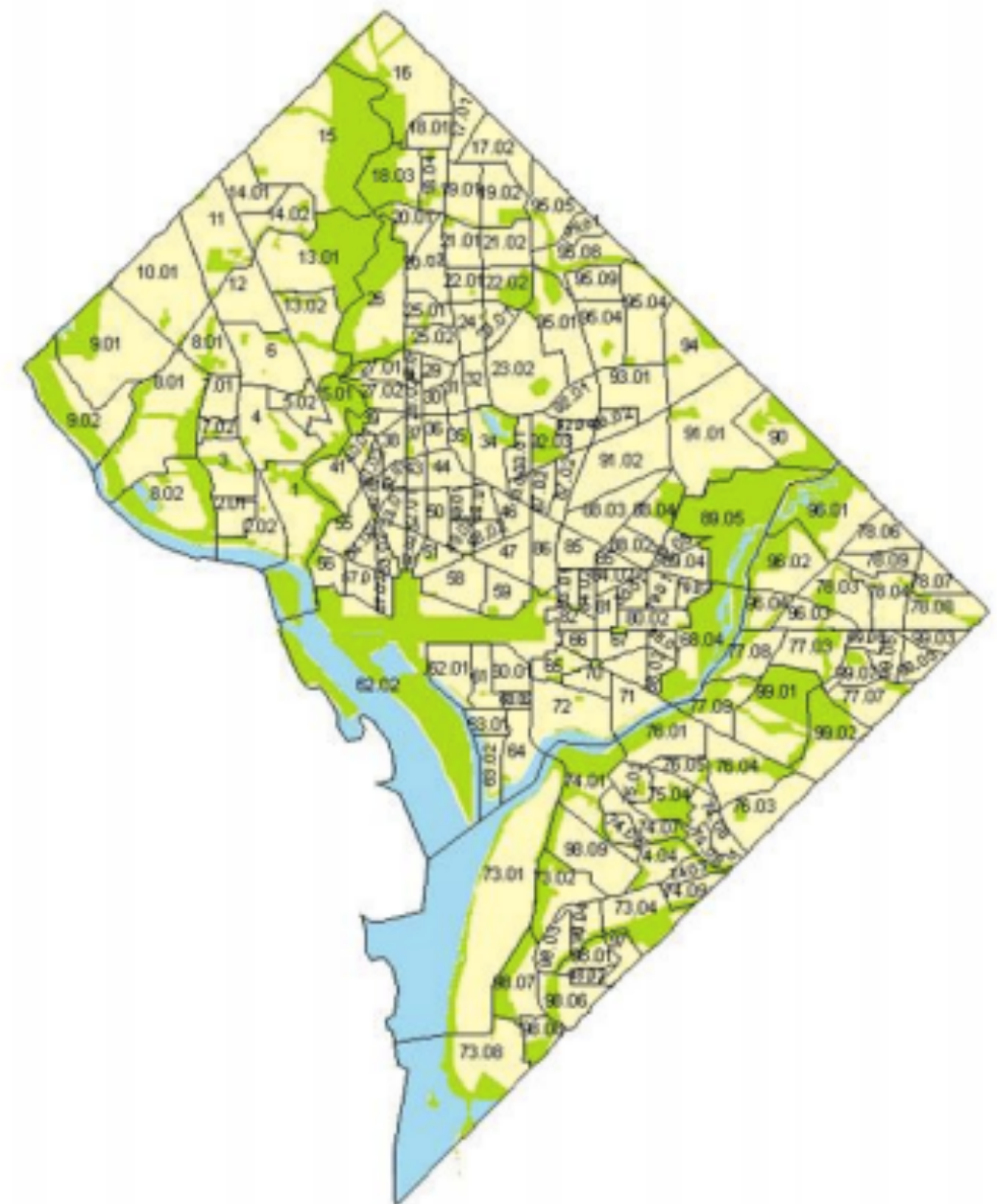
The three models help us understand where people with different social characteristics tend to live within an urban area.

Effective use of the models depends on the availability of data at the scale of individual neighborhoods.

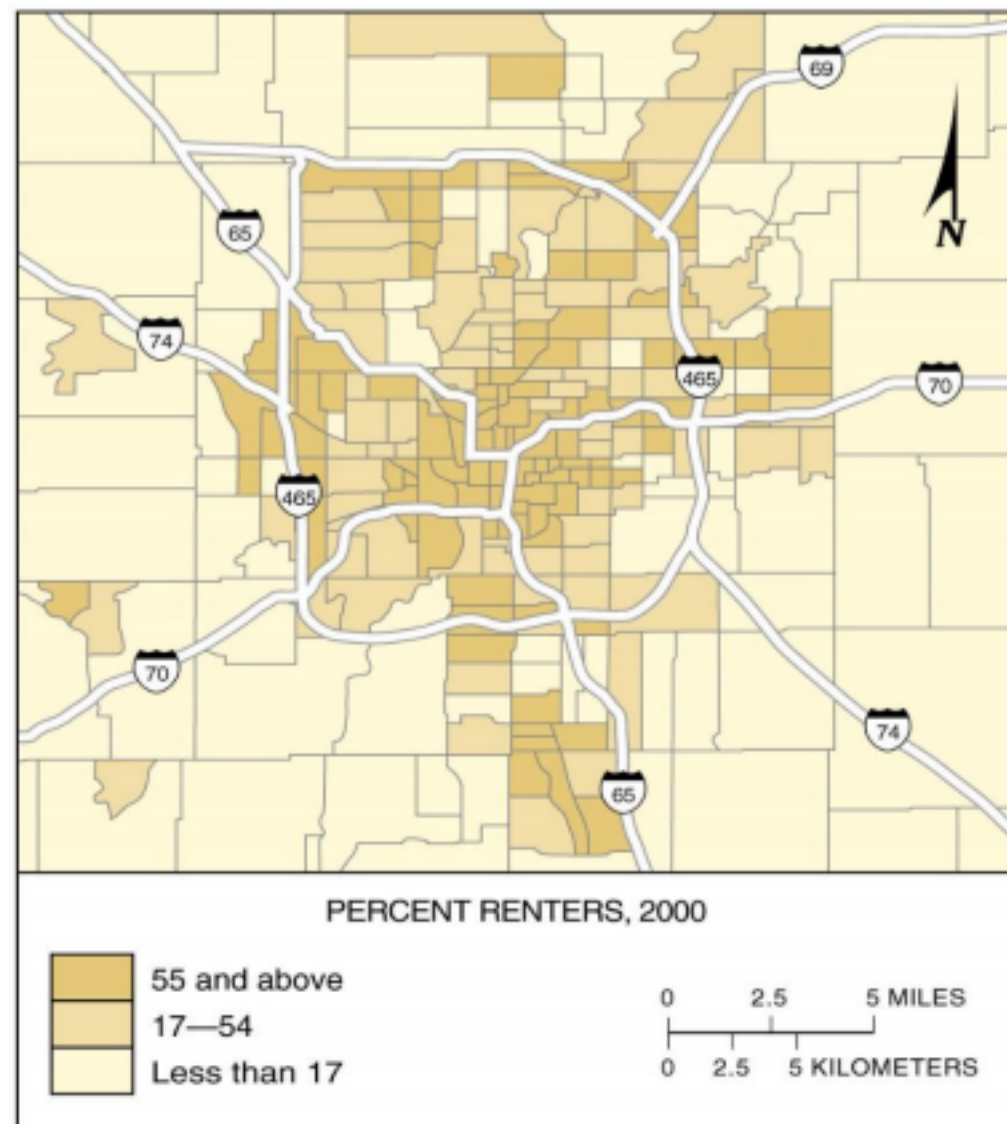
Urban areas in the United States are divided into census tracts, which contain approximately 5,000 residents and correspond where possible to neighborhood boundaries.

Every decade, the U.S. Bureau of the Census publishes data summarizing the characteristics of the residents living in each tract.

Washington DC Census Tracts



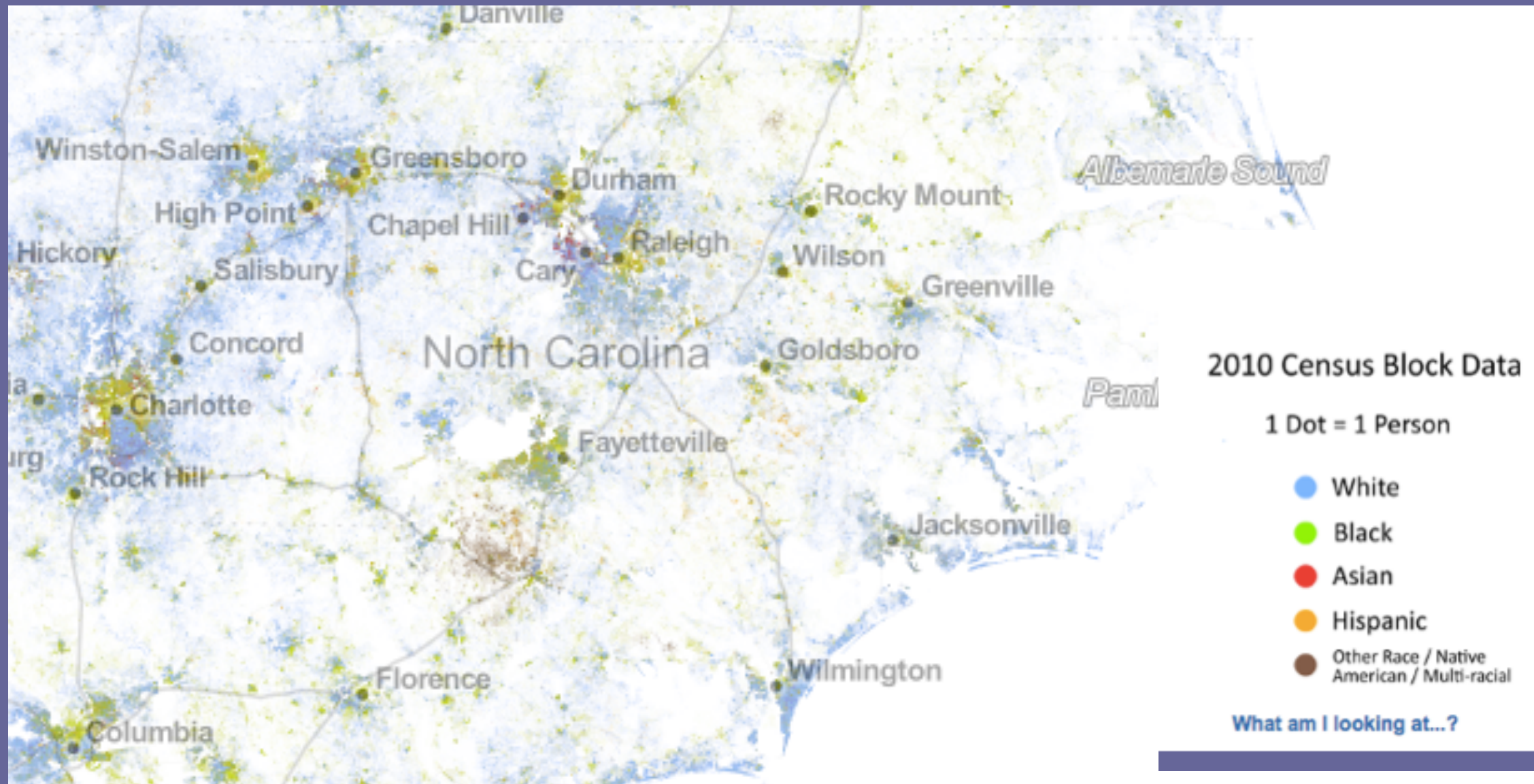
SOCIAL AREA ANALYSIS- INDIANAPOLIS: PERCENT RENTERS

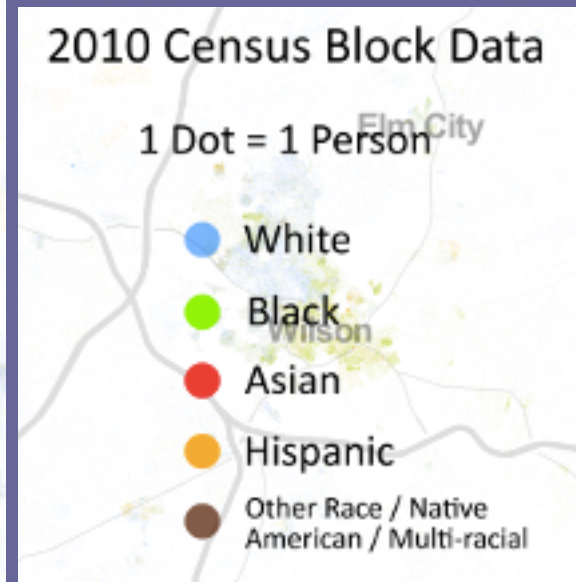
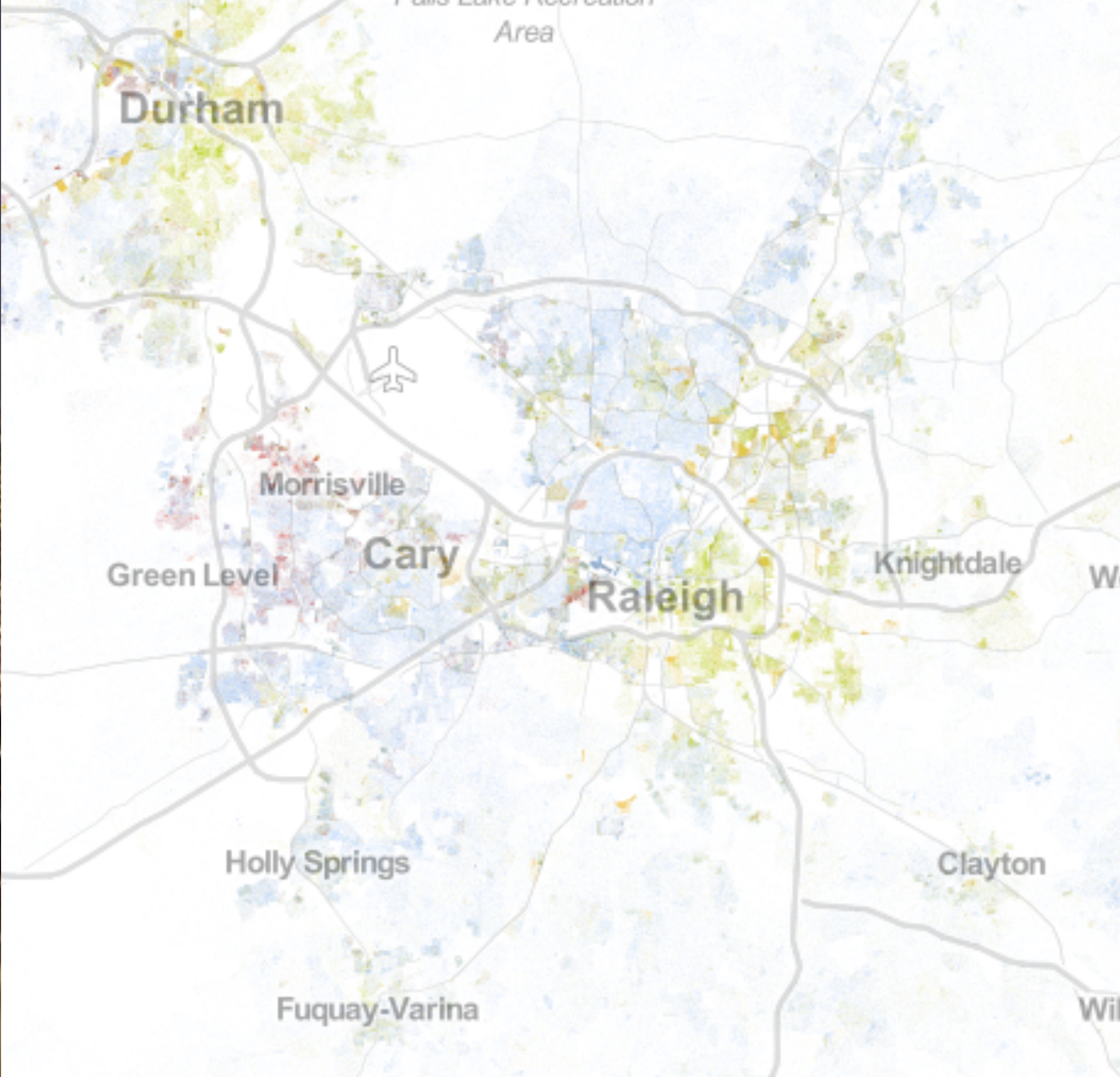


Copyright © 2005 Pearson Prentice Hall, Inc.

The distribution of renters in Indianapolis illustrates the concentric zone model.

RACIAL CONCENTRATIONS

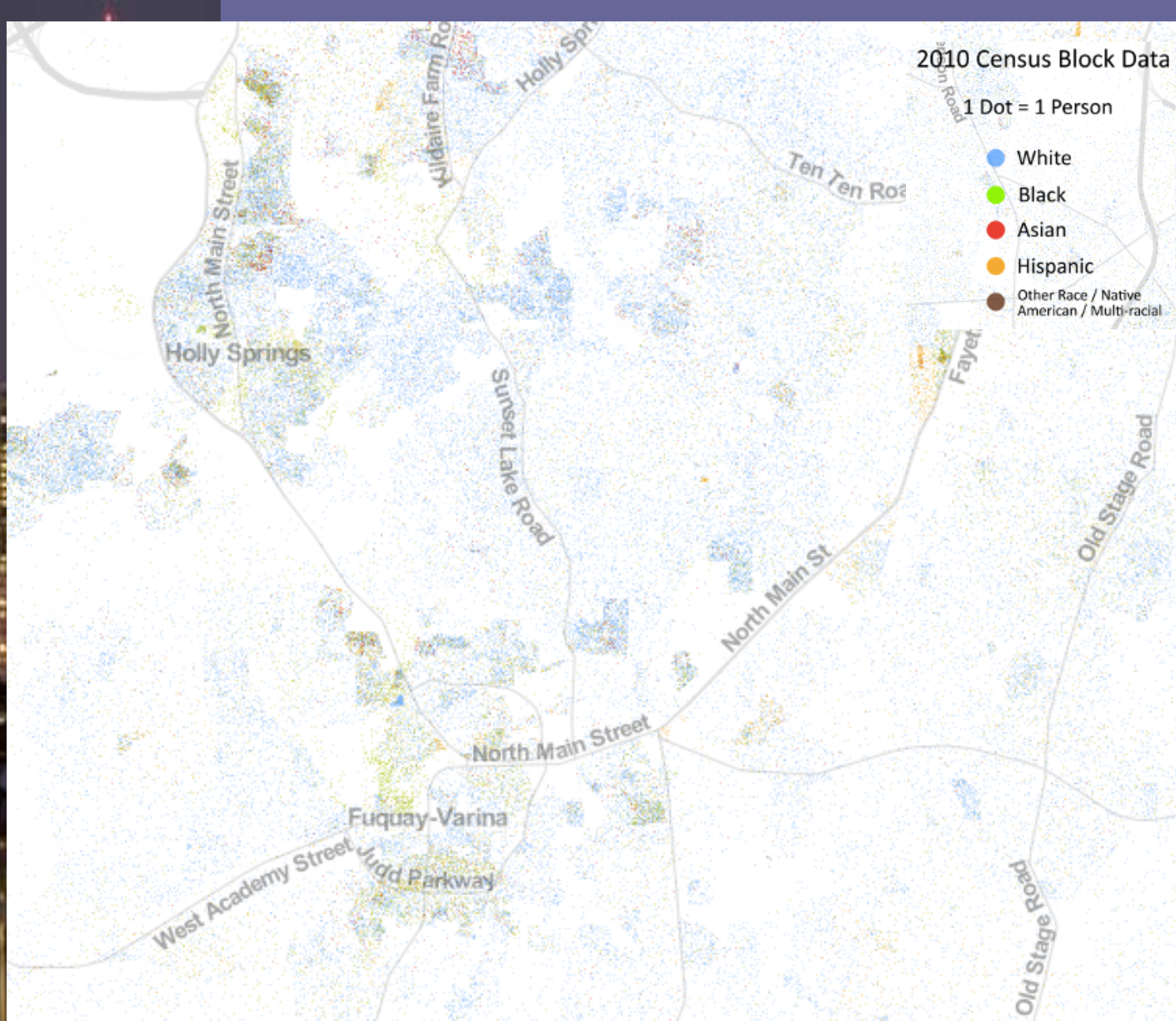




2010 Census Block Data

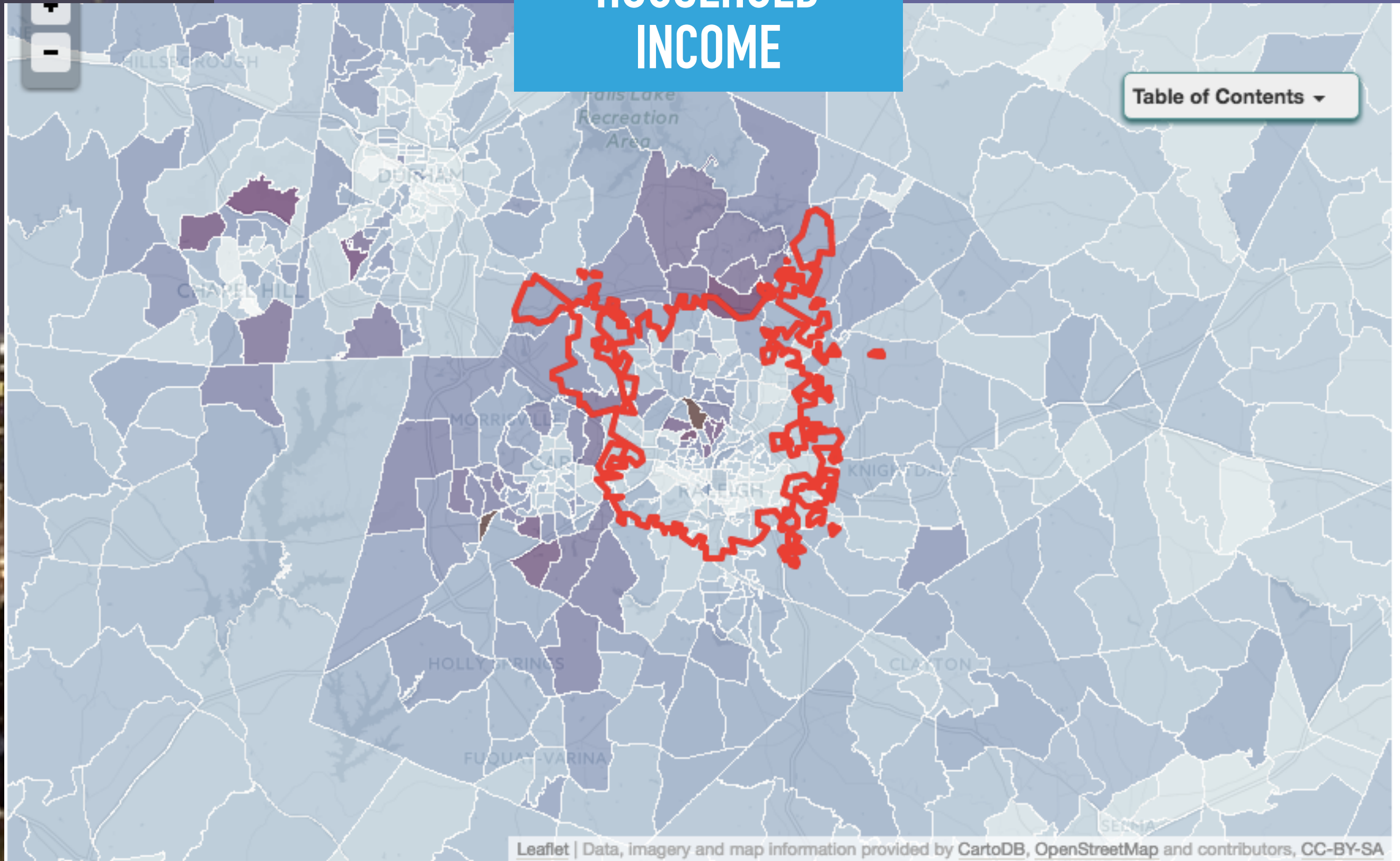
1 Dot = 1 Person

- White
- Black
- Asian
- Hispanic
- Other Race / Native American / Multi-racial



HOUSEHOLD INCOME

Table of Contents ▾



Displaying: block groups. Zoom out and pan to view other areas

Based on 2000-2013 data

\$20,000

\$40,000

\$60,000

\$80,000

\$100,000

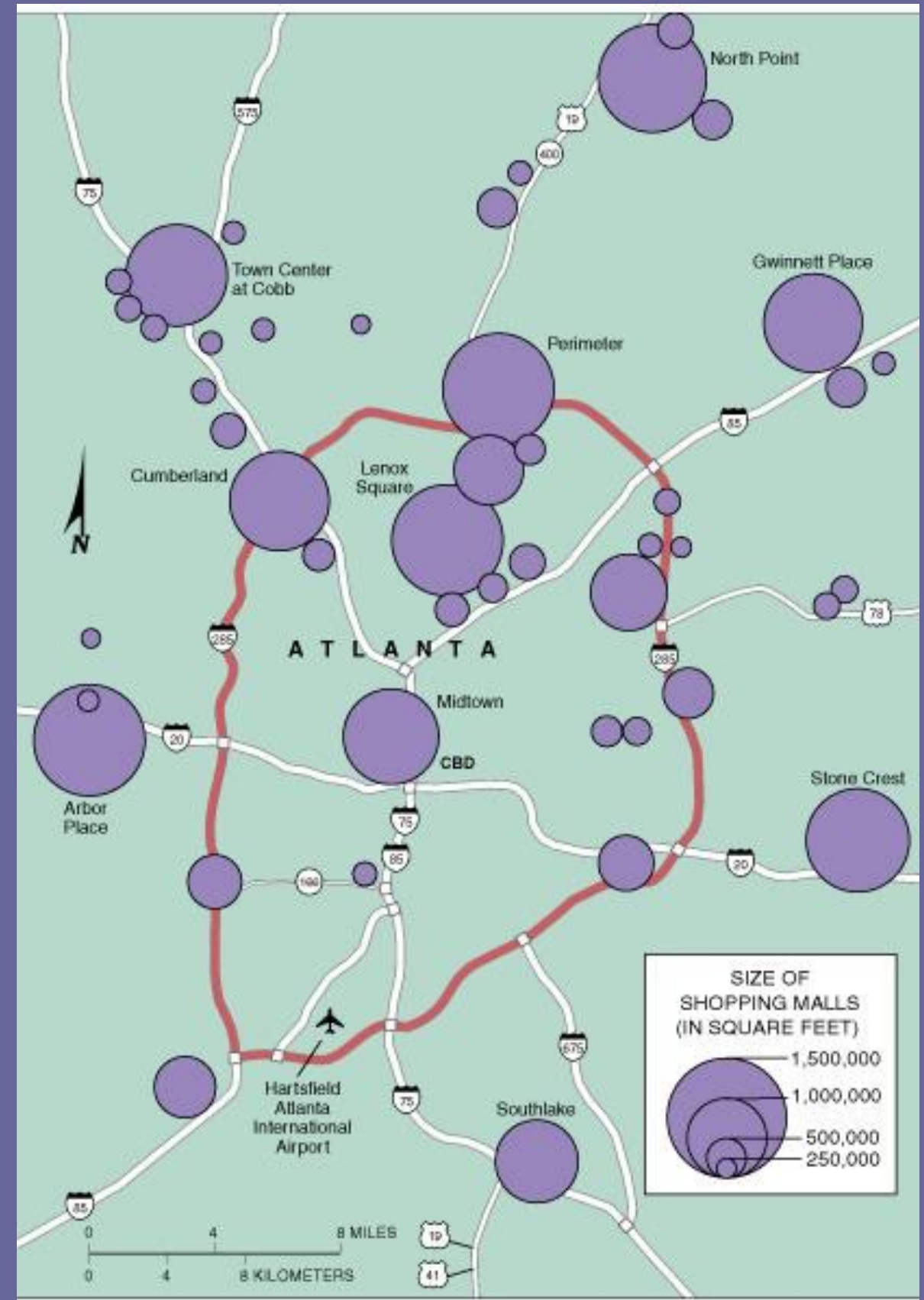
\$120,000

\$140,000

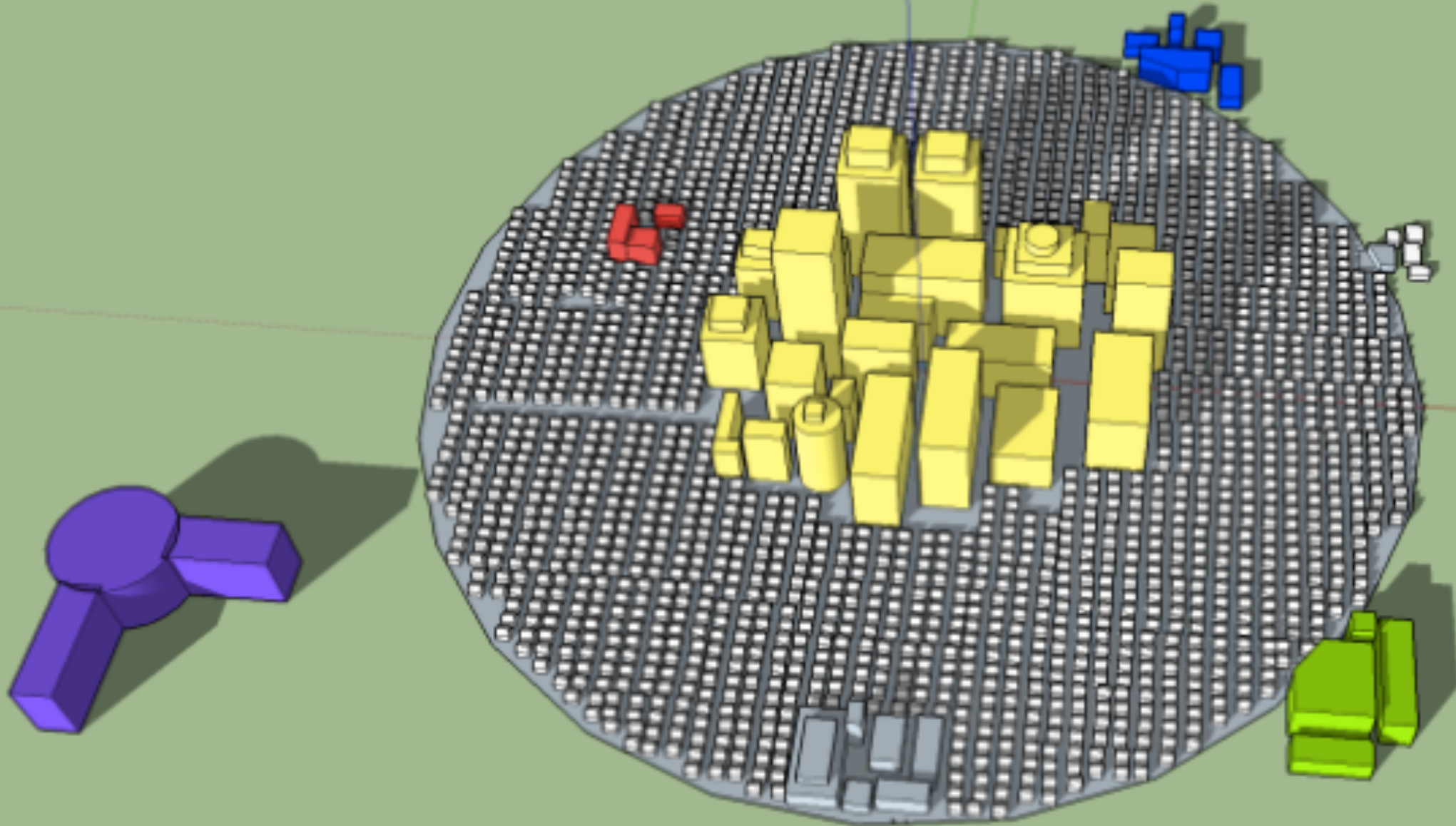
\$160,000



Galactic Model or Edge Cities

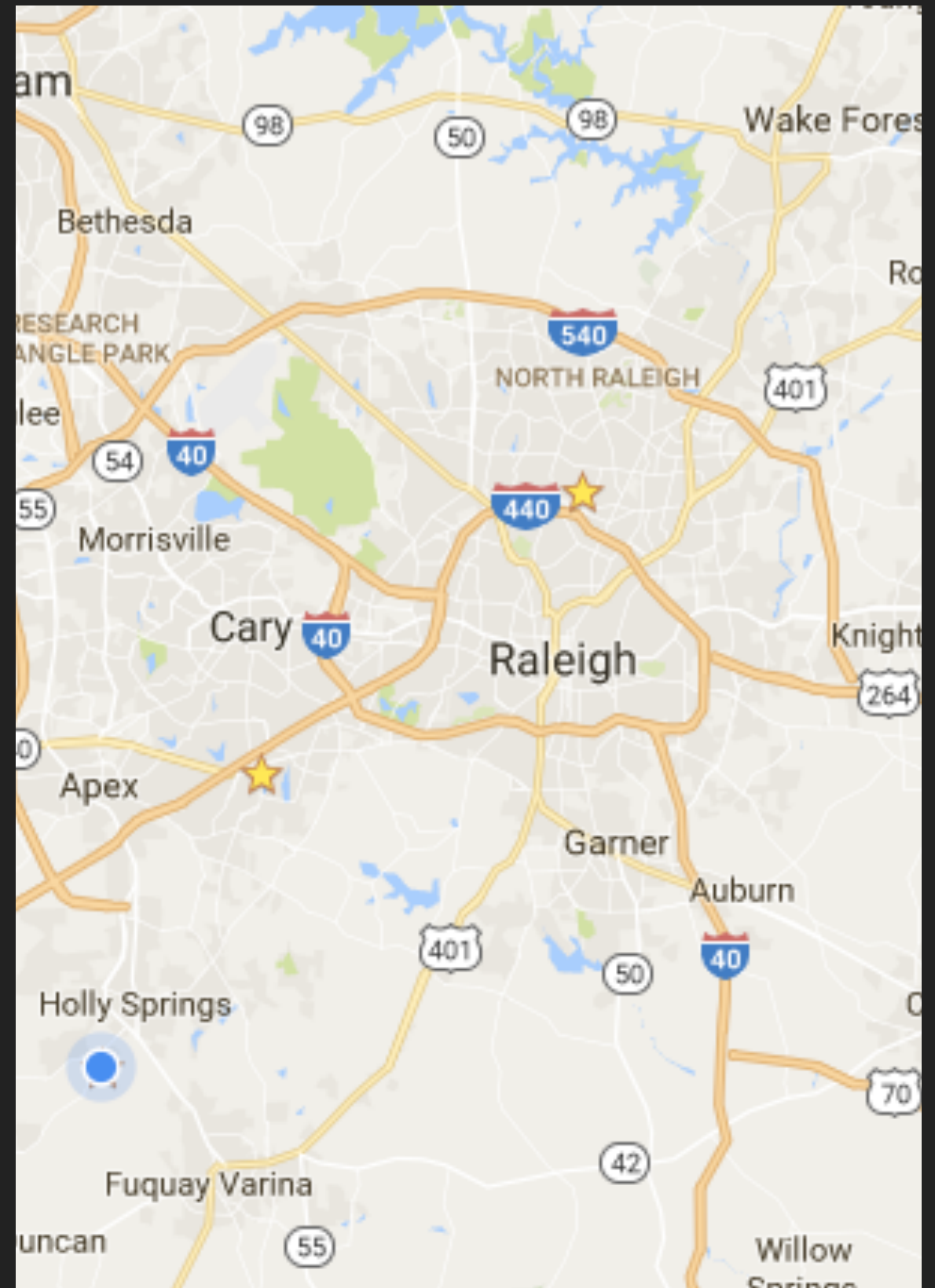


Peripheral/ Galactic Model



GALACTIC/PERIPHERAL MODEL

- ▶ urban area consists of an inner city surrounded by large suburban residential and business area
- ▶ tied together by a beltway or ring road.
- ▶ Around beltway are nodes of consumer & businesses – edge cities
- ▶ Edge Cities started out as suburb residences that gained shopping malls then manufacturing & business parks

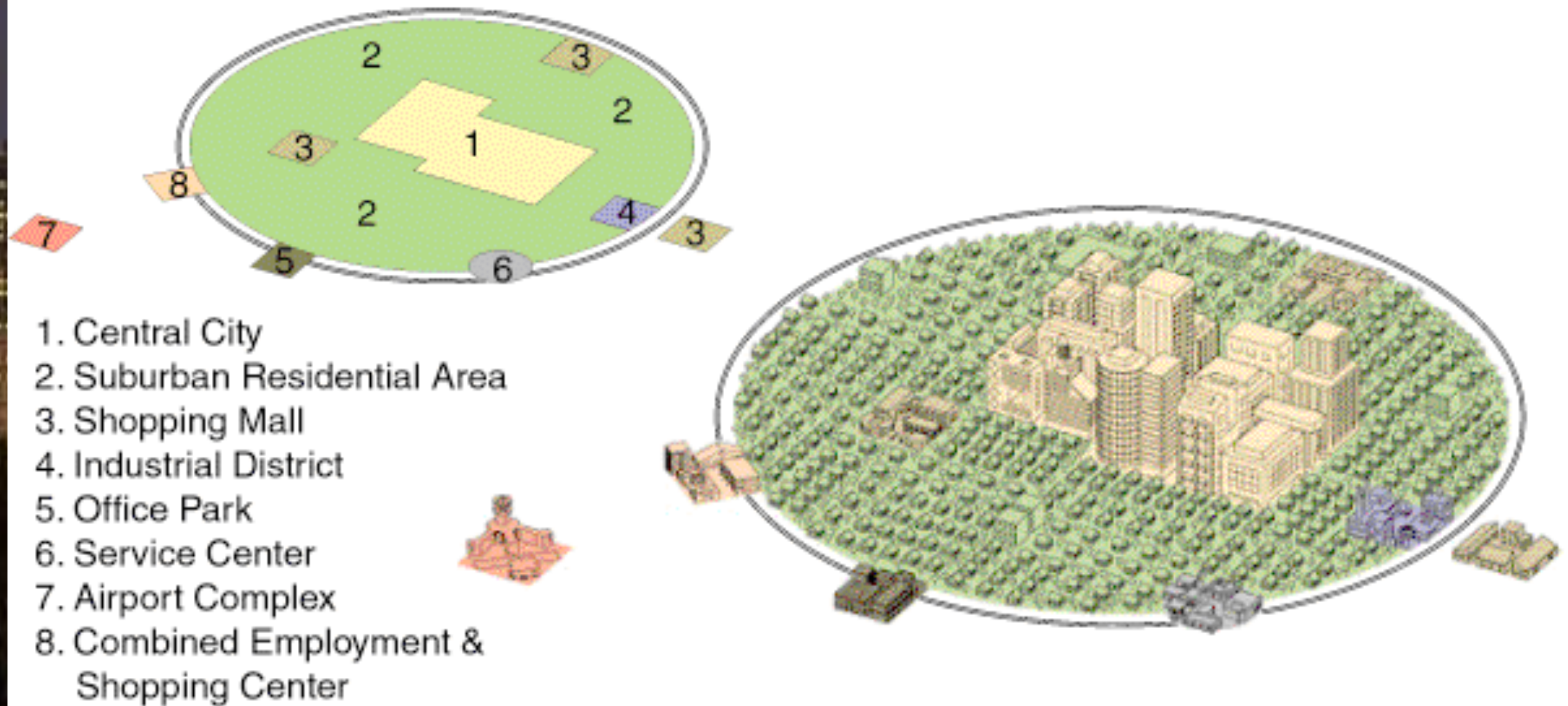




Edge Cities Characteristics

1. The area must have **more than five million square feet of office space** (about the space of a good-sized downtown)
2. The place must include **over 600,000 square feet of retail space** (the size of a large regional shopping mall)
3. The **population must rise every morning and drop every afternoon** (i.e., there are more jobs than homes)
4. The place is known as a **single end destination** (the place "has it all;" entertainment, shopping, recreation, etc.)
5. The area must not have been anything like a "city" 30 years ago (cow pastures would have been nice)

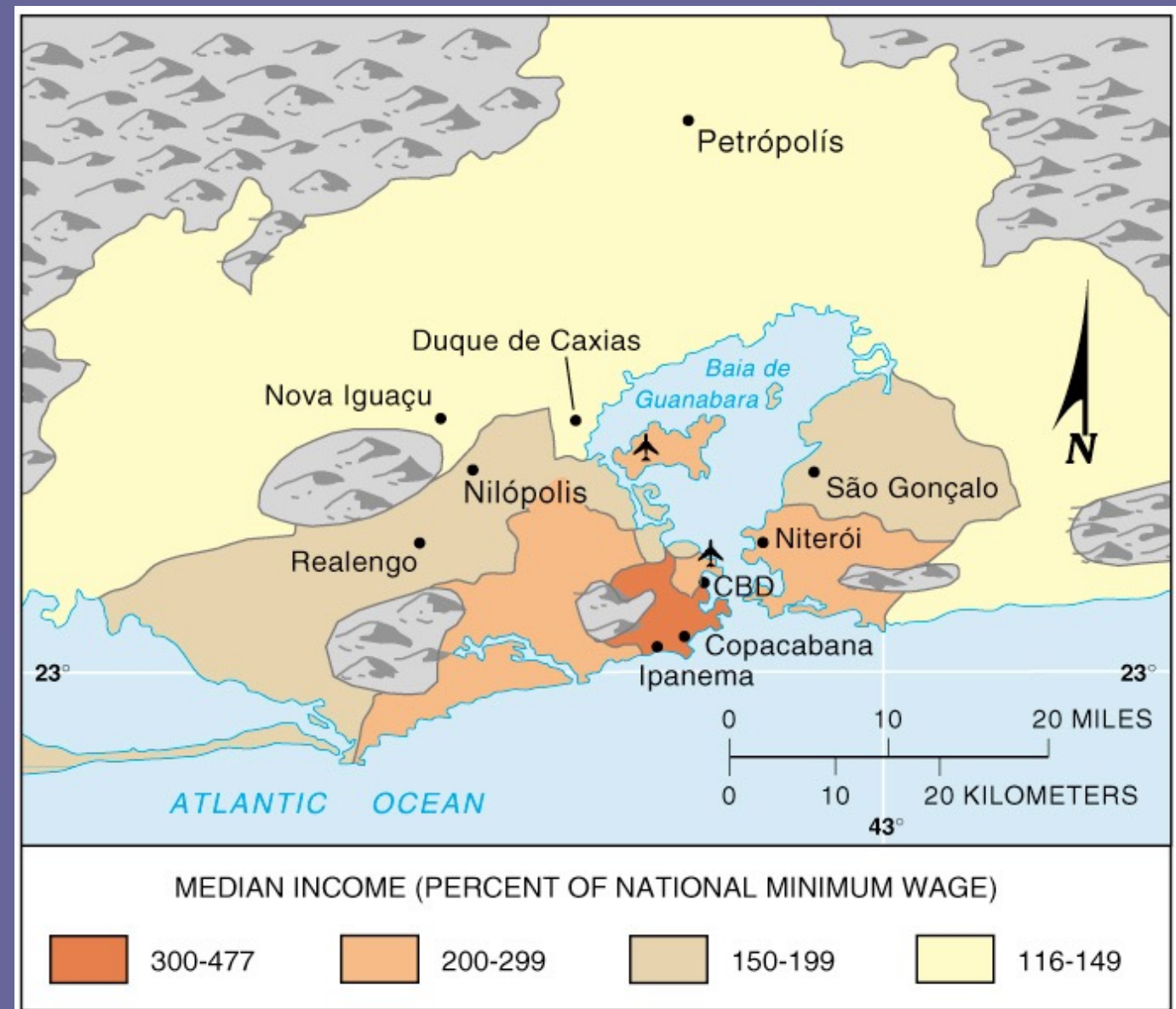
Peripheral Model (contemporary)

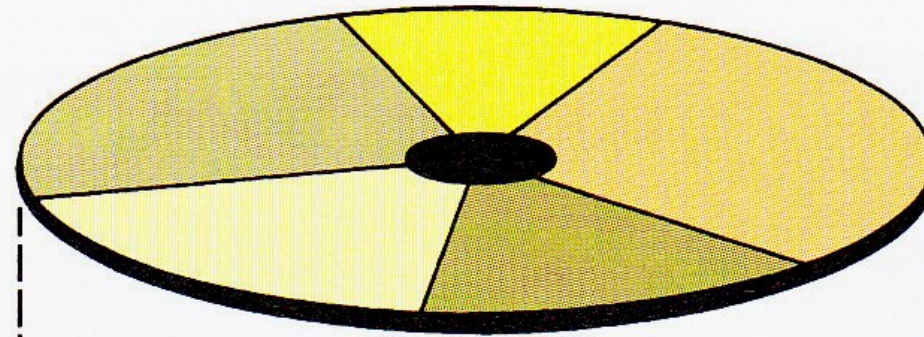


Edge cities (CBDs on Metro fringe)

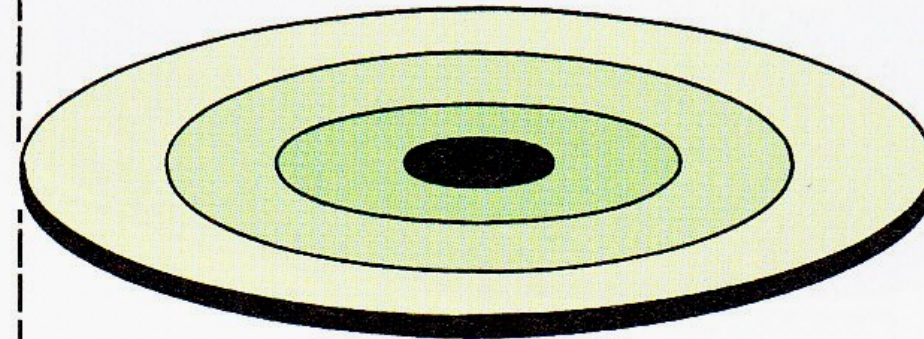


- People in cities group themselves based on
 - Social status
 - Family status,
 - Ethnicity

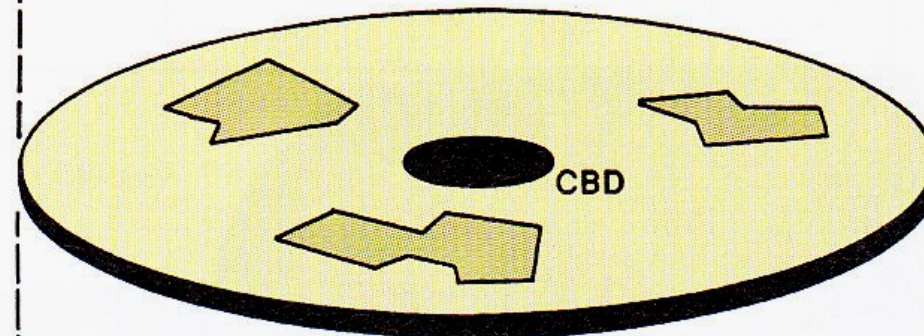




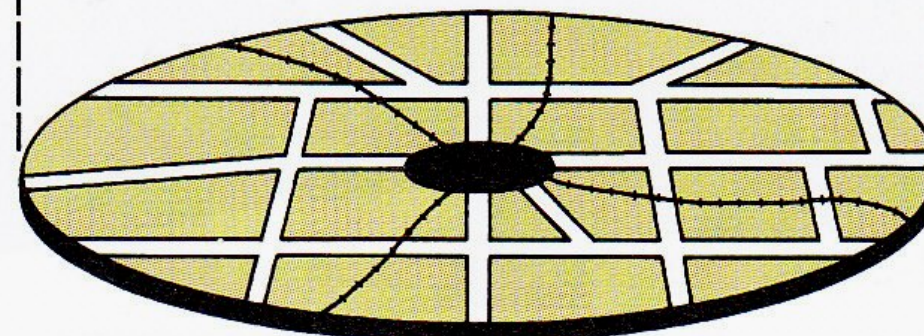
Social Status



Family Status

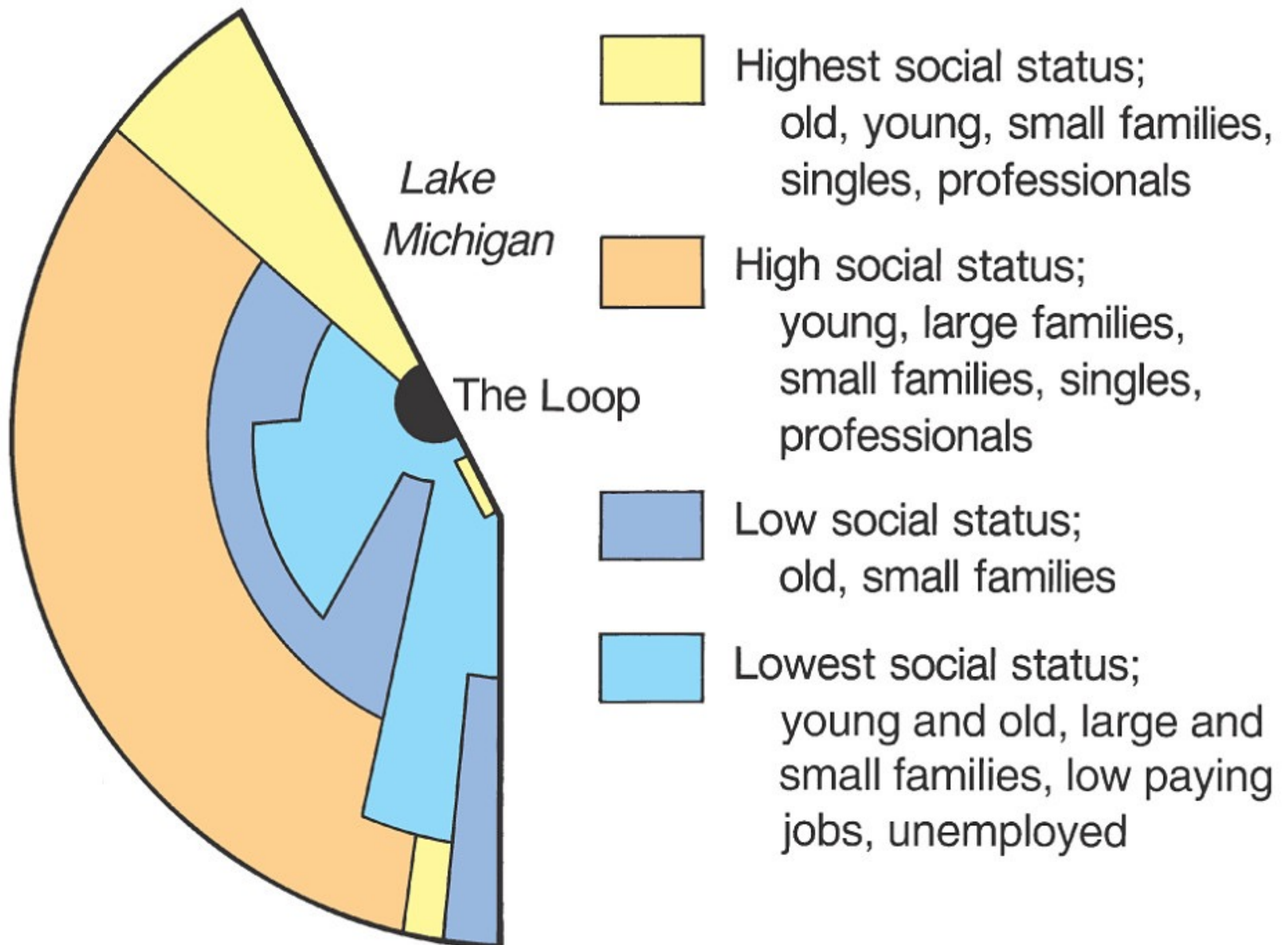


Ethnic Status



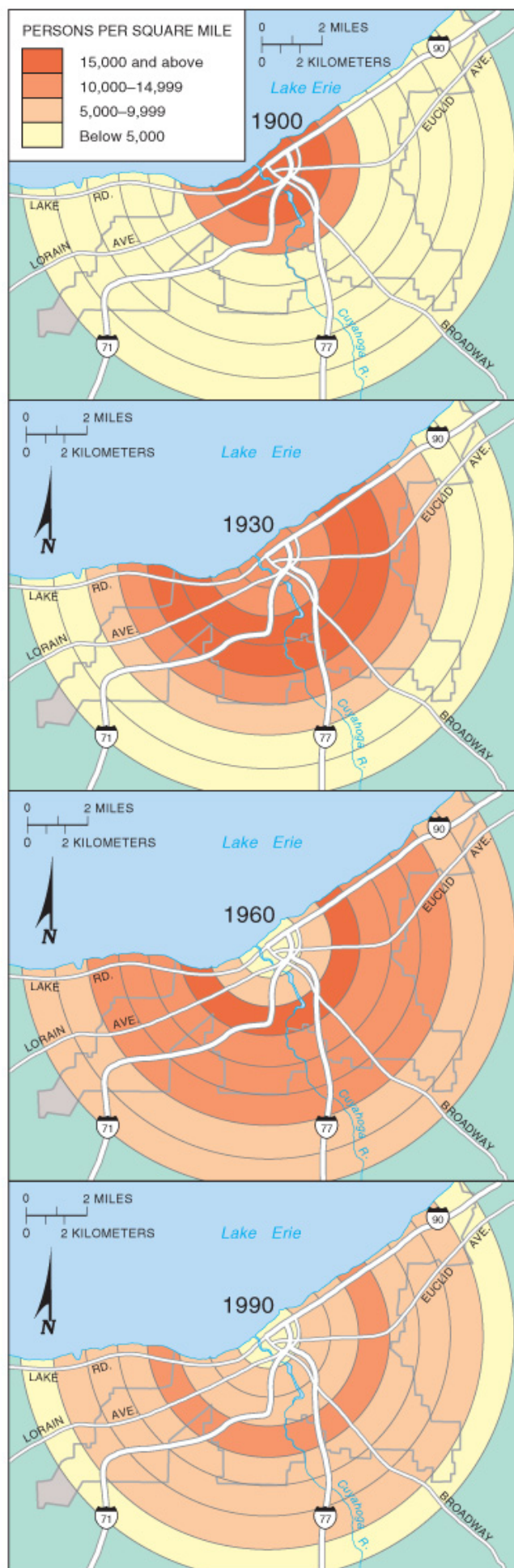
Physical Structure
(roads and transit system)

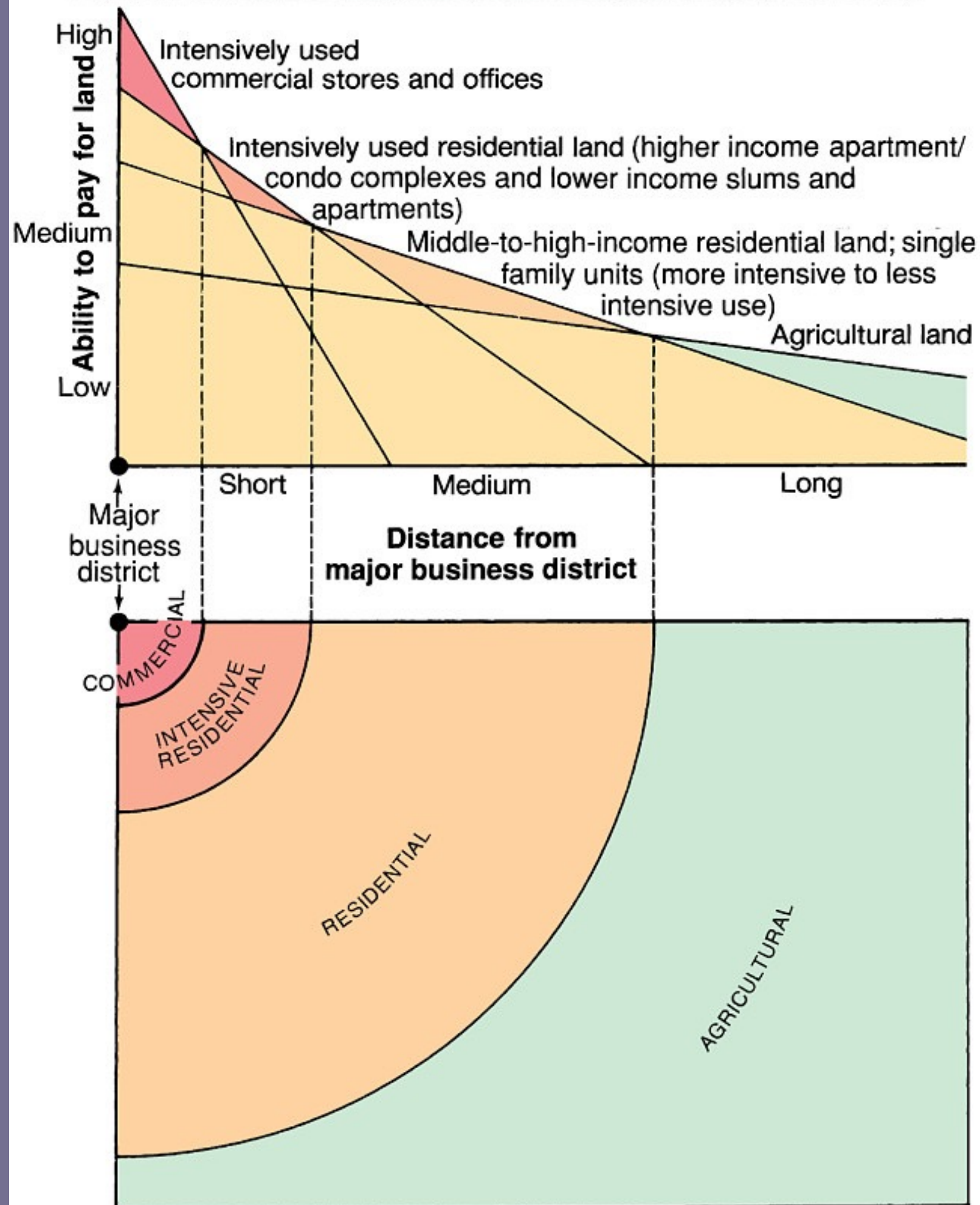
Social Space



Density Gradient

- Recently number of people in city center has decreased
- Less density difference within urban areas







Suburbia...

- According to P.O. Muller
- Suburbia has “evolved into a self-sufficient urban entity, containing its own major economic and cultural activities, that is no longer an appendage to the central city”
- *Contemporary Suburban America* 1981
- Source deBlij 294

Planning for Urban Areas

AP Central - AP Human Ge X AP Human Geography Co X

https://secure-media.collegeboard.org/digitalServices/pdf/ap/ap-human-geography-course-description.pdf

AP Human Geography Course Description Effective 2015 44 / 73

| Enduring Understandings (Students will understand that ...) | Learning Objectives (Students are able to ...) | Essential Knowledge (Students will know that ...) | Examples or Resources |
|--|--|--|------------------------------------|
| E. Urban areas face economic, social, political, cultural, and environmental challenges. | Evaluate problems and solutions associated with growth and decline within urban areas. | Economic and social problems associated with the growth and decline of urban communities include housing and insurance discrimination, housing affordability, access to food stores and public services, disamenity zones, zones of abandonment, and gentrification. | 2005 FRQ #3 |
| | Evaluate problems associated with urban sustainability. | Land use and environmental problems associated with the growth and decline of urban communities include suburban sprawl, sanitation, air and water quality, remediation and redevelopment of brown fields, farmland protection, and energy use. | 2006 MC #50, #58 PE MC #38, #48 |

10:10 AM 3/9/2016

New Urbanism





Urban Sprawl and New Urbanism

- To **counter urban sprawl**, a group of architects, urban planners, and developers outlined an urban design vision they call **new urbanism**: development, urban revitalization, and suburban reforms that **create walkable neighborhoods** with a diversity of housing and jobs”
- Many cities are trying to become “Smart Cities”
- Other **critics** say “communities” that new urbanists form through their projects **are exclusionary and deepen the racial segregation of cities.**

metropolitan area are dependent upon the location and quality of infrastructure (e.g., public transportation, airports, roads, communication systems, water and sewer systems).

Explain the planning and design issues and political organization of urban areas.

Sustainable design initiatives include walkable mixed-use commercial and residential areas and smart-growth policies (e.g., new urbanism, greenbelts, slow-growth cities).

PE MC #26

Functional and geographic fragmentation of governments presents challenges in addressing urban issues.

Analyze the demographic composition and population characteristics of cities using quantitative

Quantitative information about a city's population is provided by census and survey data.

2004 FRQ #3

Qualitative data from field studies and narratives provide





Slow Growth

- Slow Food Movement: reaction against building a McDonalds in the Piazza di Spagna – 11,000+ members in 83 countries
- Slow City Movement: started in Italy in 1999
 - a series of principles that included calmer and less polluted physical environments, conserving local aesthetic traditions, & fostering local crafts, produce, & cuisine.
 - pledged to use technology to create healthier environments, make citizens aware of the value of leisurely rhythms to life, & to share their experience in seeking solutions for better living.
 - The goal is to foster the development of places that enjoy a robust vitality based on good food, healthy environments, sustainable economies, and traditional rhythms of community life.
- Must comply with a 54-point Charter that outlines the goals of the movement.
 - To be eligible for membership, cities must have no more than 50,000 residents and must pledge to work towards implementing the promotion of organic agriculture, the banning of genetically modified foods and organisms, urban revitalization and historic preservation, alternative energy systems, preservation of local tradition and heritage, signage and light regulations, to building awareness of the local citizenry for the Slow City goals.
 - more than 65 cities have been certified so far. Towns in Germany, Norway and the United Kingdom are now part of the movement as well. More than 300 other towns from around the world have inquired

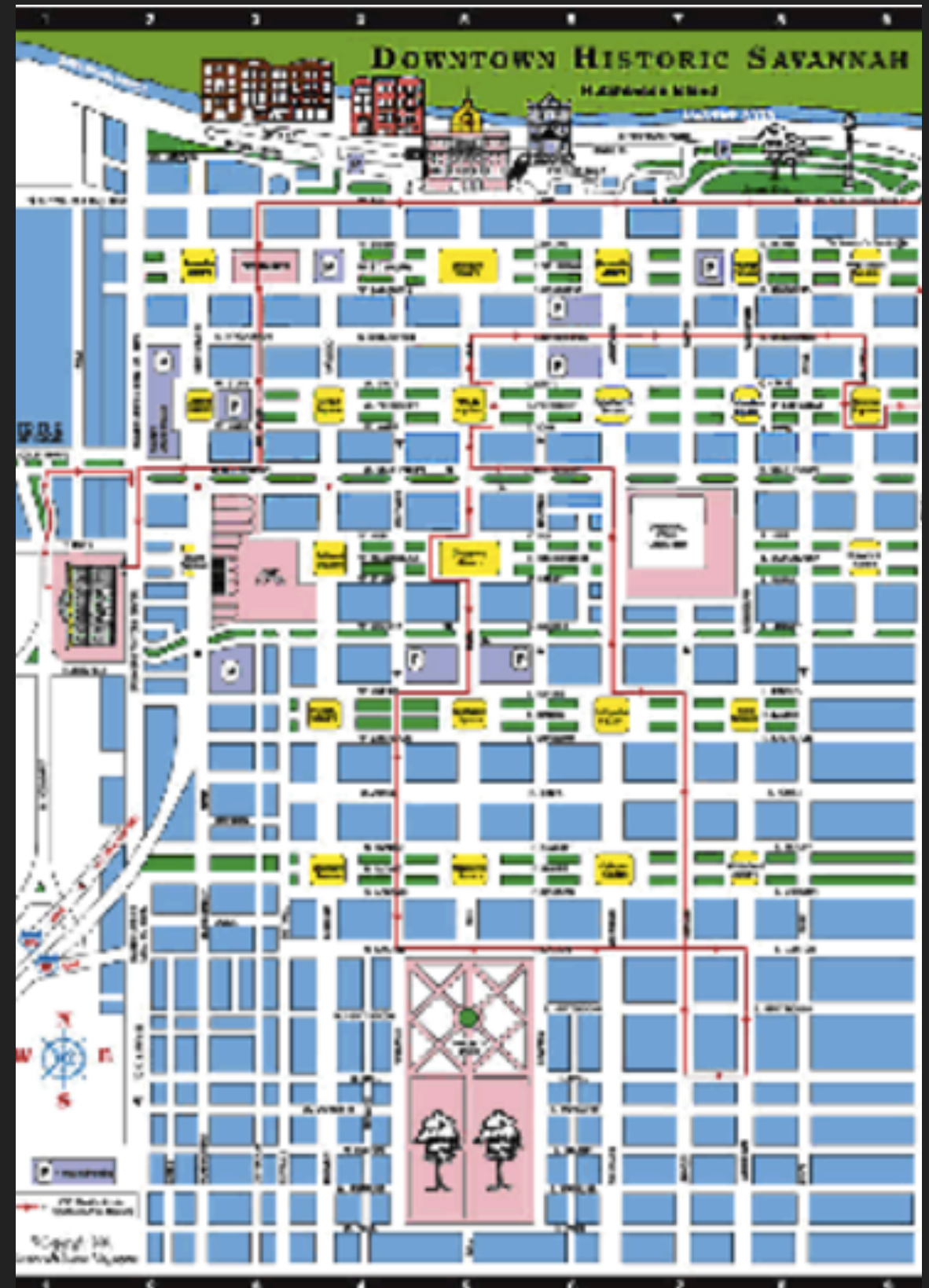
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URBANIZATION

URBAN PLANNING

- ▶ <https://www.youtube.com/watch?v=yqmso0c9CBs>
- ▶ Urban planning is the profession that concerns itself with the health and quality of life of urban places—cities and their suburbs, small towns and rural villages.
- ▶ Planning is future-oriented, a profession that creates both short and long term visions balanced with market and cultural influences.
- ▶ Planners look five, twenty, and even fifty years into the future to anticipate the future consequences of current trends and activities



Urban Planning Building Better Cities

- How to Make a Great City
 - Famous Planned Cities
 - [Canberra, Australia](#)
 - [Brasilia, Brazil](#)
 - [Washington, D.C.](#)
 - Irvine, CA
 - [Seaside, FL](#)
 - [Poundbury, England](#)
 - Smart Growth
 - Pedestrian Friendly
 - Increase Density
 - Mix Ethnic and Income Groups

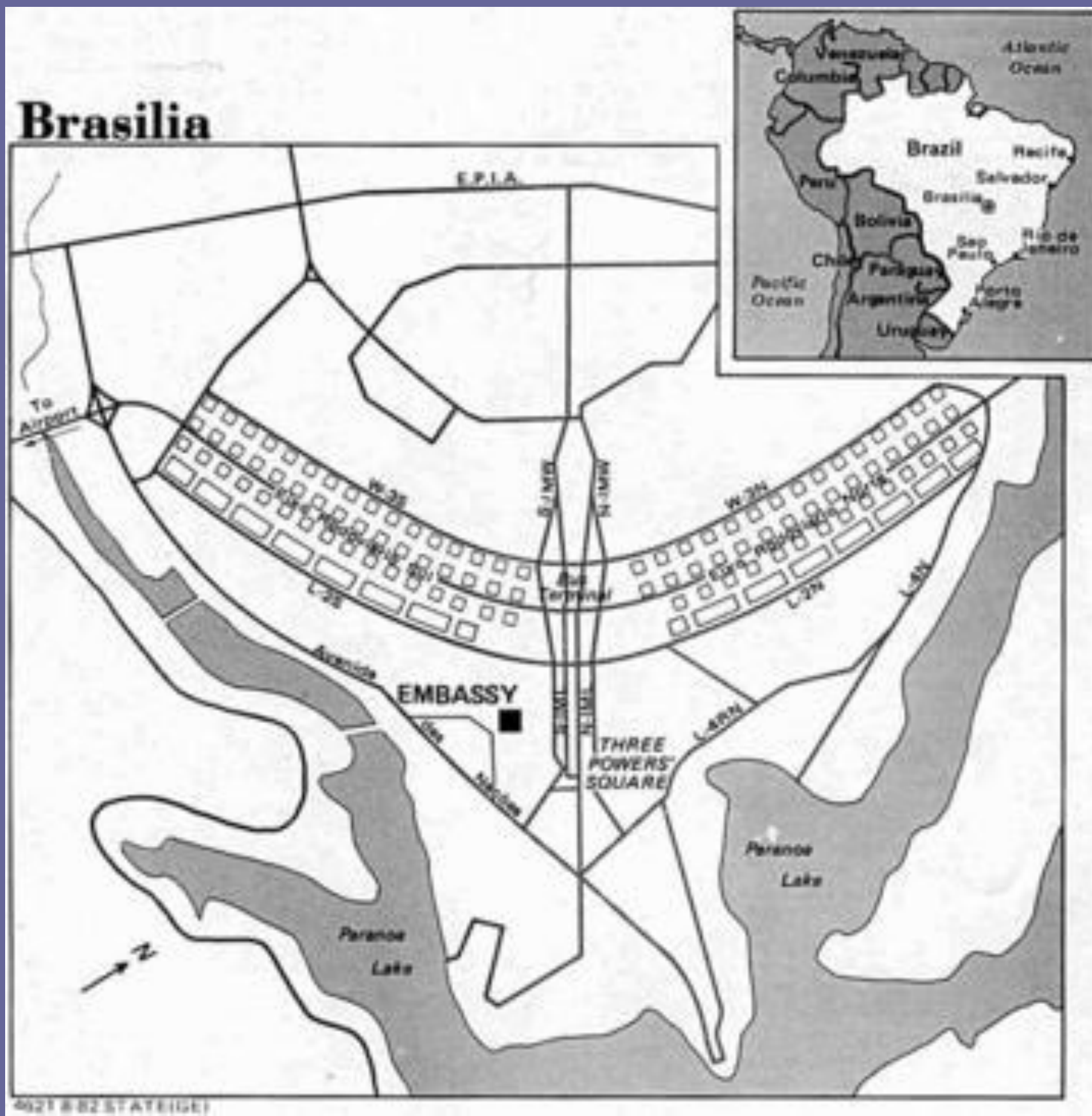


SMART GROWTH

- ▶ Connecting the cities in “smart” ways
 - ▶ Building infrastructure for the future (roads, bridges, charging stations, depots for trains/light rail, rail road track)
- ▶ Smart transportation
 - ▶ increasing public transportation (busses, trains, bikes, legs, etc)

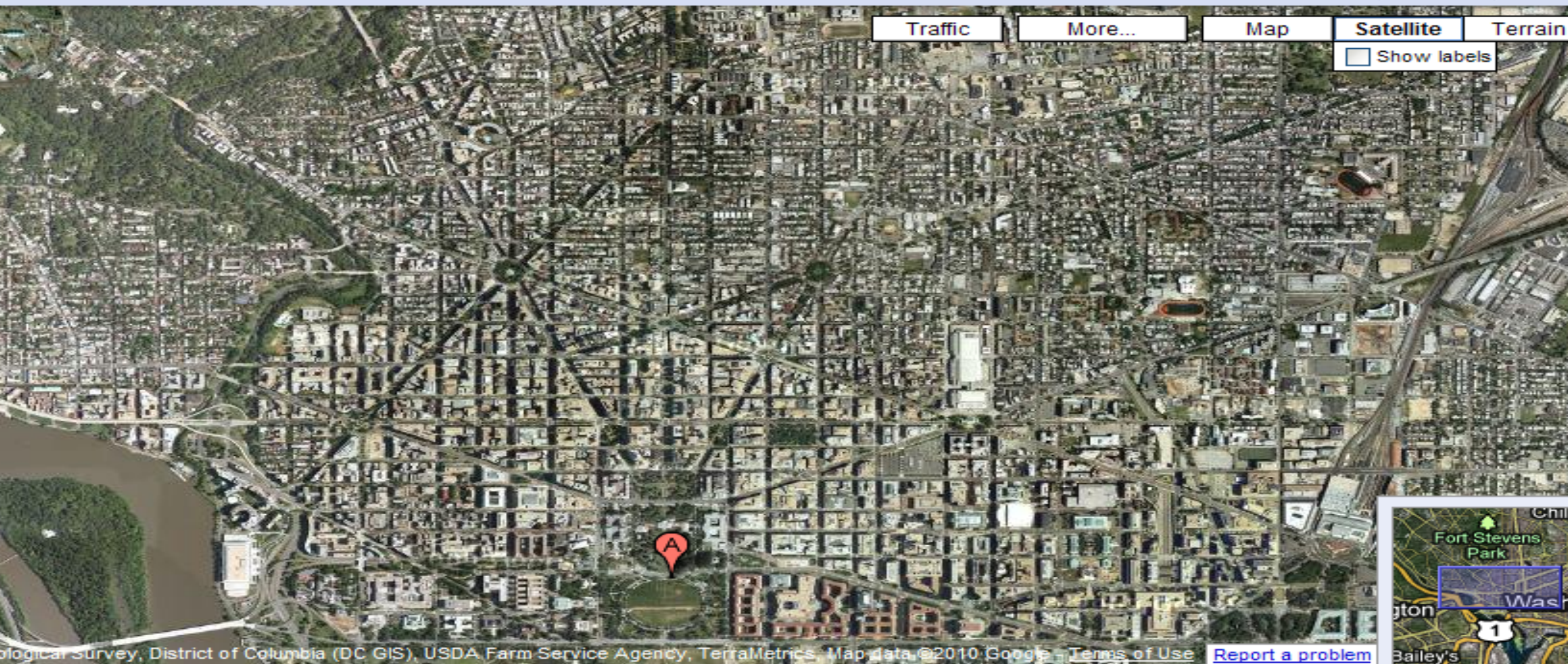








Washington, DC



biological Survey, District of Columbia (DC GIS), USDA Farm Service Agency, TerraMetrics, Map data ©2010 Google, Terms of Use

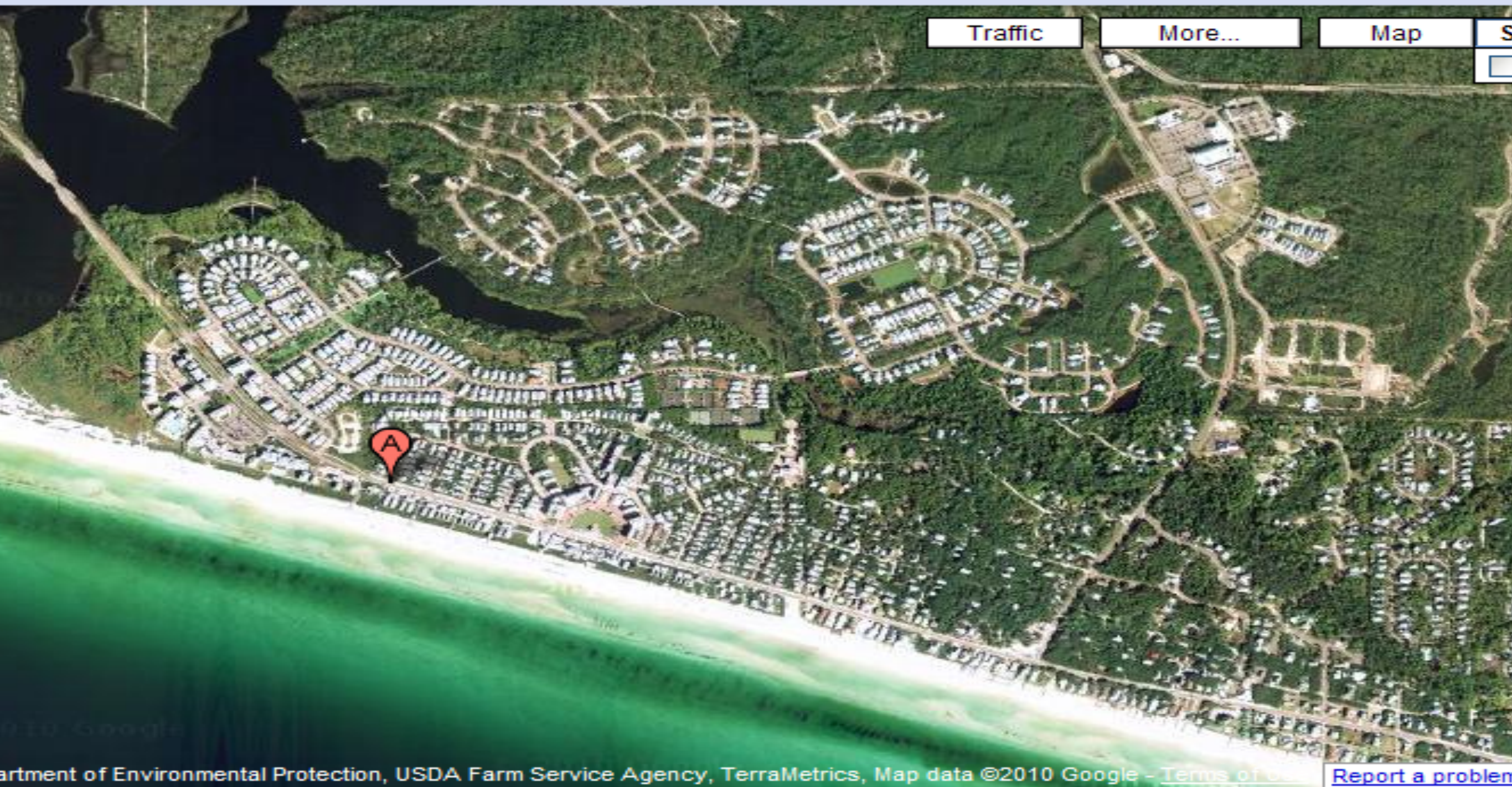
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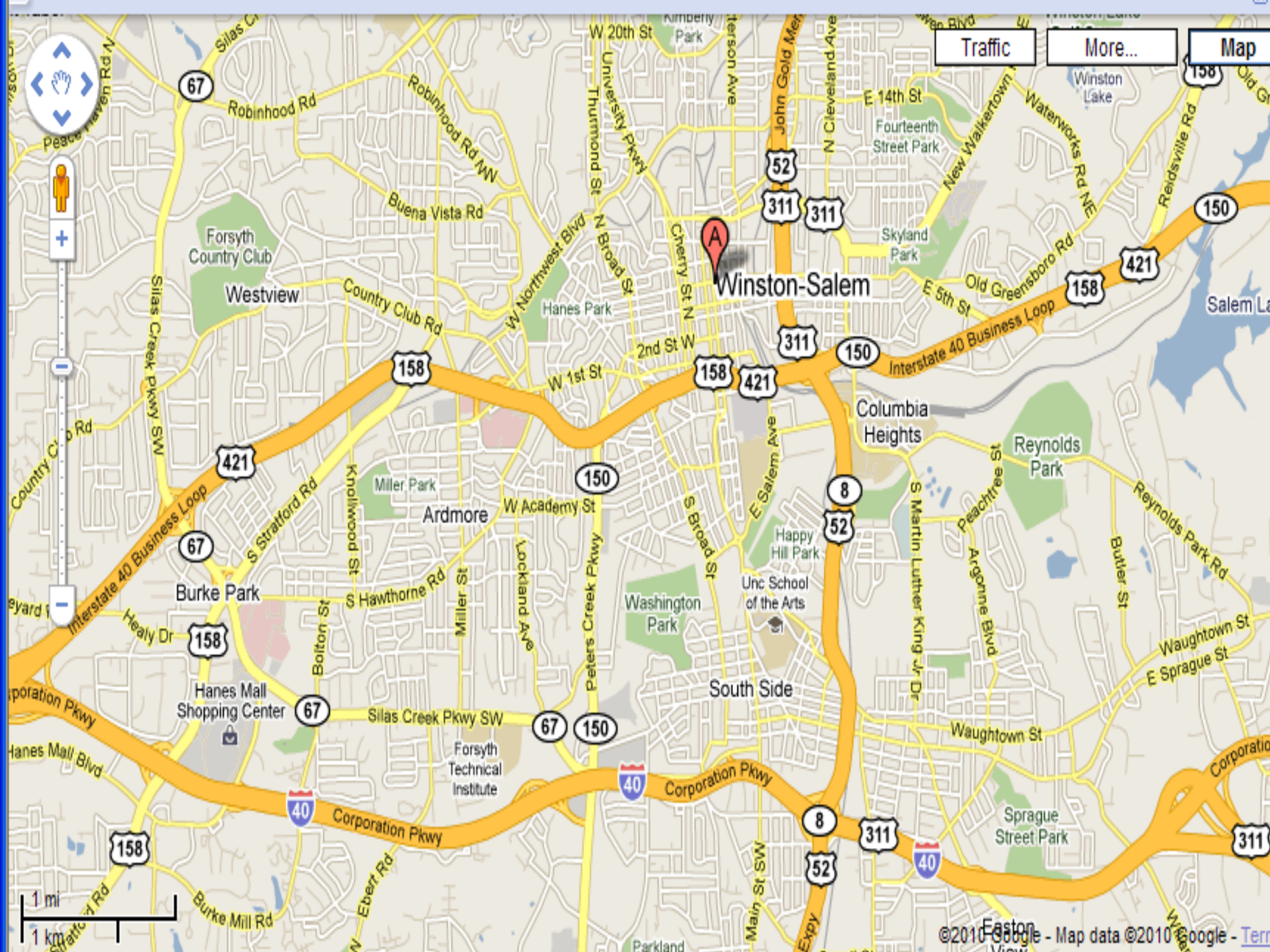
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100%



Seaside, FL





Traffic

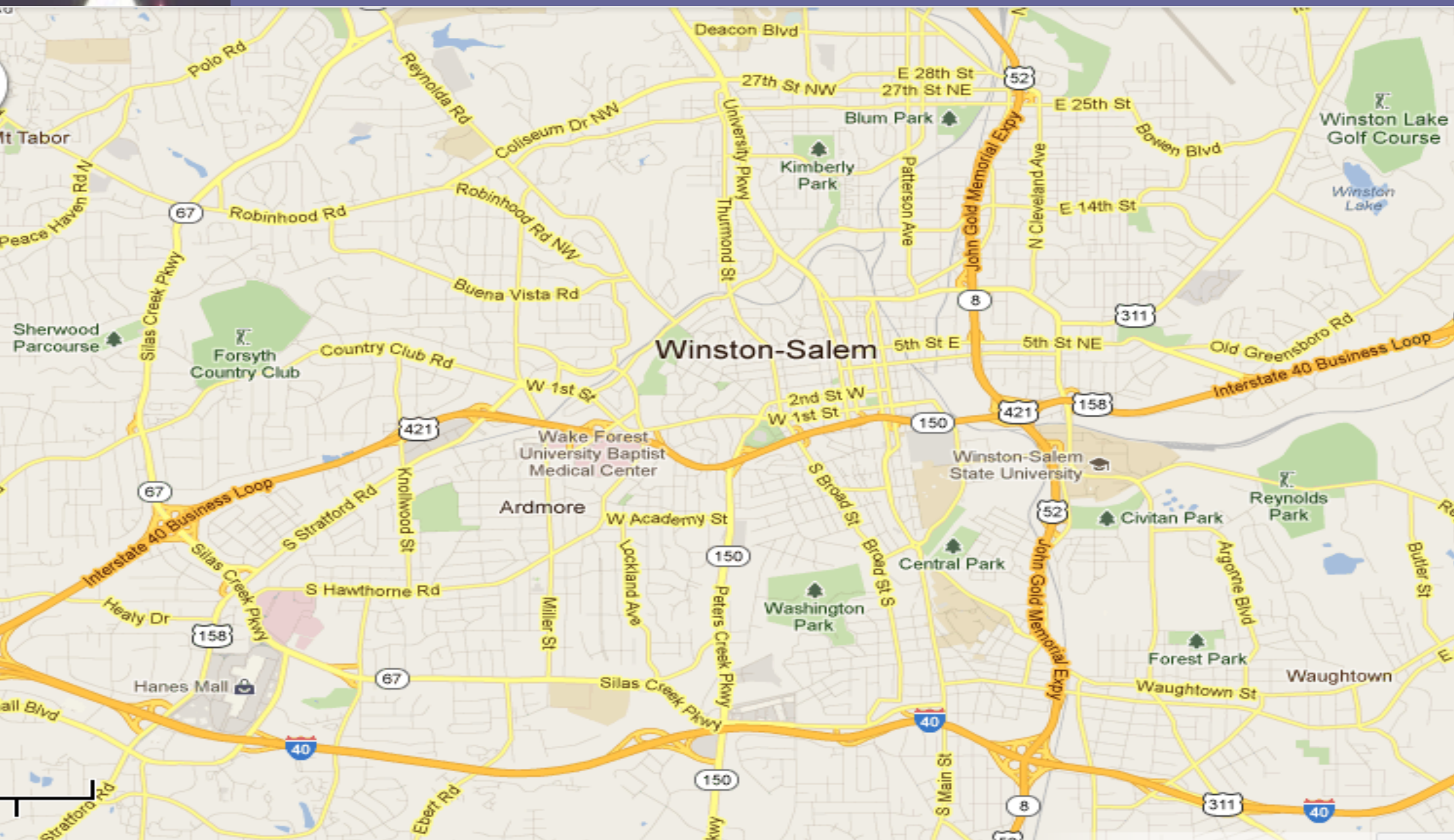
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Map

Winston-Salem

1 mi
1 km

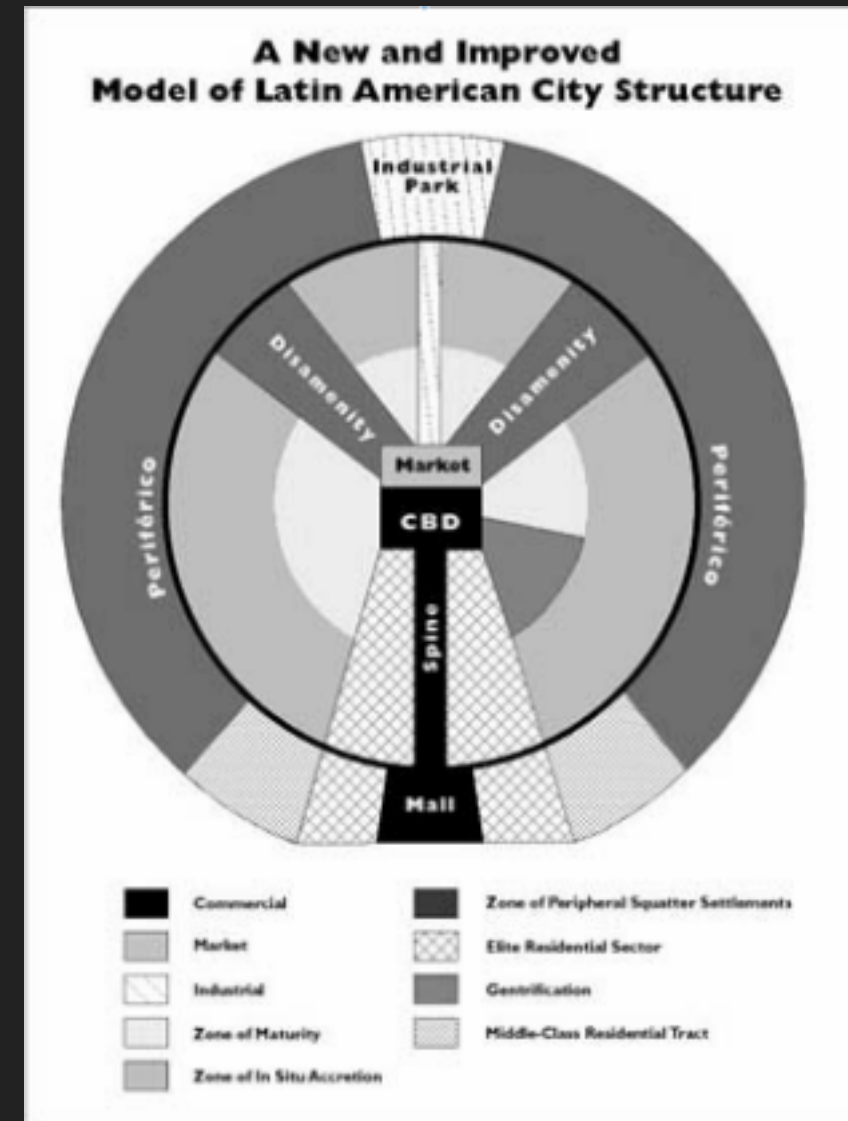
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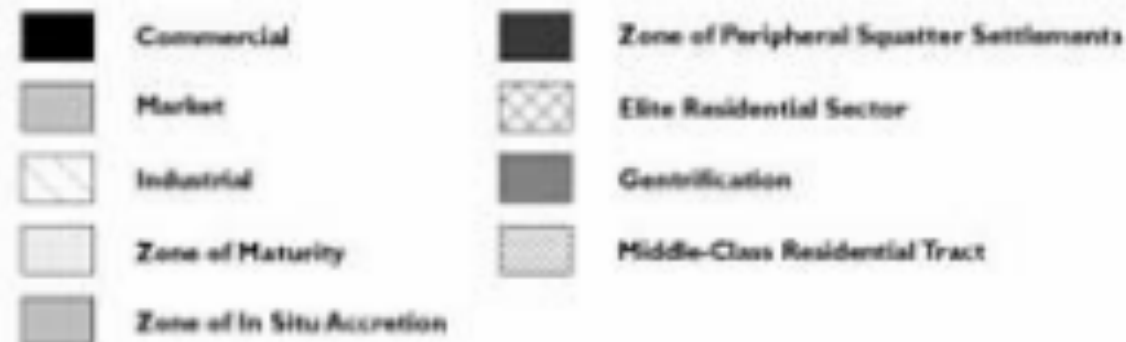
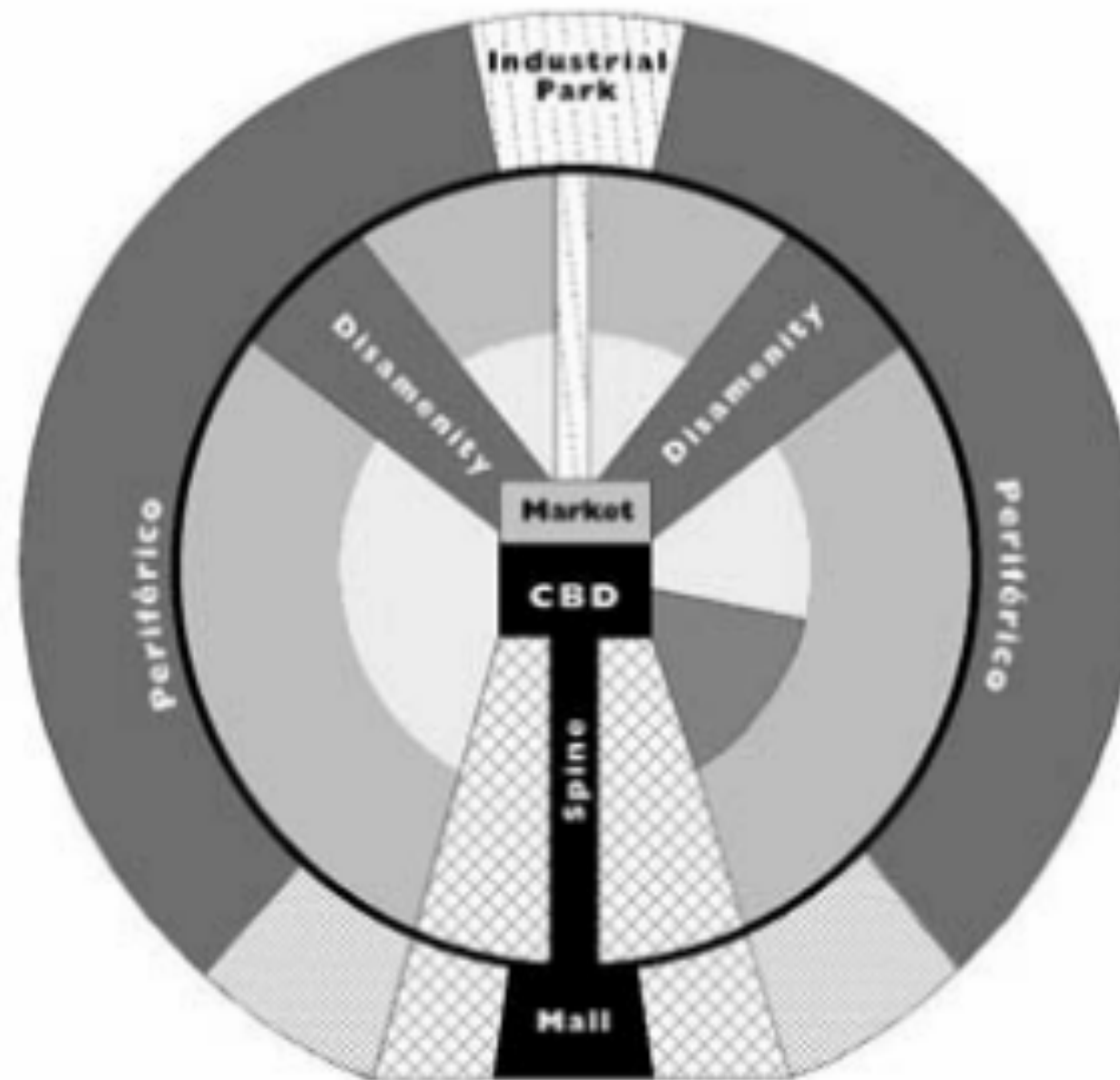
LATIN COUNTRY MODEL

- ▶ can be applied to many African states

Larry Ford and Ernest Griffin created a model of the pattern of urban growth in Latin America. Their model contains elements of Latin American culture and imprints of colonization and globalization, such as a prominent plaza and heavy growth around the CBD. However, in the Latin American pattern shown in their model, residential quality decreases with distance from the CBD. The model also presents a zone of maturity, populated with services and a wealthier population; in a zone of squatter settlements, where recent urban migrants set up makeshift housing; and a zone of in situ accretion, which is a transitional zone that shows signs of transition to a zone of maturity.



A New and Improved Model of Latin American City Structure



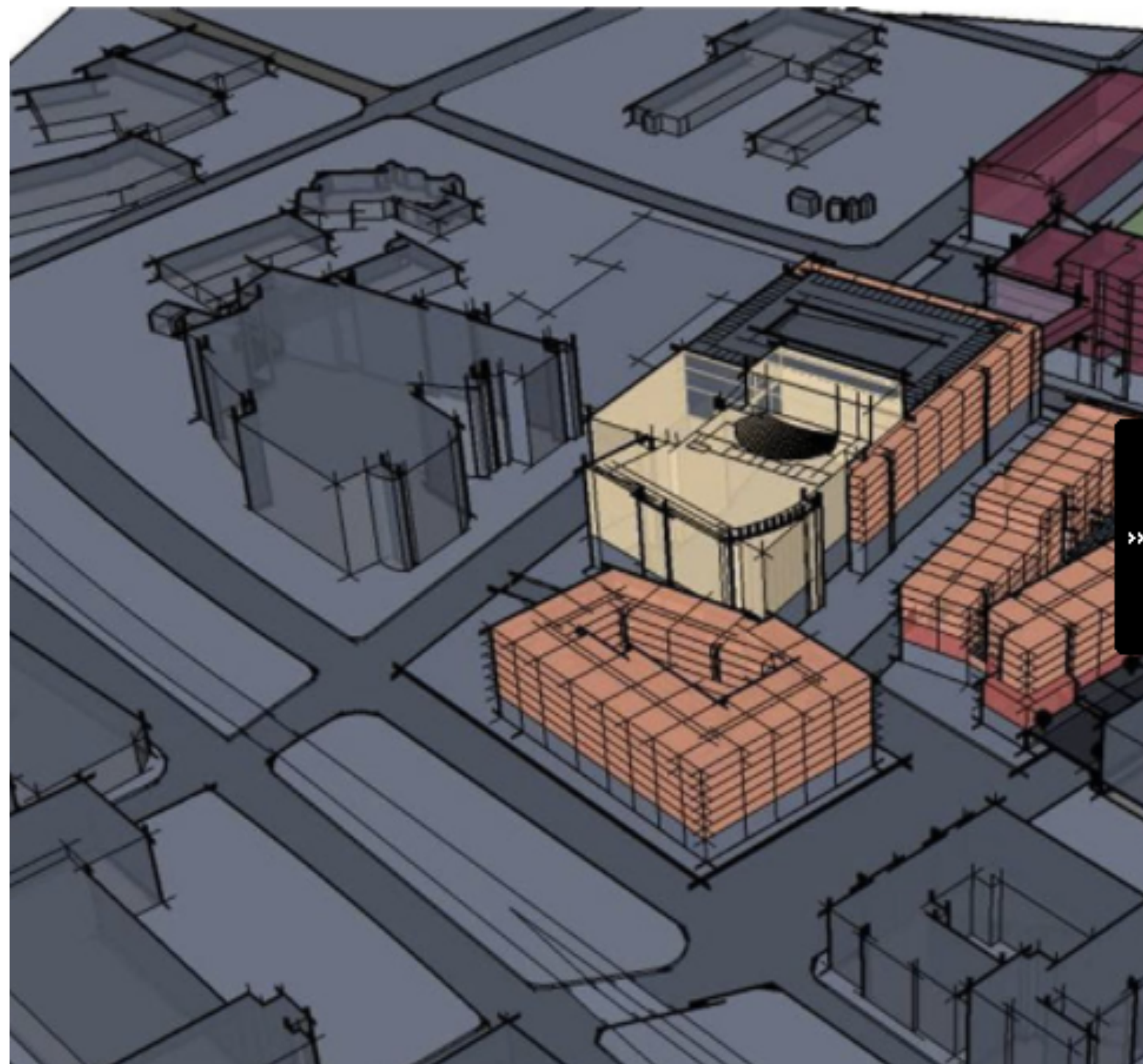


**BUILT LANDSCAPES AND SOCIAL SPACE
REFLECT THE ATTITUDES AND VALUES OF A
POPULATION.**



**RESIDENTIAL
BUILDINGS AND
PATTERNS
OF LAND USE REFLECT
A CITY'S CULTURE,
TECHNOLOGICAL
CAPABILITIES, AND
CYCLES OF
DEVELOPMENT.**

BUILT LANDSCAPES AND SOCIAL SPACE REFLECT THE ATTITUDES AND VALUES OF A POPULATION.



The American Tobacco Campus is recognized as one of Durham's most impressive mixed-use redevelopment efforts. The campus was once home to the Durham Tobacco Company, the largest tobacco company in the world at the turn of the century. Several historic buildings remain from that era including the Old Bull or "Bull Durham" Tobacco Building, the oldest factory building in Durham and a National Historic Landmark.

FMK Architects was asked by Capitol Broadcasting to provide a new vision for the Phase III property. The site in question involved the land north of the new Old Bull's Stadium and south of Pettigrew Street and the rail line. The primary goal was to introduce a substantial residential component to the American Tobacco campus along with additional retail, office and parking opportunities - and the long anticipated performing arts facility.

The resulting plan introduces an urban street pattern, a variety of connected public spaces and urban mixed-use buildings. Four to six-story buildings complement vibrant sidewalks and public spaces. An additional 140,000 SF of retail space is provided, 345 multifamily units and well over 1,100 structured parking spaces.

The American Tobacco Campus Master Plan was completed in 2005.

BUILT LANDSCAPES AND SOCIAL SPACE
REFLECT THE ATTITUDES AND VALUES OF A POPULATION.

GENTRIFICATION

- ▶ The process in which higher-income people and retail outlets that cater to them move into a neighborhood previously dominated by low-income households
- ▶ In non-gentrifying neighborhoods, poor people move out and are replaced with other poor people. In gentrifying neighborhoods, poor people who move out are replaced with non-poor people.



BUILT LANDSCAPES AND SOCIAL SPACE
REFLECT THE ATTITUDES AND VALUES OF A POPULATION.

GENTRIFICATION HAS PROS AND CONS

▶ Positives

- ▶ reduces segregation
- ▶ increases property values
- ▶ “social mixing”
- ▶ job creation

▶ Negatives

- ▶ increasingly corporate-driven
- ▶ low-income residents driven out
- ▶ sameness
- ▶ cultural destruction
- ▶ loss of “mom and pop” establishments

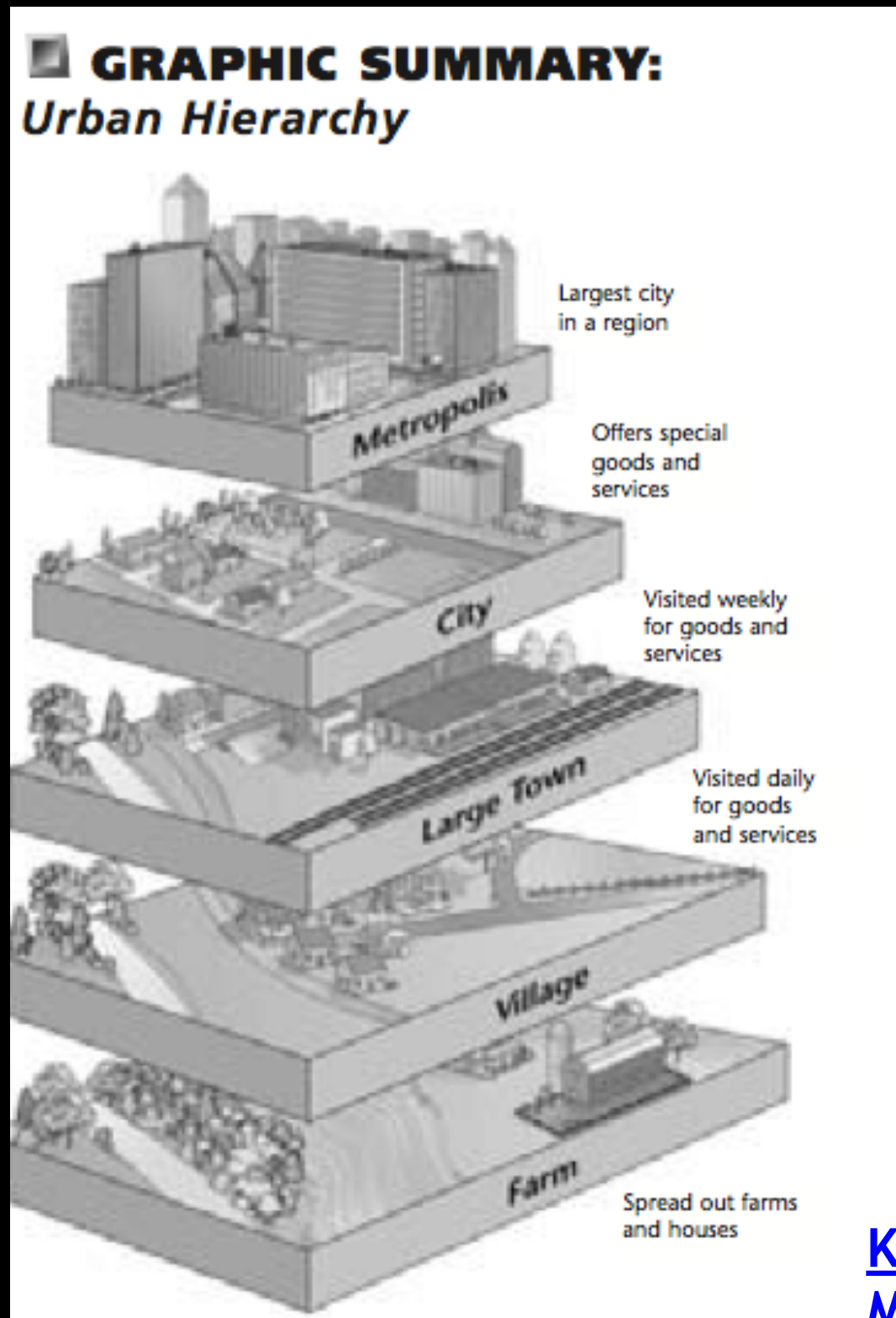




FILTERING

**AS OLD STRUCTURES AGE THEY GENERALLY
DETERIORATE, BECOME OBSOLETE, FALL OUT
OF FASHION, AND 'FILTER DOWN' IN VALUE.**

Urban Hierarchy



- **Urban hierarchy** is a system of cities consisting of various levels, with few cities at the top level and increasingly more settlements on each lower level.
- **Position** on the hierarchy is determined by the types of central place functions it provides.

[Kuby # 9 - Take Me Out to the Ballgame: Market Areas and Urban Hierarchy](#)

Central Place + Urban Hierarchy

An Example

Over the last thirty years, populations in the US South and West have increased and become wealthier overall. With more people and wealth, more services were needed. Several cities stepped up to fill this need - Phoenix, Atlanta, and Dallas moved up on the urban hierarchy as they grew to offer more central place functions to the newly growing populations. As with any hierarchy, as these cities moved up the ladder, other cities moved to fill their places: cities like Tampa, San Antonio, and Charlotte moved up, while some older manufacturing cities in the Northeast and Midwest began to fall in their rankings within the urban hierarchy.

Rank-Size Rule

- There is a **relationship between a city's population size and its place on the urban hierarchy** within its urban system.
- A city's ranking in the urban hierarchy can be predicted by the **rank-size rule**, which states:
 N^{th} largest city = $1/n$ the size of largest city
 - The largest city has 10 million
 - The next city has 5 million
 - The next city has 3.33 million

Primate Cities

Cities with **primacy** are more than two times the size of the next largest city and exert political, social and economic dominance.

Example - Buenos Aires, Argentina is nearly 10 times the size of its second largest city, Rosario.

Positives of Primate Cities:

- Advantages of agglomeration of economic activity.
- Large market for goods and services.
- Ability to offer high-end goods and services (including education) because of larger threshold population.
- Advantages of centralized transportation and communication network.
- Global trade opportunities; primate cities can compete on a global scale and attract foreign investment.

Negatives of Primate Cities:

- Unequal economic and/or resource development.
- Unequal distribution of wealth and/or power.
- Transportation network (hub and spoke) prevents equal accessibility to all regions.
- Impact of centrifugal forces and difficulties of political cohesion on economic development.
- Brain drain — migration and unequal distribution of education, entrepreneurship, opportunities.

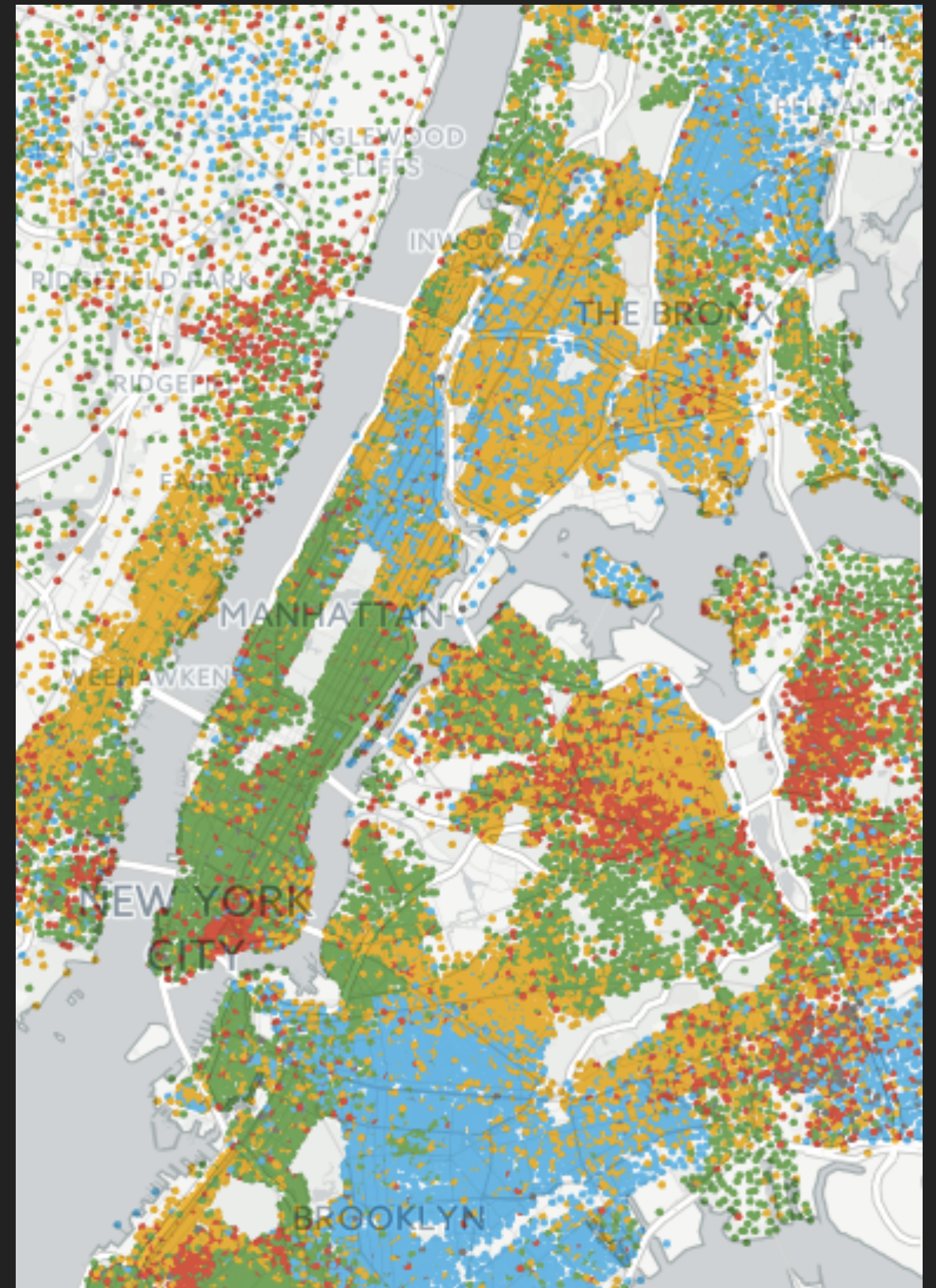
Centrality

Additionally, when a city dominates economic, political, or cultural functions more than you would expect based on its population size, the city also demonstrates a high degree of **centrality**, or the possession of central place functions.

Example - Managua, Nicaragua accounts for only 30% of the total population but controls nearly 40% of the country's economy.

HOW DO WE MEASURE CITY DEMOGRAPHICS?

- ▶ Through Quantitative and Qualitative Measures
 - ▶ Quantitative measures - population, #s of people in any demographic
 - ▶ Qualitative measures - case studies, testimonials, human interest stories



CHALLENGES FACING CITIES

LIMITING FACTORS TO THE DEVELOPMENT OF CITIES

- ▶ high functioning cities are successful at connecting its citizens to essential services (public, business, consumer)
- ▶ connecting citizens to these services is the most important factor in the economic development of that city
- ▶ dependable and useful infrastructure is crucial (roads, bridges, power grid, rail systems, public transit)



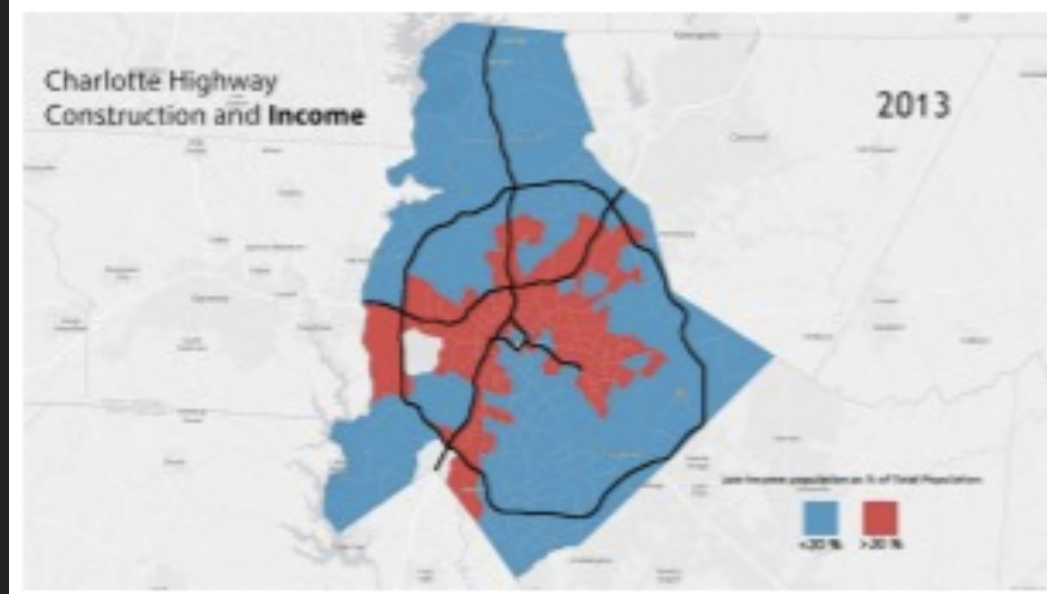
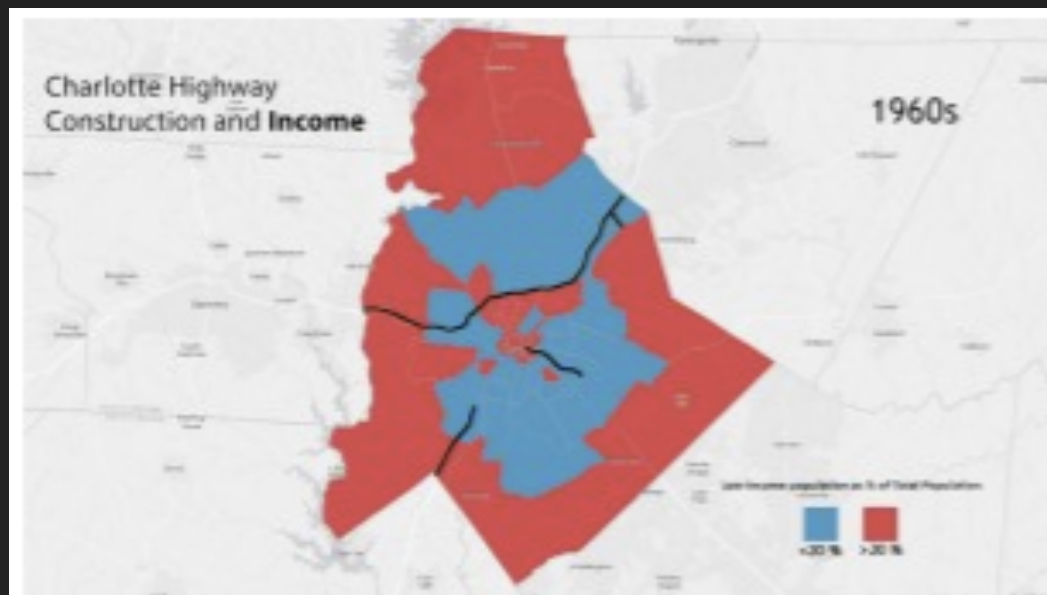
THINK AND SHARE

**WHAT CHARACTERISTICS ARE MOST
IMPORTANT IN JUDGING THE QUALITY OF A
STATE'S INFRASTRUCTURE?**

WORST ROADS

- ▶ <http://www.cnbc.com/2016/07/12/crumbling-america-10-states-with-the-worst-infrastructure.html?slide=2>
- ▶ <http://www.rd.com/advice/travel/the-best-worst-and-deadliest-roads-in-america-the-rankings/>





**URBAN AREAS FACE
ECONOMIC, SOCIAL,
POLITICAL,
CULTURAL,
AND ENVIRONMENTAL
CHALLENGES.**

PROBLEMS FACING CITIES

EVALUATE PROBLEMS AND SOLUTIONS ASSOCIATED WITH GROWTH AND DECLINE WITHIN URBAN AREAS.

- ▶ Economic and social problems associated with the growth and decline of urban communities include...
 - ▶ housing and insurance discrimination
 - ▶ housing affordability,
 - ▶ (food deserts) lack of access to food stores and public services,
 - ▶ disamenity zones,
 - ▶ zones of abandonment,
 - ▶ and gentrification.

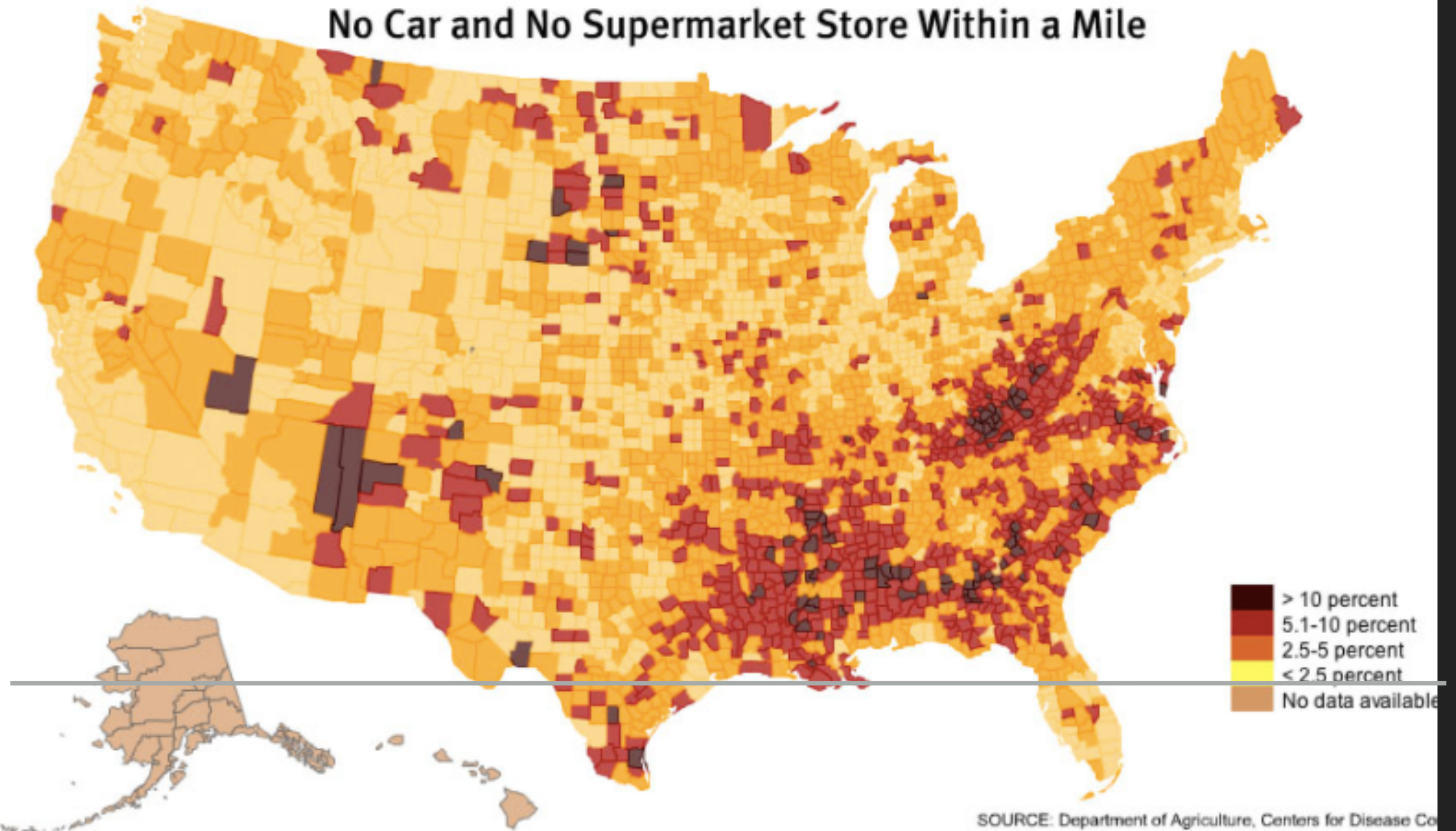


FOOD DESERTS

- ▶ low income neighborhoods where consumers have little access to medium and large grocery stores
- ▶ limited access to fresh nutritious foods
- ▶ the result is that low income families consume too much fast food which leads to poor health, and is more expensive
- ▶ disproportionately affects low income and minority families



No Car and No Supermarket Store Within a Mile



FOOD DESERT



FOOD DESERTS IN MISSISSIPPI

DISAMENITY

- ▶ The very poorest parts of cities that in extreme cases are not connected to regular city services and are controlled by gangs and drug lords.

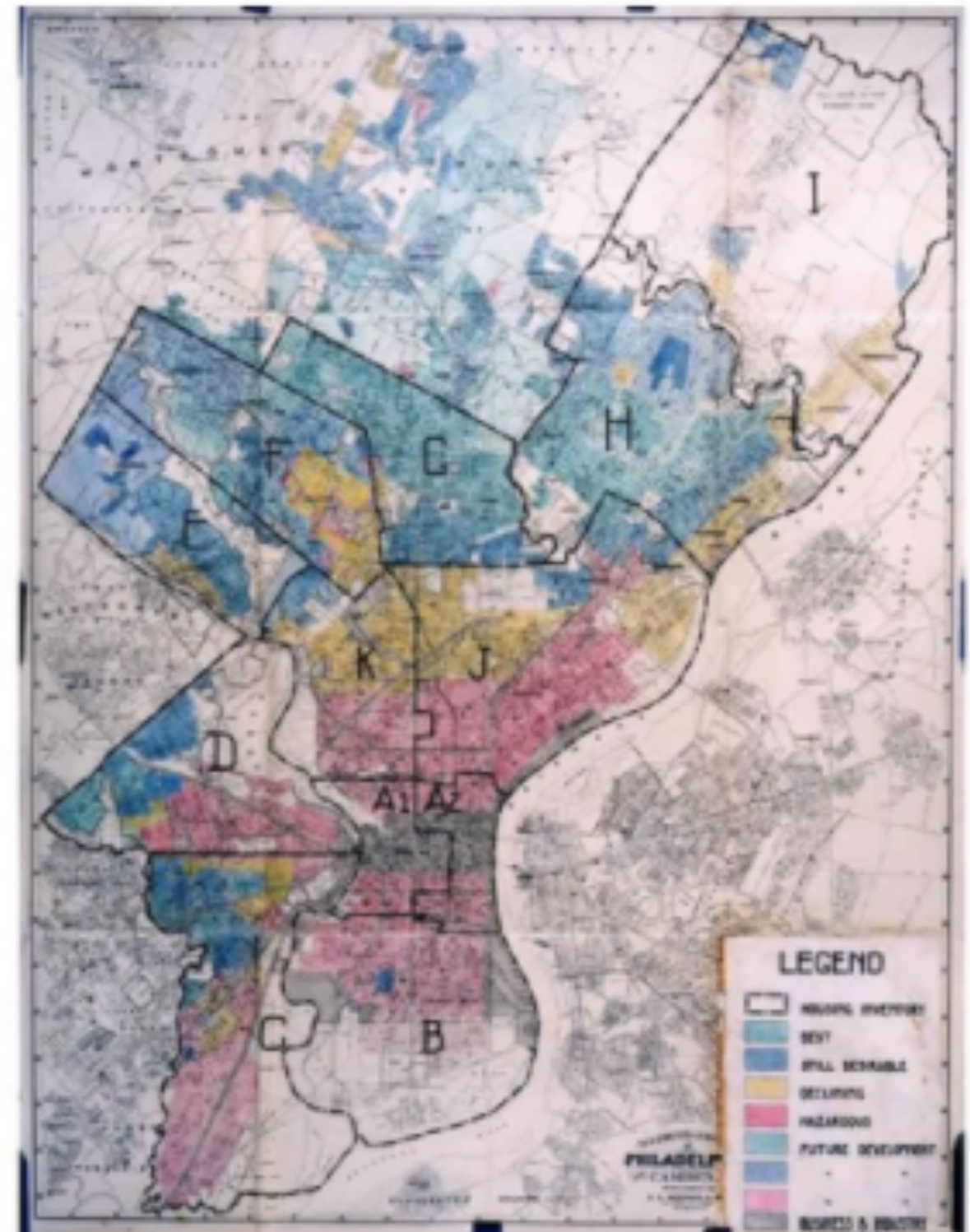


REDLINING

Some banks engage in redlining—drawing lines on a map to identify areas in which they will refuse to loan money.

Although redlining is illegal, enforcement of laws against it is frequently difficult.

The Community Reinvestment Act requires banks to demonstrate that inner-city neighborhoods within its service area receive a fair share of its loans.



NIMBYISM

- ▶ Not In My Back Yard-ism
- ▶ The philosophy of homeowners that social problems should be kept out of their neighborhood for the fear that their property values will be lowered.



THE “INNER CITY”

- ▶ Refers to urban areas with substandard housing, education, living conditions.

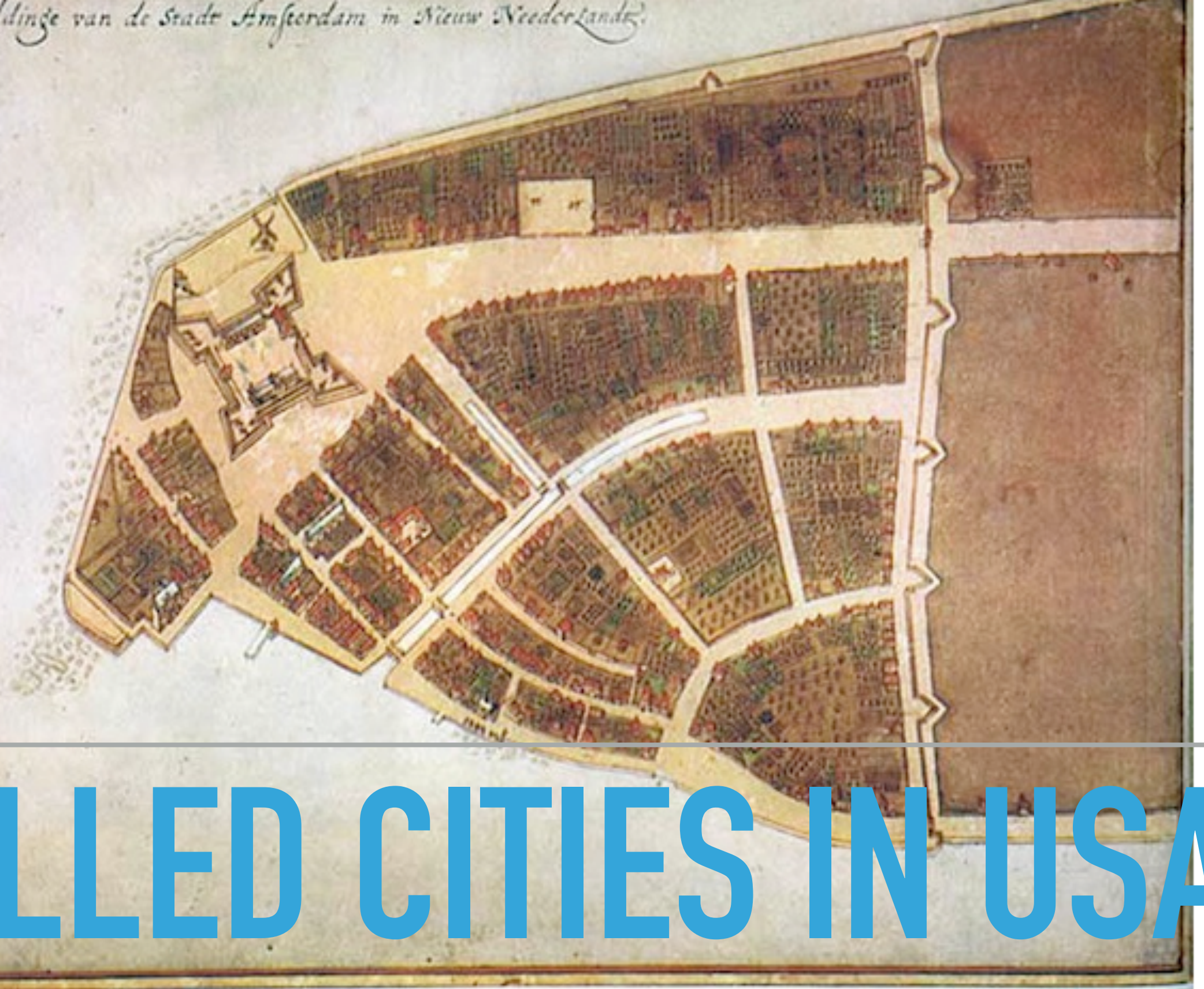


MEDIEVAL CITY

- ▶ European-style city with high density of development, narrow buildings, and a church at the city center, with high walls for defense



Afbeeldinge van de Stadt Amſterdam in Nieuw Nederlandt.



WALLED CITIES IN USA

A 1664 map of New Amsterdam. The wide street is now Broadway, and Wall Street is the line with guard towers on the left. Source: [William & Mary Barrett Dyer](#).



WALLED CITIES IN USE



ST AUGUSTINE, FLA

WALLED CITIES IN USA

COLONIAL CITIES

- ▶ as opposed to medieval cities, colonial cities have wider streets and public meeting areas (public squares), larger houses surrounded by gardens, much lower population density.



MERCANTILE CITIES

- ▶ Atlantic maritime trade disrupted old trade routes & centers of power starting in the 1500s (from interior to coastal ports);
- ▶ central square became focus ("downtown"), these cities became nodes of a network of trade;
- ▶ brought huge riches to Europe (e.g. Lisbon, Amsterdam, London, ...)



MANUFACTURING CITIES

- ▶ Grew out of the Industrial Revolution and the “Little Ice Age”; associated w/ mushrooming population, factories, tenement buildings, railroads, ...;
- ▶ poor living & health conditions;
- ▶ cities improved w/ government intervention, city planning, and zoning, ...



MODERN CITY

- ▶ (modern architecture) little attention is spent on building aesthetics or ornate designs;
- ▶ improved transportation & road systems has allowed greater complexity, multiple CBDs, and dispersal into the suburbs;



POSTMODERN ARCHITECTURE

- ▶ architecture & design developed for look & commerce (may connect to historical roots);
- ▶ a reaction to feeling of sterile alienation some had to modern architecture;
- ▶ city spaces become more people-friendly.



WHAT TO DO WITH OLD STUFF

- ▶ In Europe, old buildings are preserved and integrated into the cityscape
- ▶ In the US they are torn down and something new is built in their place.



SKYSCRAPERS

- ▶ Because European cities were built before the tech. existed for skyscrapers, many of the older parts of European cities only have 5 stories tall building.
- ▶ By the time the tech was available, most of the cities already had downtown regions
- ▶ so skyscrapers in European cities are built on the outskirts of the city while in America, they are built in the center.



DIFFERENCES BETWEEN EUROPEAN AND AMERICAN CITIES



WHERE UPPER CLASS RESIDENTS LIVE

- ▶ In Europe's cities, the wealthiest citizens live downtown/in the CBD
- ▶ In the US, the wealthiest residents of cities generally live on the outskirts of a city or in the suburbs



MCMANSIONS

MCMANSIONS

- ▶ Derisive term given to large suburban houses due to their super size and similar look;
- ▶ Made as large as possible as cheaply as possible
- ▶ Generally ostentatious and lacking in architectural integrity/ingenuity

