

G. Urban Problems in the MDC

Understanding Suburbanization

During the 1950s-60s, there was a massive out-migration from cities downtowns to edge cities and suburbs. The edge cities and suburbs were located on lands outside the official boundaries of the dominant city, forming unique communities with their own mini-CBDs and housing communities. This meant that the main city no longer had political control over these populations, instead the suburban and edge cities had their own town governments with their own elected officials. The suburbs were close enough to the major city for the residents to drive into the city to work, but far enough away to enjoy the social benefits of cheaper land values along with lower-density development. The trend to suburbanize was driven by a number of unique forces, that intersected at the same time:

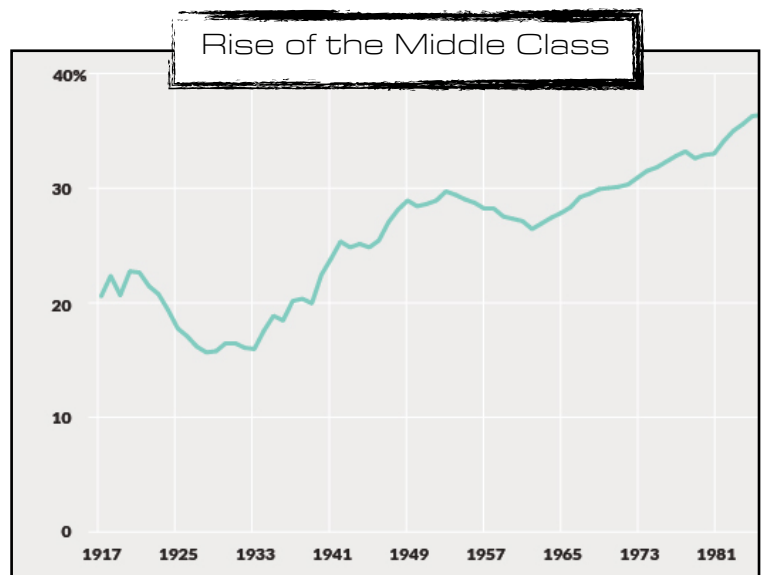
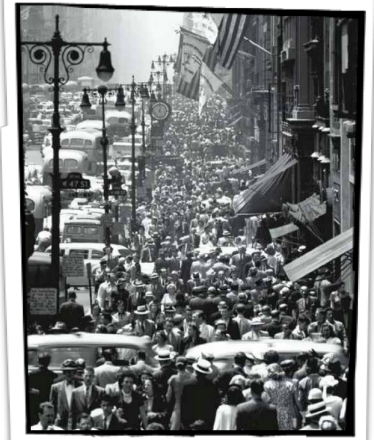
Overcrowded Cities. Coming out of WWII, the MDCs advanced pro-natalist policies to make up for the lost lives of two world wars. The result was the largest population boom in the history of the world, commonly referred to as the *Baby Boom*. Thanks to improved industrialized medical technologies, high fertility rates were supported by low infant and child mortality rates. 20 years later, the baby boom was followed by an echo boom. These demographic explosions stressed the infrastructure of the inner-city.

Paired with this demographic transition was an increase in urban migration. Due to mechanization and globalization of trade, primary sector work was rapidly decreasing; both in the number of opportunities as well as the amount of pay. Farms were consolidating into megafarms, looking for cheap labor to maximize the benefits of their economies of scale. This resulted in a sharp increase of rural-to-urban migration. A parallel phenomenon was the return of international immigration. During WWII, international immigration had drastically reduced because societies usually shut their borders in times of war. However, the war had created over 50 million refugees, along with trillions of dollars worth of ruin to infrastructure, buildings, and transportation (Berlin is STILL rebuilding...). Once peace was reestablished, people migrated to urban areas where they could rebuild their lives. In the USA, multiple waves of migration took place. First, there was the Great Migration of African Americans from the southern states to the northern states for economic opportunities and the hopes of a better quality of life away from the South's slavery heritage. Besides, the North fought the South to end slavery... Right? This influx into Rust Belt cities was paired with mass migration from Latin American and Asian states who were beginning to develop and were transitioning into Stage 2. Through chain migration, large ethnic enclaves were forming in the inner cities, placing further strain on the urban infrastructure and resources.

Economic Boom - The Rebound of the Middle Class

After the WWII, American industrialization moved into high gear. Europe and Asia needed goods and materials to rebuild. The American factories, which had been unharmed in both world wars, stepped up to meet global demand. As a result, Americans experienced a low-unemployment rate with growing GDP from massive exports. With the rapid advancement in technologies (i.e. home appliances, TVs, advanced automobiles...), the factory labor became more skilled - causing wages to increase. The result was a growing middle class with expendable income. Instead of "just barely getting by," families could now consider purchasing luxury items like improved homes, faster transportation, washing machines, refrigerators, etc. During this time, families typically had two-parents, with the father providing for the whole family by working in the secondary sector. Minimal advanced education was required to support and provide for children.

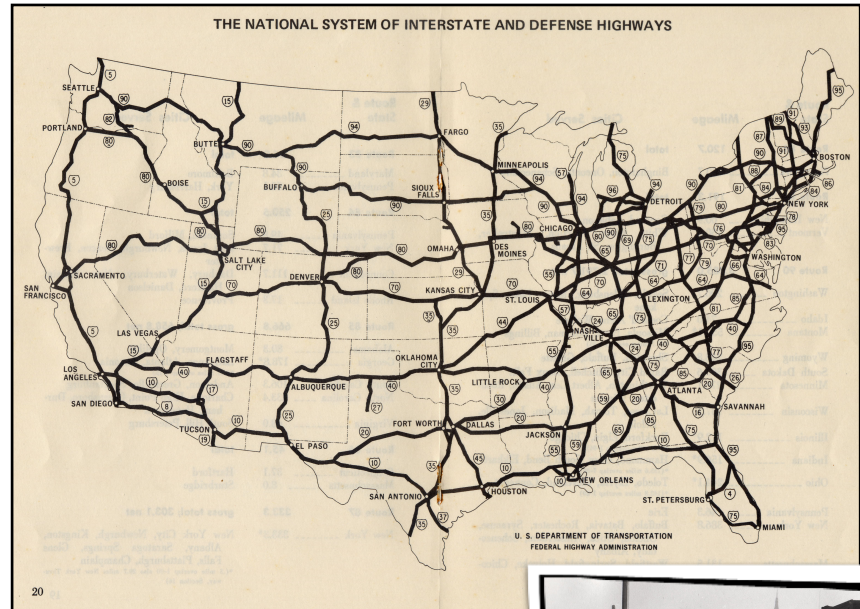
While suburbanization is not an official "problem" in urban spaces, the phenomenon caused a series of unintended ripple effects throughout metropolitan areas. The largest problems in urban spaces have their roots in suburbanization.



The middle class boom in the 1950s was supported by the government's GI Bill. The *GI Bill* was put forward to support soldiers coming home from WWII as they reintegrated into society. It provided one year of unemployment benefits as the soldiers looked for new work; provided money for them to attend trades school tuition free (with a \$500 cost of living stipend) or the ability to use a partial scholarship to attend college; and also guaranteed low interest loans to veterans. As soldiers came home from the war, the GI Bill was utilized to fund a massive wave of automobile and home purchases in the newly built suburbs.

Automobiles & Highways. In the 1950s, President Eisenhower invested heavily in advanced highway transportation networks to meet the growing demand for automobiles in the USA. Ford, GM and Chrysler (who were agglomerated in Detroit) were the leading car manufacturers in the world. Before WWI, less than one million people owned a car. By the 1950s, the economic boom and GI Bill gave more people expendable income and resulted in the rapid diffusion of automobiles into American society. By 1970, one out of every five Americans owned at least one car. Soon, cars were interwoven into the fabric of American Pop Culture.

As a result of the expansion of highways and automobile usage, Americans could travel further, faster, and with greater control over their individual activities. On a personal level, people could travel wherever they wanted to, whenever they wanted to. On a business level, tertiary sector and footloose industries (especially high-tech), could move away from the large CBD, to take advantage of cheaper land through improved transportation and communication infrastructures.



Birth of Regional and Global Supply Chains. On a business level, highways, trucks, and containerization rapidly increased global economic activity. This allowed for more goods to travel further, faster, to more customized destinations, creating large supply chains and an *international division of labor*. Businesses centralized their operations in the cities that provided the least costs, greatest transportation access, and the opportunity to maximize their economies of scale. The businesses used this as leverage with local and state governments for lower corporate taxes; threatening to move overseas if their taxes were not reduced.

Improved Food Security and Accessibility. The increased yield from the green revolution, refrigerated shipping containers, and the global supply chains improved the ability to feed large, decentralized populations. GMOs began to increase the yield of the megafarms, improving the quantity of food-resources available. Industrialization of the food industry increased the speed of processing food as well as reducing the costs. Containerization and refrigeration allowed for large quantities of food to be shipped quickly anywhere in the world, including highly perishable goods such as milk and meat. Delivery trucks were able to deliver these refrigerated containers to grocery stores and restaurants; most of whom were conveniently located along major road intersections. This allowed people to get into their cars and go to the low-cost grocery stores or restaurants; distributing globalized food to the decentralized populations in the suburbs.





Suburban Housing



Office Parks

Prefabricated Housing & Cheap Land. Industrialization during the 1950s changed housing. The ability to receive industrially made products from the low-cost factories around the world caused a reduction in the cost of housing. With advances in production and trucking, houses could be *prefabricated* - large sections of houses constructed at a factory and then delivered for assembly at their final destination. This increased the production speed of housing while also reducing the cost. It also reduced the necessary job skills to work in construction, resulting in lower pay for workers and contributed to a phenomenon known as placelessness where neighborhoods all started to look the same.

Since highways and roads were being built away from the CBD, housing developers had access to large amounts of land that were significantly cheaper than in the CBD. The result was an explosion of low-density family homes connected to the transportation networks. Rows and rows of nearly identical cookie-cutter, prefabricated houses sprawled across the landscape surrounding cities. Entire communities of new homes seemed to appear overnight.

The result of these forces was a massive boom of out-migration from the cities to the suburbs. Middle and upper class residents, who were primarily ethnically White, rapidly relocated to take advantage of the higher quality of living at a lower cost. Tertiary and quaternary sector work followed them, relocating to mini-business parks, office towers, and shopping malls in the edge city. Since the suburbs and edge cities were located outside of the boundaries of the major city, the edge cities kept all of the local taxes. This allowed towns to provide high quality infrastructure as well as attract family friendly services like hospitals, restaurants, coffee shops, libraries, schools, parks, pools, community centers, etc.

(Sub)Urban Sprawl & the Environment.

While suburbanization and the creation of edge cities has had a seemingly positive impact on economic growth and high quality living for middle class families, it has also created significant problems for cities. *Urban sprawl* is the term used for the vast quantities of land used for the unrestricted, massive building of low-density housing, box store retail, and business development on the outer edges of urban spaces. Around the USA, urban sprawl currently expands at a rate of 1 million acres of land each year. The following concerns have arisen as a result:



Urban Sprawl: Houston Edition

Rushed Development & Poor Planning.

“If an urban space is not growing, it’s shrinking.” In this time of economic restructuring, each modern city is in competition with other cities for the lucrative business and housing growth. Many city governments took the mindset of “If you build it, they will come and buy it.” Instead of villages, towns, and cities working together to create a large scale plan for land development, each has tried to maximize their own opportunity for growth, afraid of what will happen if they do not. As a result, the rush to develop led to poorly planned and inefficiently zoned urban and rural spaces. Instead of attempting to maximize the usage and density of every inch of land, cities used single use zoning and sold off chunks of land with no clear plan. Developers showed up with mountains of cash and purchased the land that was most appealing to them. This left gaps of land that were unsold and underdeveloped. This is called *leap frog development*: developers “leaping” over unused sections of land to start new development, causing wasted sections of unused land.

Urban Sprawl values building new construction over refurbishing old, run down construction. As cities aged, many developers and city governments took a just-build-new approach. The developers leaped over older retail establishments, housing developments, and schools, choosing instead to build new structures. This caused an

expansion of land use on the edge of the urban landscape, while the buildings near the center deteriorated, a process known as *urban decay*. *Underperforming asphalt* is valuable land that has been paved over but is no longer serving a valuable economic purpose. For example: The picture at right displays a run down shopping mall with a large parking lot that no one shops at any more because they have better options, such as shopping online with Amazon. Shopping malls are/were built at key highway intersections, meaning the land has a high value. Thus, the expensive land is paved over but is no longer being used for economic gain by the town/city. Instead of redeveloping this land into something new and useful, the city and businesses “leapt” over it to build office and retail spaces on new land, further away from the city's CBD, thereby contributing to urban sprawl.



Underperforming Asphalt

High-Cost Infrastructure.

Infrastructure is expensive to build and maintain. When residents and businesses are scattered and dispersed across a landscape, it is difficult and expensive to provide services and infrastructure to every residence and building. Roads must be extended, more power lines installed, new power transformers installed, more internet cables, new trash centers, more cell phone towers, more clean water and sanitation pipes linked together... This does not include the challenges, expenses, and time delays of providing other services like firefighters, EMS, and police. When urban centers are dense and well planned, it is easier to plan emergency system coverage, but when people are dispersed over larger amounts of land, it is harder to plan coverage and it takes longer for services to arrive in an emergency.



APPLICATION #1:

What challenges does the city of Melbourne face in providing infrastructure to our houses in this community (pictured above)?

Loss of Farm Land.

Since all land is not arable, farm land is very precious. This is especially true with a global population expanding towards 10 billion that has a growing appetite for meat. Older, pre-industrial urban settlements were settled near arable land to feed their populations. In accordance with Von Thunen, the richest farm land for intensive market gardening was the land closest to the urban center. As cities expanded with urban sprawl, the in debt, struggling, or aging family farmers sold off high quality farm land to the highest bidder. The once-farmable land was paved over for roads, houses, and business complexes. It is estimated that 70% of prime farmland is zoned or planned for development.

Isolation & Car Dependency.

Urban sprawl is based upon the use of privately owned automobiles and single use zoning. With rapid development, governments zoned land by its usage, creating clusters of commercial retail and industrial centers, infilling with single family residential. These commercial retail centers were dispersed at major road intersections, becoming isolated from each other. With a car, these intersection-based complexes are 5-10 minutes apart. However, without a car, they are a 30-40+ minute walk. Thus, the expansion of the suburbs resulted in a lifestyle that HAD to have a car. A person or family without a car cannot function economically or socially. Because of this car dependency, businesses have to take into account where their customers are going to park. In the CBD, parking structures were vertical parking garages. In the suburbs, the low cost of land led businesses to choose wide, open air parking lots. Some smaller businesses have

decided to agglomerate into strip malls or business complexes to share the cost of parking lots and other amenities.

If a person does not have a car, or if their car breaks down, they cannot function in this suburban sprawl environment. The number one complaint of international migrants when they transition to the USA is the requirement of having access to automobiles to function for basic needs like going to the store, going to work, etc. Those who cannot afford transportation are stuck in the city, where they must rely on whatever public transportation is available or on the services that are within walking distance of their home.

Automobile dependency also results in wasted productive time and energy because of traffic congestion. As an urban center's population grows, there is an increase in the amount of the congestion on the roads, making the commute longer to get to work. Studies show that an average American driver spends 443 hours a year driving their car - the majority waiting in congested traffic. When the wasted productive time is combined with the cost of the fuel from sitting in traffic. It is estimated that the US economy wastes \$72 billion a year in traffic jams.

The final problem is deaths from accidents. Because cars are operated by amateurs, they are prone to colliding with other cars or losing control of their own vehicles. Cities in America with urban sprawl have 5x more deaths by car accident than cities founded on compact, multi-use zoning. In total, car accidents cost the USA \$871 billion... a year. In that same year, 24 million vehicles were damaged, 3.9 million people were injured, and 33,000 died.



Increased Health Concerns.

The increased amount of driving due to urban sprawl has created a sharp increase in illness.

- Obesity. Because of the amount of time spent driving, people are less active. People sit at school or work, sit while driving to/from their destinations, sit once they get home, then lie down to sleep. As a result, there has been an increase in obesity, Type II diabetes, and cardiovascular disease in suburbia. This is especially true in children, who are significantly less active, especially when they do not have to walk to school.
- Breathing Problems. Another health concern is the increase in illnesses connected to air quality. Air pollution levels from automobiles have been tied to an increase in asthma, allergies, cancer, and bronchitis.
- Heat islands. Dark rooftops and black pavement trap in heat during the day. This heat is radiated back into the environment, artificially increasing the overall temperature of the city during daytime and night time by 2-4°F. The increased heat causes physical discomfort, breathing problems, strokes, and hydration concerns.

Increased Urban Metabolism.

Suburban communities have a high urban metabolism. *Urban metabolism* is the amount of resources consumed by people living in urban settlements. Suburbanites consume 3x as much energy as their urban counterparts, while also producing 3x as many CO₂ emissions. Suburbanites use 7 billion gallons of water a year just on their lawns, pools, and car washing; 1 trillion gallons of water are wasted from leaky faucets alone.

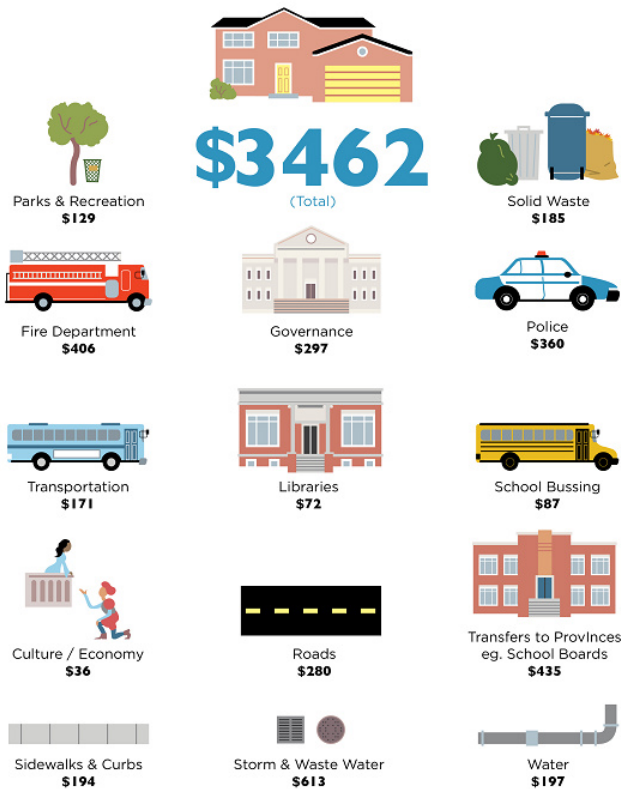
Suburban living is expensive and consumes a large part of people's monthly income: 33% of a suburban family's monthly income pays for housing, with 16% spent on transportation costs. An urban resident spends less than 25% of their income on housing and transportation combined.

Pollution, Pollution, Pollution.

Urban sprawl has devastating impacts on the environment. The expansion of urban settlements has destroyed native plant and animal habitats that would take decades or centuries to replace. Many housing communities and parking lots are located either on former wetlands (that were drained) or in former forests (which were cleared). Each year, over 100,000 acres of wetlands are drained for more suburban development. New highways, commercial retail, and housing developments combine to destroy 1 million acres of woodlands and open space per year. Each suburbanite in America creates an average of 50 pounds of CO₂ emissions per day from their vehicles. Suburbs create water pollution because of the chemicals disposed into water; gasoline, motor oil, pet waste, lawn paint, fertilizers and pesticides go into the water tables and pollute rivers and lakes. Suburban homes also produce a large amount of trash when compared to their urban counterparts.

Suburban

City's Annual Cost, per Household

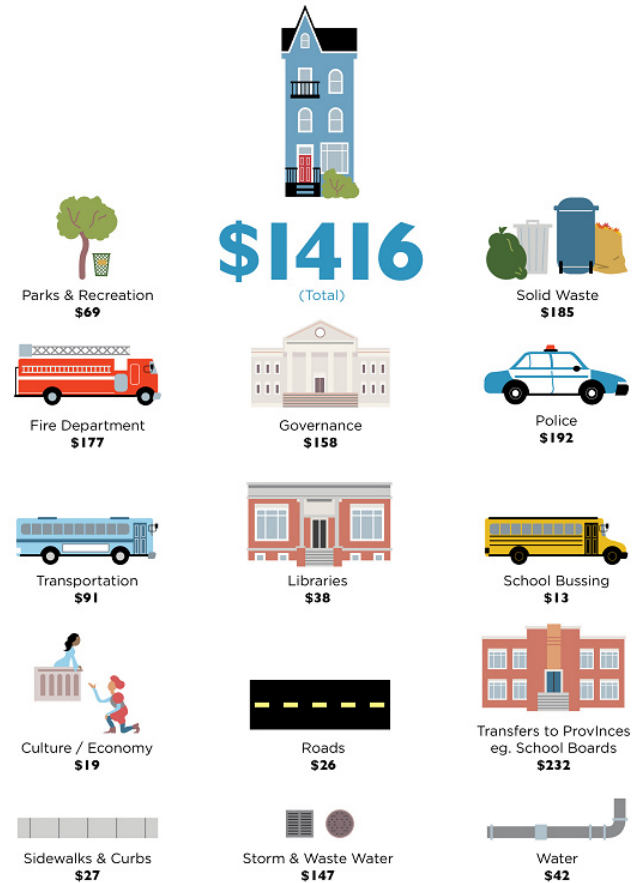


SP Sustainable Prosperity

For more data and more reports, visit thecostofsprawl.com
Data based on Halifax Regional Municipality

Urban

City's Annual Cost, per Household



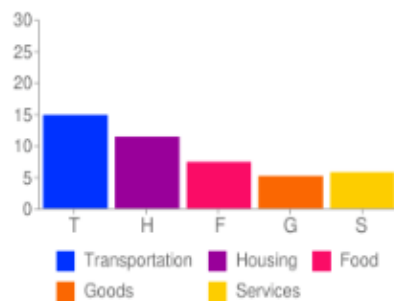
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Raleigh, Wake County, NC

44.5

metric tons CO₂ equivalent

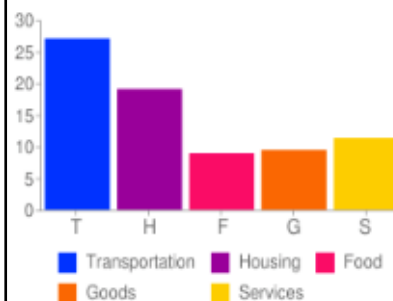


Downtown Raleigh

Raleigh, Wake County, NC

75.8

metric tons CO₂ equivalent



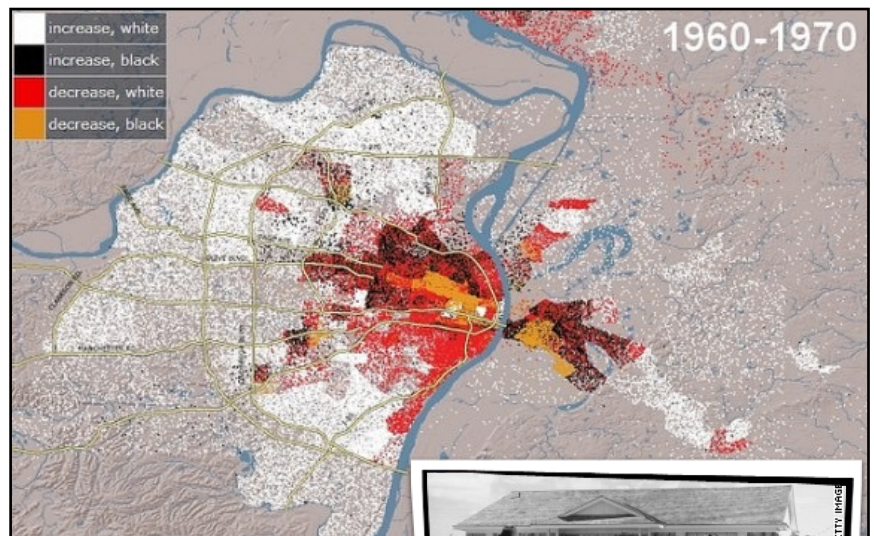
Declining CBDs

Since the 1950s and the beginning of mass suburbanization, the downtown/inner city region of major urban spaces has been in a state of decline. There are three major causes for this phenomena:

1 White Flight. With the start of Suburbia in the 1950s, middle and upper class white residents migrated out of the city and into the suburbs. The cities were crowded, services were stressed, and waves of millions of migrants poured in from Asia, Latin America, as well African-Americans from the southern US. It is impossible to know exactly which migrations were driven by racism and which were driven by better opportunities... but there is strong evidence that a higher quality of life was not the only motivator:

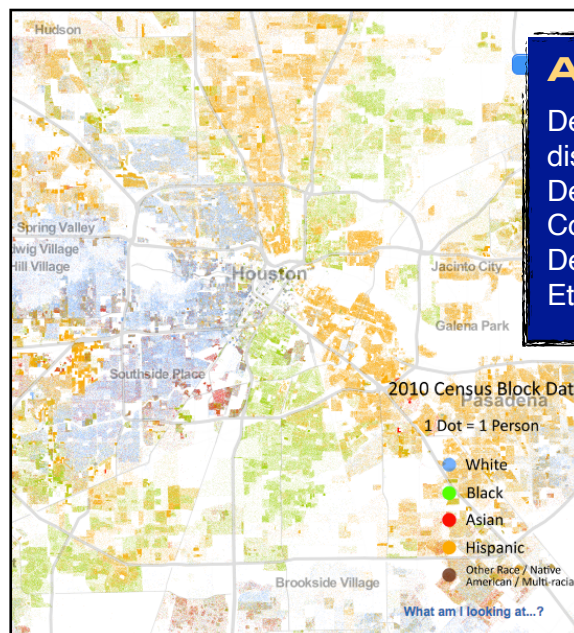
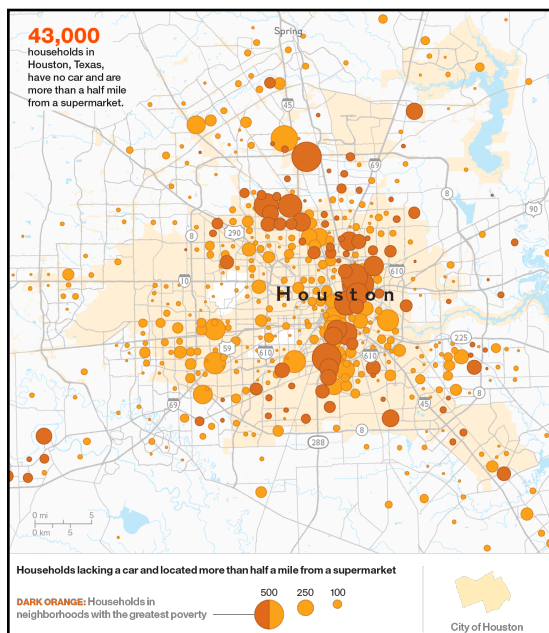
- *Political Control.* White residents went from being the majority vote in most city centers to bordering on a minority vote because of the in-migration. Moving to the suburbs was a chance to secure political dominance of new housing areas; they were able to elect their own city officials and to make policies that met their own interests.
- *Fear.* For every one African-American resident that moved into a community, two white people moved out to the suburbs. Many residents living next to African-American ethnic enclaves expressed fears that proper values would decrease and that it would be harder to sell their homes.
- *Tax Control.* With the influx of lower income migrants, there was an increased need for government services paid for by tax dollars. When white flight moved the middle classes outside of the official city limits, all of their tax money left with them. The cities lost a massive amount of tax revenue that was needed to fund key services like education and public transportation for the remaining low-income populations.
- *GI Bill.* The GI Bill that gave veterans access to funds for college scholarships and low interest loans helped boost the movement of people to the suburbs. However, the GI Bill was only for white veterans returning from WWII; minority soldiers and their families were expressly denied access to the services, loans, and funds. While the white families used the GI Bill and other loan programs to leave the CBD, obtain college degrees and increase their wealth building opportunities, minorities became trapped in dying city centers and were denied the tools needed to improve their position or migrate to the suburbs themselves.

2 Loss of Services. As the wealth of the upper and middle residents left the inner city, the high quality services left with them. The edge city inhabitants utilized their wealth to create high quality schools, attract the best teachers, and provide them with ample classroom resources. Many high school campuses rivaled the quality of a small college or university. Subsequently, in the inner city, the schools lacked funding for building improvements, resources, or quality teachers. The challenges of educating lower income and limited English speaking migrant students was made more difficult by having a shortage of educational resources. Many of the schools began falling apart due to disrepair... literally falling apart. As an example: in 2000, the gymnasium roof of East High School in Cleveland, Ohio collapsed from lack of maintenance and repairs. Other classrooms in East High had buckets stationed in the classroom to catch water when it rained because of holes in the roof, that also caused rivers to flow in the main hallway. They didn't want to damage their encyclopedias from the 1960s that stated: someday we might put a man on the moon.



As the wealth left the city, other services left with it:

- **Food Deserts.** In the suburbs, grocery stores continue to fight for the best spaces around growing residential communities. Many suburban developments have 3-5 grocery store options within a 10 minute drive of their home. In the inner city, the loss of the wealthy populations caused businesses to lose faith in the area and move out. Many areas are experiencing a food desert: the lack of access to any available fresh food within a 1/2 mile of their home. The food that is available is high processed, sugary, fast food, or alcohol. Any fresh food that is available is very expensive, because of the lack of accessibility or availability. It reduced the inner-city people's purchasing power - the amount of goods a person can purchase with their money. As an example: The amount of food a person in the suburbs could get for \$10, it would cost the person in the city \$16. Meanwhile, the average salary of the family in the suburbs is \$45-50k, while the family in the inner city is \$18-25k. Thus, the inner city dweller makes less per year, has less access to low-cost nutritious food, and spends a larger percentage of their income on the food that is available.
- **Lack of Health Care.** Similarly to food, health care services also left the inner city. Tertiary businesses follow population growth and wealthy markets. The suburbs were rapidly growing and were comparatively very wealthy. As a result, family doctors, OBGYN, optometrists, and dental care followed the wealth to the edge cities. This left downtown dwellers with emergency room hospitals as their main/only source of medical treatment. Instead of having family doctors or urgent cares to provide low cost health care, inner-city families are left with the ER which is the most expensive healthcare option in the USA.
- **Public Transportation.** Before cars, mixed income communities used public transportation. The public transit was supported by the taxes of wealthy businesses and residents. As the wealth left, so did the funding for public transportation. Thus, the most vulnerable populations were left with limited transportation access. With the main job growth taking place in the suburbs, the lack of public AND personal transportation limited people's access to the locations where the jobs are located.
- **Lack of Financial Services.** As businesses and the middle class emigrated, so too did basic financial services like banks. Residents did not have access to banks/ATMs to deposit checks or build savings. Entrepreneurs did not have access to financial locations to get loans for starting businesses, purchasing homes, or home renovation. They were left with predatory lending services, like Cash-N-Run: Payday Advance that charge a fee for basic check cashing or micro-loan pay advances (at a 19% interest rate). Credit cards with high interest rates are used to fill in the financial gaps with a 23-25% interest rate and pawn shops to sell off valuable possessions for immediate cash. This is compared to the families in the suburbs, whose banks provide loans for 3-6% interest and credit cards for 15-17% interest.



APPLICATION #2

Describe the spatial distribution of Food Deserts in Houston, Tx. Compare the Food Desert Map (left) with the Ethnic Dot Map (Right).

3 Loss of Secondary Sector. From 1970-2010 the inner city took a final financial hit with the loss of key secondary sector factories. During suburbanization and white flight, footloose and tertiary businesses moved to the edge cities away from the CBD, lowering the GDP for the city and causing a financial crisis. As transportation and communication evolved, supply chains transformed into a global division of labor. The extremely low cost of land, labor, and taxes in Asia made outsourcing the lowest cost option. Factories closed throughout the Rust Belt, reducing employment from 19 million manufacturing jobs in 1980 to only 11 million in 2010.

Deindustrialization had a catastrophic impacts on major urban centers when secondary sector industries 'raced to the bottom' overseas, looking for the highest profits with the lowest costs. One impact was physical: *zones of abandonment* and *brownfields*. Shells of once vibrant factories now sat as silent skeletons. Once a business left, there were no other companies willing to come in and breath life back into those factories, nor to transform them into something new - instead choosing lower cost land near the suburbs. Some of this land had become *brownfields* - land contaminated by chemicals or hazardous waste and now unsafe for immediate use (or so people think...) This left large chunks of the CBD's most expensive and important land empty and abandoned, littered with empty warehouses and unwanted environmental hazards.

A second impact was social. The secondary sector provided a livable wage employment to many low-skilled and immigrant workers. When the factories left, the men were put out of work. Since most of the families had been supported by the head male of the house, this meant a loss of the sole income for the household. Due to circumstances usually beyond their control, these men were often uneducated or undereducated, leaving them with few skills and options to seek new employment and too little money to seek retraining or education into a new field. What little employment came into these deindustrialized zones was minimum wage, part time, tertiary work. Some families went from \$19-25/hour work to \$5/hour employment. The new jobs also provided less than 40 working hours a week so the workers did not have access to work provided health insurance or retirement benefits.

Cities had to restructure their economies, finding a new place in the global division of labor. Some cities, like Pittsburgh and Philadelphia, found renewed life by attracting innovative businesses and medical research. Other cities embraced the financial sector, like New York or Charlotte. Unfortunately, these jobs - while profitable for the city - required college degrees and specialized certifications. This meant the low-skilled labor already living in the city did not have the opportunity for employment with these new companies. New high skilled labor migrated into the suburbs to fill the jobs, while the low-skill labor already in the city remained trapped and in poverty. However, not every city found a place in this new post-industrial economy. Detroit and Cleveland, which were once key pillars of the American and global economies, have faced severe economic hardship. In 2013, Detroit filed for bankruptcy; its GDP had fallen to a point that it could no longer pay off its mounting debts.

Inner Cities: Poverty & Social Divide

As a result of these social, political, and economic changes, the inner cities became a place for the impoverished to agglomerate. The definition of *poverty* is the inability of a person or family to provide nutritious food, adequate housing, and sufficient clothing for themselves or their family. The level of income needed in MDCs to be considered in poverty differs based upon the society. In the USA, poverty for a single person is defined as an income of \$12,880 per person per year or less. For a family of four (two parents, two children) it is an income level of \$26,500 (as of 2021). With the loss of secondary sector employment and the underemployment from



Brownfield



minimum wage tertiary jobs, the poverty level of urban cities has soared. In 1980, 23 million people were in poverty. In 2015, poverty peaked from the global recession at 47 million people or ~12% of the US population. 18.5 million of those in poverty live in *extreme poverty*. These numbers do not include the ~20 million people who live just above the poverty line at \$25k per year. All together, that is 20% of the US population - or 1 in 5 Americans. These statistics represent the highest poverty rates in the developed world.

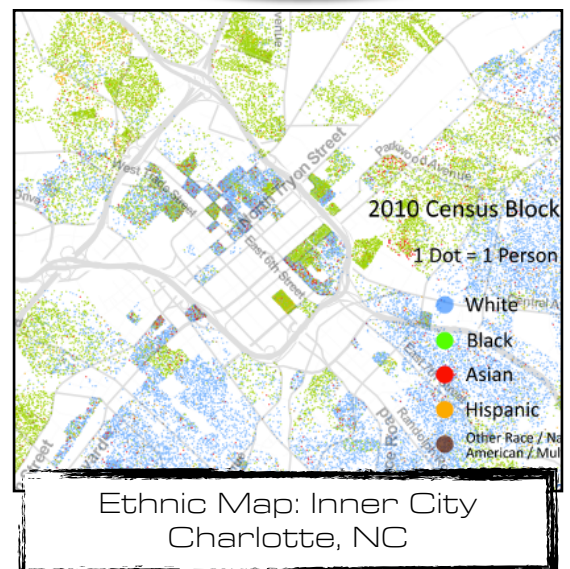
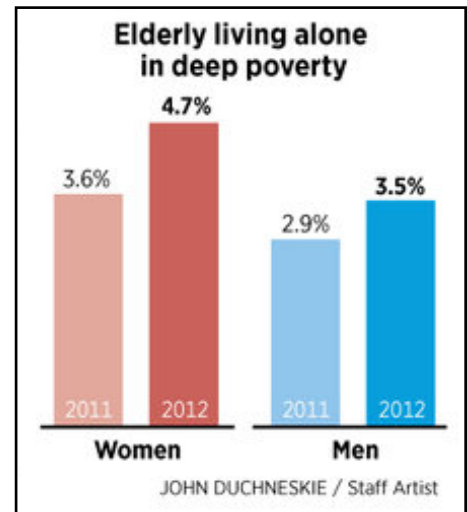
Who is in Poverty. The most vulnerable populations are the hardest hit by poverty in the inner-city. There are three groupings key to understanding the difficulties of poverty in the inner-city:

- **Elderly.** Many elderly are moving back into the city because of the need for easy access to medical resources. However, many live on a fixed income. In the 1950s, the average life expectancy was around 60 years old, so retirement plans only needed to last people 1-3 years. In the 2020s, people are living into their 80-90s. Retirement pension plans and other forms of fixed income, like social security, had not been built to live on for 20-30 years. As a result, as living expenses and medical expenses exceed their incomes, the elderly fall below the poverty line, on the brink of being homeless. Currently, 1 in 7 elderly are living in poverty.
- **Gender:** Although women compose 50% of the total population, women make up 60% of the poverty population, usually young mothers and single elderly women.

Pink Ghettos are sections of the inner-city with high concentrations of impoverished females, often acting as the sole breadwinner for a family with young children; 50% of families in poverty are single-mothers with kids. Most were either pregnant in their teens or fleeing domestic violence. In both scenarios, the women typically have limited education - having either dropped out of high school or only possessing a high school diploma, hindering their ability to earn money and support their children. As a result, *1 in every 5 children live in urban poverty*. These single moms work to “manage” the poverty, often depriving themselves to make sure their kids eat. The jobs the women can get are often minimum wage jobs, with inconsistent weekly hours, and no health care or sick leave. In contrast, only 6% of married couples with kids live below the poverty line.

Single elderly women make up 23% of women in poverty. These women grew up in a time where women were not supposed to be educated, but who were expected to stay at home and care for children. When these women outlived their husbands, they also outlived their husbands’ retirement plans and benefits. Faced with rising medical and housing expenses on a fixed income, these women often find themselves living in poverty.

- **Ethnicity:** Poverty rates are not spread equally across ethnicities. While the white population comprises over 50% of the population in poverty, less than 12% of the white population is impoverished. This is compared to 33% of African Americans and 31% of the Hispanic Americans who live below the poverty line. The Hispanic numbers may be even higher, because the US census does not include the illegal populations. Efforts for minority groups to escape poverty have been hindered by lack of access to resources like quality education, high incarceration rates (1 in 3 black men go to prison), or practices, like *redlining*, by banks to refuse loans to people living in high ethnic and poverty areas.



5 Theories of Poverty. When analyzing urban poverty, inevitably the conversation returns the question: Why does poverty persist in the richest state in the history of the world? Below are the top five theories about the nature of poverty. No one theory is entirely right or wrong since every story of poverty is unique. However, how a person views the cause of poverty directly impacts how they believe the situation should be fixed:

- **Theory #1 - Culture of Poverty.** The problem is with the people. Poor habits and a lack of desire to improve holds them back from success. To fix poverty, people need to be better educated and given support tools to help teach how to be successful. They need to pull themselves up by their own boot straps and through their own effort.
- **Theory #2 - Cycle of Poverty.** Poverty creates more poverty. Parents who were born into poverty will live in poverty and pass their poverty mindset to their children. Parents who have not experienced success in a capitalist society do not know how to teach success to their children. To fix poverty, children should go to head-start pre-k programs and good schools to learn how to break the cycle.
- **Theory #3 - Broken Institutions.** Government and charity groups have good intentions to help the impoverished, but the system is broken. Planning is poor, funds are mismanaged, and a lot of effort goes in to creating very limited change. To fix poverty, a better plan needs to be put into place, run by better people, and improved to remove inefficiencies.
- **Theory #4 - Institutional Racism.** The government wants to help certain groups of people, but not others. The government and charities will help certain ethnic or religious groups, but intentionally directs resources away from groups they do not want to support. To fix poverty, new laws and leadership need to be in place in government.
- **Theory #5 - Structured Class Conflict.** The Marxist view that for the rich to stay rich, they need the poor to stay poor. The rich structure the economic system to keep the poor trapped in poverty with no way out. To fix poverty... there is no fix as long as capitalism is given free reign of the economy. The only option is revolution.

Affordable Housing & Gentrification. Access to quality housing is critical for success. A permanent home address is a requirement for obtaining employment and accessing government services. The location of the housing is critical for air and water quality, as well as access to food and public transportation services. For children, quality and consistency of housing has a direct impact on their self esteem and level of success in school. Housing insecure children score significantly worse than their house secure peers... and 1 in 30 children in the USA experience homelessness each year. In addition to home security is the quality of construction. The quality of the home determines how damp and drafty the residence becomes. Drafts and dampness lead to frequent illness, especially in the vulnerable populations - infants and elderly.

Expounding the problems of poverty is the lack of affordable housing. One of the greatest challenges to poverty in the inner cities (and in the entire USA) is providing housing that people can afford. Housing is considered affordable when it takes up less than 1/3 of the family's monthly income. The location of the "inner city" near the CBD causes the land values to be high, making the cost of housing steep. As a result, the land is owned by developers who build high density apartments and many people living in the inner city have to pay rent their entire life, never owning the place where they live. The lack of ownership also makes people vulnerable because they do not control the building or what happens to the building. Cities are desperately short on affordable housing. The city of Cincinnati, Ohio has 60,000 families in need of affordable housing. Some groups estimate the USA needs 7 million housing units to meet the affordable housing needs of its population.

The topic of affordable housing creates tension between the impoverished and business community/developers. The land with the highest density of poverty sits on top of some of the most highly valuable land in highest demand locations. However, the city will SPEND more money on the people living there instead of MAKING more money from this potentially profitable landscape.

Housing Status	Type of Housing	Degree of Dependence
Securely Homed	Single Family Home	SELF-SUSTAINED
	Apartment Building	
	Mobile Home	
Precariously Homed	HUD Apartment	STATE RESOURCES
	Subsidy Housing	
	Boarding House	
Homeless	Group Home	CHARITY
	Institution	
	Illegal Doubling Up	
	Transitional Housing	
	Dormitory Shelter	
	Public Space	

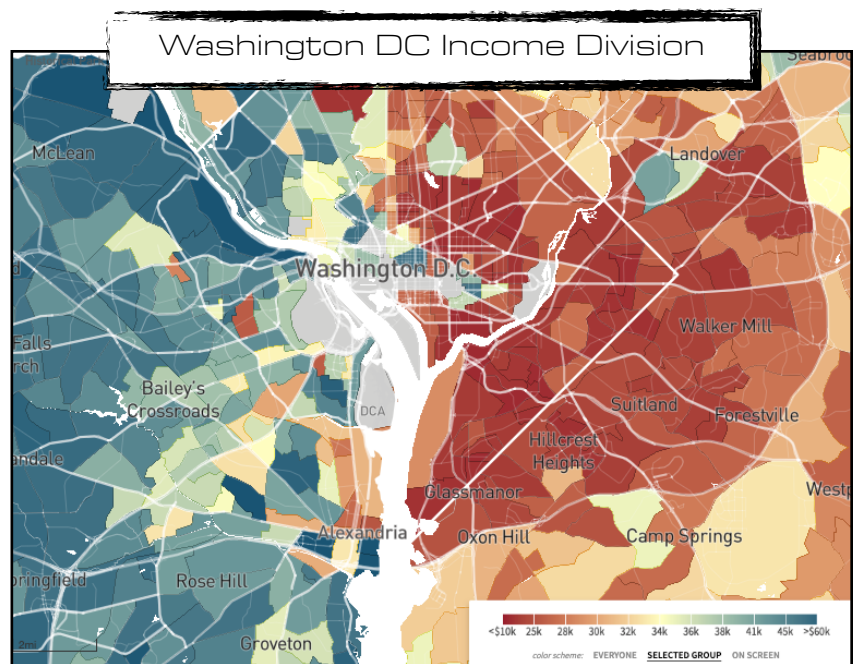
The business communities want to use the high valued land to attract high value businesses that will generate profit and tax revenue. They also want to *gentrify* the inner city - redeveloping the old, run down, impoverished parts of the city into high class condominiums to attract the Yuppies (young person with a well paying job) and DINKs (dual income, no kids) back into the city to live (*bringing their paychecks with them*). The business communities resent the poor - both for having their business taxes go to paying for services only used by the poor AND not being able to use the prime land the impoverished are living on. To gentrify a location, land developers pay the current owners market value (i.e. millions of dollars) for the land and the building. The new owners evict the current residents - some of whom have lived there for decades - and remodel the building. The new condos and town homes sell for \$500k+ to new buyers. Once enough new condos have sold, high end restaurants and other services come into the area because service industries follow populations and money.

This has two effects on inner city housing: it removes affordable housing options for low income residents and increases the land values and taxes on all the other homes in the area. As a result of the increased land values, taxes increase. Since businesses pass the extra cost onto the consumers, rent in the neighboring buildings increases. Residents with fixed or minimum incomes in the surrounding buildings can no longer afford to live there and have to leave. To where? Who knows? But not there.

Homelessness. For people who cannot afford housing, homelessness is one of their only options. Homeless individuals carry their life's possessions with them, everyday trying to find a place to rest their head and scrounge or beg for food to eat. Homeless people are attracted to cities because of the available infrastructure; it's better to be impoverished in a city than in a rural community - especially when cities throw away 30-50% of the food brought in through supply chains. On a good day, the homeless have access to charitable organizations and churches providing a warm meal and a room to share with other people in the same situation. When such options are not available, the homeless are left to the streets as "squatters," seeking a park bench, doorway, alleyway, bridge underpass, dumpster, or pile of cardboard to use as shelter. Many homeless individuals suffer from mental illness or physical disabilities, many from their experiences as military veterans.

Between Great Britain and USA, there are over 1 million permanently homeless individuals, 25% of them children. It is hard to know exact numbers since the homeless are hard to accurately quantify because of their transient nature. This number does not quantify the number of illegal immigrants who also live without housing. 40% of homeless families are underemployed - meaning they hold some type of job (or multiple jobs), but do not earn enough to keep secure a permanent residence.

For 40% of Americans, they are one paycheck away from poverty, living on the edge of homelessness, and depending on job security from week to week. As the economy fluctuates, families move from having temporary housing, to being homeless, and back to having housing. In 2014, temporarily homeless people numbered 1.5 million in shelters across the USA. 1 in every 30 children in the USA experienced a period of being homeless during the school year - 2.5 million school aged children in total.



Effects of Poverty

- **Crime.** There is a direct link between low income levels and crime. People in poverty experience frustration, anger, loss of self-worth, and desperation. Most crimes in the inner city are property crimes, committed out of anger against the system they feel is oppressing them or out of desperation to gain resources to survive. Desperation and anger lead people to gangs, drugs, and the selling of goods illegally on the informal markets (aka: black market). These individuals cannot win within the legal economic system so they embrace a high risk lifestyle with the hope of it bringing greater prosperity to themselves and their families. Unfortunately, rivalries between gangs, as well as the competition for drug sales, create further violence and hardship for people in the community.

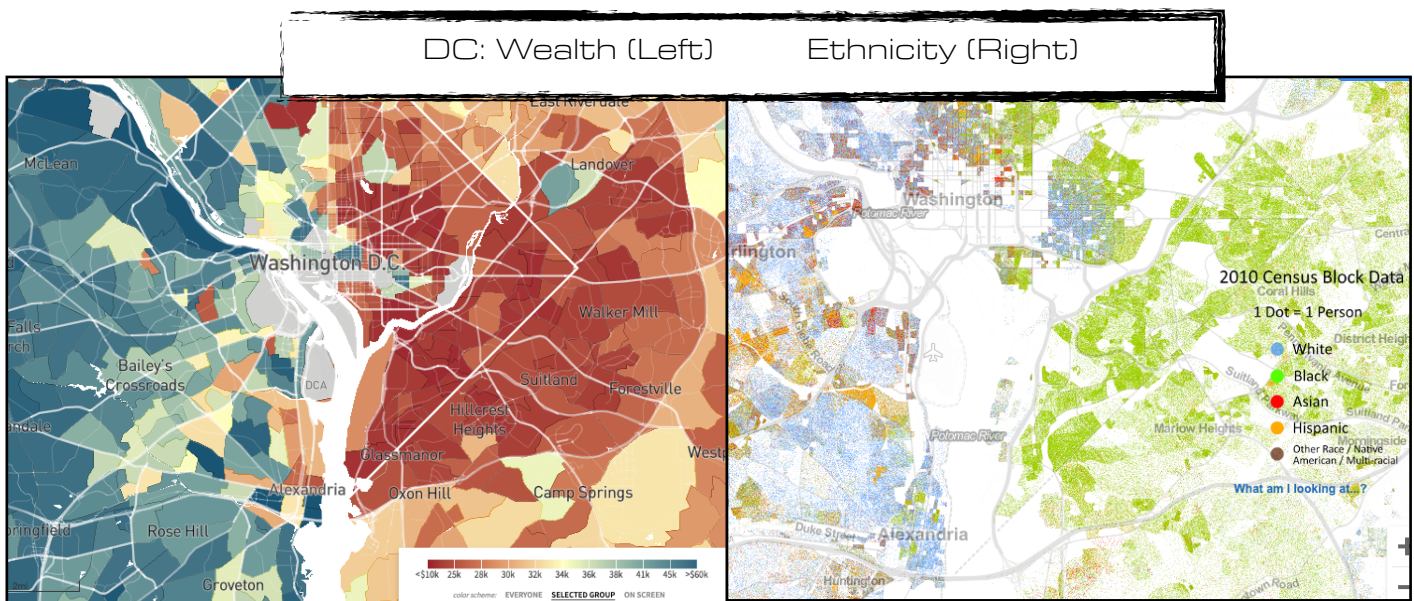
As a result of crimes, large numbers of impoverished individuals are *incarcerated* (put in prisons). The average salary of a person before being put into an American prison is \$17,000 - barely above the poverty line. Once a person is incarcerated, their life changes forever, limiting their access to government services and creating another barrier to employment - as they must declare on every job application that they have been convicted. If a person has been incarcerated for drugs, they can no longer receive benefits such as food stamps.



- **Health.** People in poverty suffer from higher rates of health problems. Damp, drafty, and overcrowded housing leads to increased risk of diseases like bronchitis, tuberculosis, arthritis, and skin diseases. Lack of food leads to malnutrition and developmental issues. Lack of healthy food leads to high rates of obesity, heart conditions, and Type II Diabetes. Depression, mental illnesses, drug addiction, alcoholism, and suicidal behavior are significantly greater in high-poverty populations. Lack of access to health care and contraceptives leads to high rates of teen pregnancies, as well as high infant and maternal mortality rates. The elderly and physically disabled are on fixed incomes, often placing them in situations where they cannot afford their medicines AND their food AND their place to live. They struggle to gain access to the needed services to maintain their health and wellbeing.
- **Segregation & Environmental Justice.** Even though desegregation was legalized in the 1950s, the city populations are still highly segregated. This segregation is along the lines of wealth, race and language. The nature of chain migration creates pockets of homogenous populations in ethnic enclaves or ghettos. Most minorities enter cities due to previously difficult situations. African-Americans migrated to northern cities after slavery ended, escaping the Jim Crow South. Hispanics arrived after financial and safety struggles in their origin country forced them to migrate. Each enclave works together to form solutions that help themselves with what limited resources they have, working as a “defensive measure” against their collective struggles. However, city programs have helped in creating and sustaining these racial divisions. In the 1910s, cities like Louisville forbid races from buying homes in the parts of town inhabited by the other race - keeping them separate. Similar Jim Crow laws created legalized segregation across the south. The 1940s GI Bill allowed white veterans to go to college along with getting loans for cars and suburban homes. The black, hispanic and indigenous veterans did not. Redlining forbid banks from lending to poor communities that were primarily people of color. These policies, while “officially” made illegal, still echo in the ethnic make up of our urban spaces today.



The effects of segregation go more than skin deep. The environments of these segregated areas are in stark contrast to one another. The richer, whiter neighbor hoods have greener spaces, more trees, and fresh air. They have retail stores and office spaces, with plentiful food options. Meanwhile the minority communities are located near industrial complexes - or the toxic brownfields they left behind - and major highways. The air and water are highly polluted, affecting their daily health and quality of life. They live in food deserts, within minimal salaries to purchase healthy foods. Thus, based on the environmental injustice, they live very different experiences and die in very different ways... in the same city and zip code.



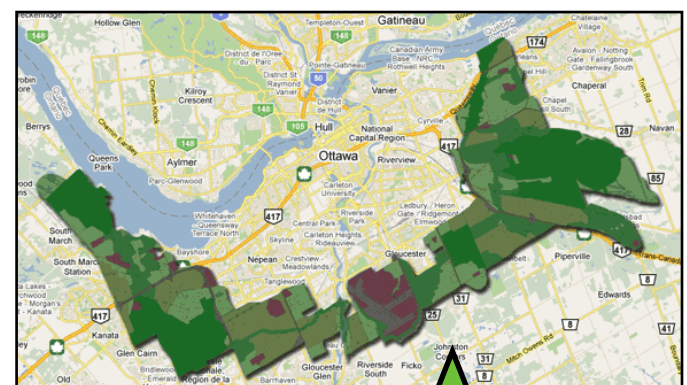
APPLICATION #3

What is the relationship between Income, Ethnicity & Segregation in Washington DC?

H. Urban Solutions in the MDC: Sustainable Development

With the vast array of problems facing the 21st century urban center, there are a series of movements aimed at correcting the issues facing the modern city:

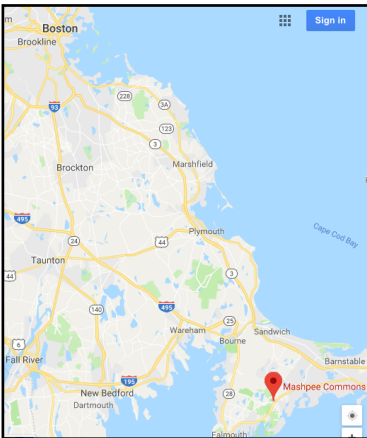
- Urban Growth Boundaries & Growth Rate Caps.**
 Governments can place firm boundaries limiting where building and development are allowed to take place, and put a cap on the rate at which growth can happen. This encourages higher density buildings and a more intense, strategic use of space; it also saves farm land from becoming suburban housing. One downside for rapidly growing societies is that they still have a high demand for housing, with or without a growth boundary. Once land is restricted, the demand will be even greater, but the supply of land just decreased or became limited. High demand with low supply creates a sharp rise in land and housing costs. Thus, the city will reduce its growth but may create an affordable housing crisis.
- Land Conservation and Green Belts.** Governments can zone land around urban centers as *greenbelts* or as natural reservations that cannot be developed. The goal is to provide better air quality and to allow residents to be close to nature. If the green belts are large, it may be challenging to develop property on the opposite side, which will limit development to land within the greenbelt.



While environmentally friendly, greenbelts present a few urban challenges. Similar to *Urban Growth Boundaries*, greenbelts can cause land values to rise due to increased demand inside of the belt. London experienced this problem, with the greenbelt causing a massive spike in housing prices. This was due to an inability to increase the amount of housing within the confined greenbelt area to keep up with demand. Second, if the land beyond the greenbelt was not properly zoned to prevent growth, development can “leap” the greenbelt and sprawl beyond the natural preserves. This happened in Ottawa, Canada, which has had severe issues reaching these communities with infrastructure due to their considerable distance from the city center.

- **Transfer of Development Rights.** What about the farmers? How can growth be limited AND money be directed to support debt ridden farmers and keep them from selling land to developers? One solution is for a government to define the number of housing or business units permitted on one acre of land, regardless of the actual use of the land (think of it as theoretically allowed home development density). Each theoretically allowed home is a *credit* and all land owners receive a certain number of *development rights* or *housing credits* per acre of owned land. Farmers can sell their housing credits to a land developer, allowing farmers to keep their land AND have more money. Land developers can use the purchased credits to build more homes or larger buildings on the property they already own.

*For example: A farmer who owns a lot of land, but has a lot of debt, is trying to compete in the world of commercial agriculture. The farmer needs money, but does not want to sell his land. However, the farmer possesses **development rights** because of the amount of land he owns. The farmer is able to sell his right to develop land to anyone he chooses without having to sell his land. Meanwhile, in the city, a developer has purchased land, but has reached the limit for the number of housing units he can build on that land. The developer can buy **development rights** from the farmer and build more houses (or a larger apartment complex) while the farmer keeps her land. This allows the developer to build more housing units on the land he already owns, gives money to the farmer, and helps prevent urban sprawl.*



Smart Growth and New Urbanism

Smart Growth and New Urbanism have arisen in response to the challenges presented by suburban sprawl. The suburbs attracted both the wealthy families as well as the footloose, tertiary, and high tech industries. These industries have no financial incentive to move back into the CBD. The upper income residents want easy access to their work with a higher quality of life in the suburbs, while sustaining the environment. Most suburbs have a large amount of underperforming asphalt in their struggling retail centers and dying shopping malls located at strategic transportation intersections. These sites already have the infrastructure for sanitation, electricity, clean water, transportation... everything needed to support a medium density community of people.

Mashpee Commons, Mass



Bringing Density to the Suburbs.

The goal of New Urbanism is to bring density to the suburbs, limit growth, promote redevelopment of strategic locations to achieve a series of purposeful goals:

- **Goal 1: Mixed Use Development & Compact Communities.** Use of mixed-use zoning brings medium-to-high density residential buildings together with the business community; reuniting residential and commercial uses in one area. Condos/apartments are on the upper floors while commercial and retail space are at street level. This creates purposeful, high density communities which meet the threshold needed to support higher end services and businesses. New urbanism also increases the value of the land, as well as the amount of taxes entering the community. This allows local governments to be able to fund needed community services like public transportation and better infrastructure.
- **Goal 2: Increase Affordable Transportation Options.** By creating compact communities, more transportation options become available. The first option is walkability and biking options - creating safe pedestrian areas to walk between housing, retail, work, and recreation. The second option is increasing mass public transportation. Higher density housing meets the threshold to support buses and light commuter rail. Ideally, there will be less traffic congestion and pollution due to people using shared transportation. Also, with the communities being built near major transportation intersections, there are shorter work commutes, reducing time spent traveling. Financially, walking, biking and mass transportation are all cheaper than owning private automobiles. Therefore, people will see an increase in their available income for discretionary spending.
- **Goal 3: Community.** Where Suburbia created isolation and placeless-ness, New Urbanism's goal is to create community and a sense of place. With medium and high density housing, less land area is used for residential purposes, leaving more space available for community activities and place making. Land can be used for outdoor public parks, markets, public art, and festival spaces. Residents have easier daily access to healthy recreational activities close to their homes. Outdoor dining and eating plazas would be available for people to enjoy nature while dining with friends. All of these combined help communities to create their own sense of place.

The housing options can be built to create diverse communities and is designed, and subsidized, to increase affordable options for all age ranges - reconnecting older and younger populations. Increased affordable housing, intermixed with upper-wealth housing, reconnects people from across the economic and cultural spectrums creating a safer and more diverse community. This also provides lower income residents with access to higher quality services attracted by the density and prosperity in the community. Because of the high population density, all residents have access to adequate, affordable, and nutritious food - eliminating food deserts. Studies show that well fed and well-served populations have reduced crime levels, creating safer communities.



APPLICATION #4

How is New Urbanism on display here?

- **Goal 4: Environmental Sustainability.** With massive urban growth projected over the next century, urban spaces must be sustainable. The buildings can be constructed to be energy efficient using green energy technologies. Medium density creates a much smaller ecological carbon footprint than single family homes. Walking and biking are extremely environmentally friendly. Mass public transportation greatly reduces the consumption of fuel and CO₂ emissions. As a result of curbing urban sprawl, there is greater conservation of farm land and forests. Brownfields, unused parking lots, roads and developed lands can be revitalized to their previous state of wetlands, farms, forests, or as nature parks.
- **Criticisms.** While all the plans look perfect on paper, New Urbanism has received certain criticisms of how it does not achieve its goals. The first is convenience. Families greatly enjoy the single-family home lifestyle with all the services and conveniences provided in the suburbs. It is hard to convince a family with 2-3 kids to give up their backyard and minivan for an apartment and walking. If families brought their cars with them into compact communities, they would require parking spaces and road infrastructures... defeating the purpose of compact communities. When it is all done, there are no promises that business still would not push for sprawling settlements because of how profitable they are to the companies. Thus, it would be a very high expense invested, with little reward in return.

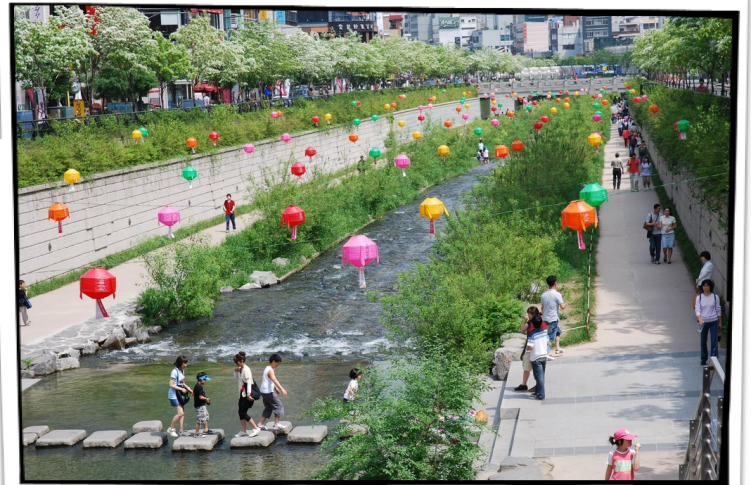


Gentrification & Urban Renewal

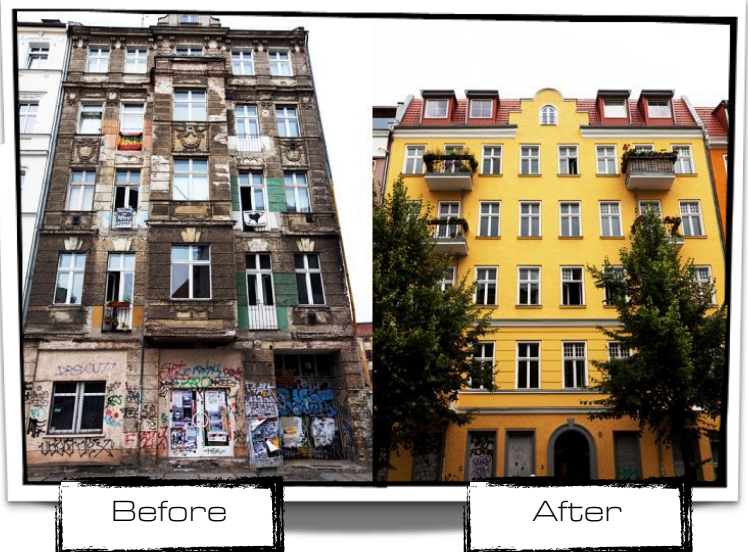
With the economic restructuring of the *Global Division of Labor*, once industrialized cities needed to reinvent themselves and revitalize their dying city centers. Cities needed a renewed function in the global economy, attracting a new population to become residents. *Urban renewal* promotes city government and business leaders meeting to take the following steps:

- First, urban governments need to reinvigorate the CBD by attracting 21st century innovative businesses. They should aim at a combination of quaternary sector businesses, corporate headquarters, and tourism. City leaders should invest in public-private partnerships to attract an agglomeration of financial, legal, technical and research sector businesses with tax breaks and quality of life incentives. They should also invest in supporting local entrepreneurship, encouraging investors to take a chance on new business ventures. Cities that move in this direction begin turn their vacated land into tall skyscrapers with plenty of office space and high density residential towers.

- In a complimentary effort, cities need to invest in attractions to bring families and their money back into the city, even if just to visit for the day. The reality is: many families are not moving back into the CBD... but they will travel for a great experience. Cities can invest in spectacular experiences such as sports stadiums for professional teams: NBA, NFL, NHL, MLB; theaters for live shows; public parks; museums; restaurants; high-end retail stores; developed water fronts; and exciting night life. They can building convention centers and music performance spaces to bring people in from outside the region. Comi-con conventions attract people from all across the USA, who in turn spend money at hotels and restaurants during their stay at the convention center. Major cities are typically situated around a larger natural body of water (river, ocean, etc.) that can be transformed into a great place to spend the day. The goal is to get residents from the larger metropolitan area and beyond to bring their money into the city and spend, spend, spend to help businesses meet their thresholds.



- Cities can work with developers to attract wealthy residents back into the city. DINKS and Yuppies were the most attractive targets. They are young, without families, have a greater income, and a desire to live in a vibrant place that gives them a community experience. Millennials have shown less interest in owning yards, keeping up a big house, or working on cars than previous generations. Millennials want great food, healthy lifestyle, an involved community, and diverse entertainment. Developers can be encouraged to invest in *gentrification*: buying out older, run down building complexes and redeveloping them into high-end apartments, condos, and townhouses. Areas that were once slums, ghettos, and full of crime have been transformed into mixed use development zones, where residents can walk to everything they need. Like new urbanism, urban renewal promises young wealth community and lifestyle. In Cincinnati, the area known as “Over the Rhine” was once infamous for its high levels of poverty and crime. It has since transformed into an area of high class living. One rundown housing complex used to rent apartments for \$800/month. Now the gentrified condominiums rent for \$2,400/month.



While gentrification and urban renewal are beginning to breath new life into old cities, it is not without problems. The process of gentrification is eliminating many affordable housing communities and forcing low-income minority groups to relocate. Some cities build new housing in a separate location in the city. Others do not provide any assistance, essentially forcing the low-income residents to leave the area. This causes residents to migrate to other slums, further stressing broken areas and further segregating marginalized populations. It can destroy historic communities and architecture that many in the city want to fight to preserve. For example, Harlem in NYC has a long, glorious history from its amazing Harlem Renaissance cultural explosion in the early 1900s. Much of that community is being gentrified, transforming a historically black region with a unique cultural identity into a primarily white community with refurbished buildings.



APPLICATION #6

Is Gentrification killing communities or saving cities?