

Class Two

Urban Policy 4211/6606

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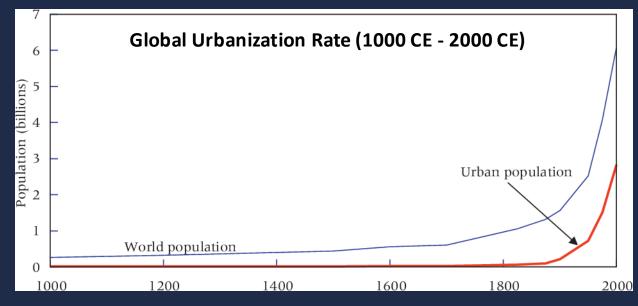
The Impulse to Urbanize and Why Cities Create Value

After a slow start, we suddenly become an urbanized species

- For first 300,000 years of our species existence, we led nomadic and pastoral lives
- Around 10,000 BCE, small settlements began to emerge
- Around 4,000 BC, settlements grew to something approximating "cities"
- Urbanization remained steady but at a low level until the Industrial Revolution







Ur – The First City?

"The Urban Revolution" changed everything

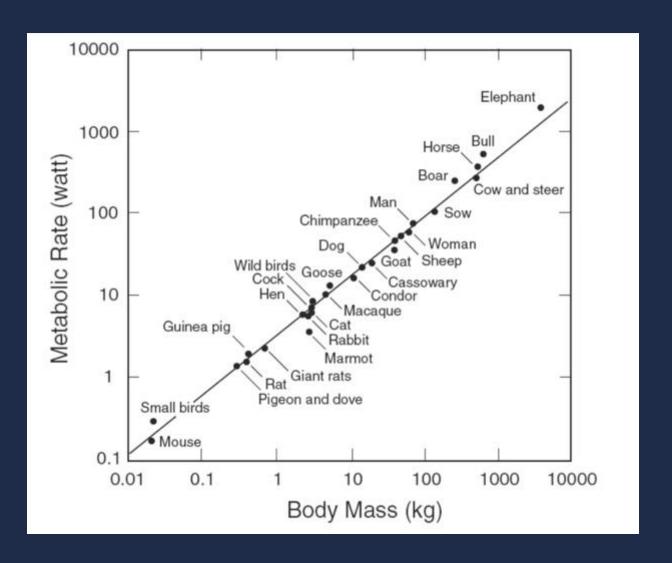
- Density, driven largely by the capacity to cultivate food (Neolithic Revolution)...
- ... generated social surpluses, the ability to gain a benefit from exceeding personal needs ...
- ...which encouraged specialization (social division of labor)...
- ... that led to increased productivity and the stock of wealth ...
- ... which generated the need for permanent institutions to protect and regulate that wealth

The Urban Revolution Emerged Independently in a Variety of Places Around the World



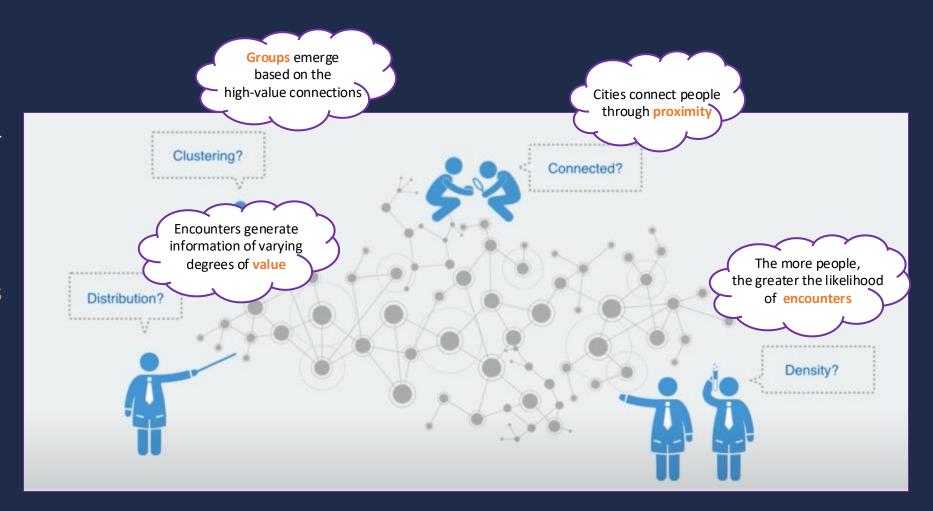
Cities are subject to the same scaling benefits as biological organisms

- Double the size of the organism and it only needs 75% more energy
- Double the size of a city and it only needs
 85% more energy
- Similarly, the ratio of built infrastructure roads, buildings, utilities – also declines by 15%
- Quantitative Theory of Cities
 - Non-linear scaling
 - Economies of scale
 - Pace of life
 - Growth
 - Networks



The underlying engine for this move to urbanization is the city functioning as a "network"

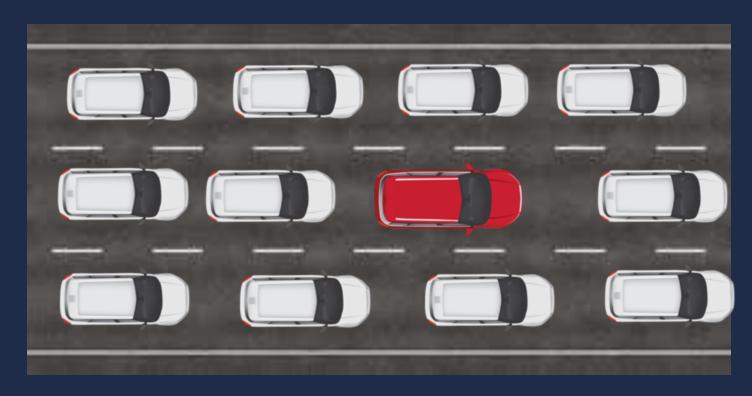
- Networks form in order to distribute "something"
 - They can be engineered or they can emerge organically
- Cities distribute information through quasi-random encounters
- The effectiveness of this distribution depends on the quality of the network infrastructure



Some networks are subject to decreasing returns to scale

US Federal Highway Network

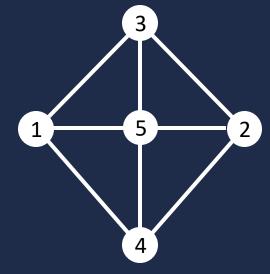




The addition of an incremental user decreases the average value generated

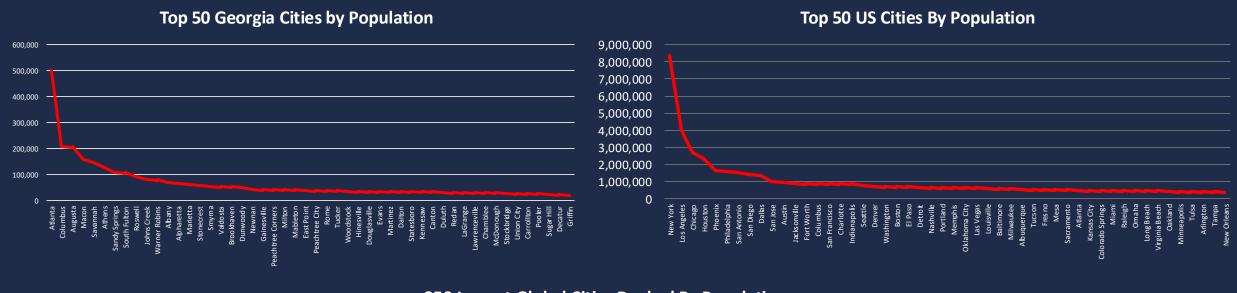
Network effects – or increasing returns to scale – has largely driven our impulse to urbanize

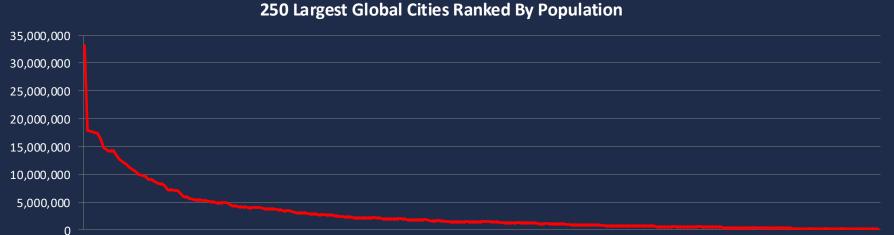
- Rather than reducing value, each incremental addition to the network increases average value
- The incentive to join the network increases as the network grows
- Bigger is better



	Connection	Connections	Connections	Connections
User 1	1	2	3	4
User 2	1	2	3	4
User 3		2	3	4
User 4			3	4
User 5				4
Total Value	2	6	12	20
Increase in Total Value		200%	100%	67%
Average Value	1	2	3	4

This increase in value leads to first mover advantages and power curves





Networks also generate resilience through their ability to circumvent disruptions

- Distribution networks that can bypass disruptions are more resilient
 - Built in redundancy
- In the same sense, cities
 with built environments
 that are networked in a
 way that maximizes
 redundancy are more
 resilient

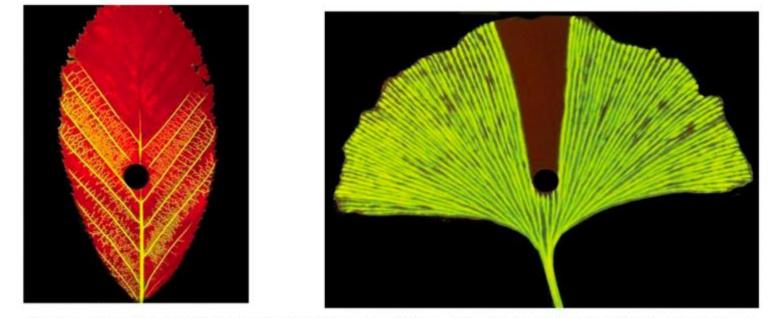


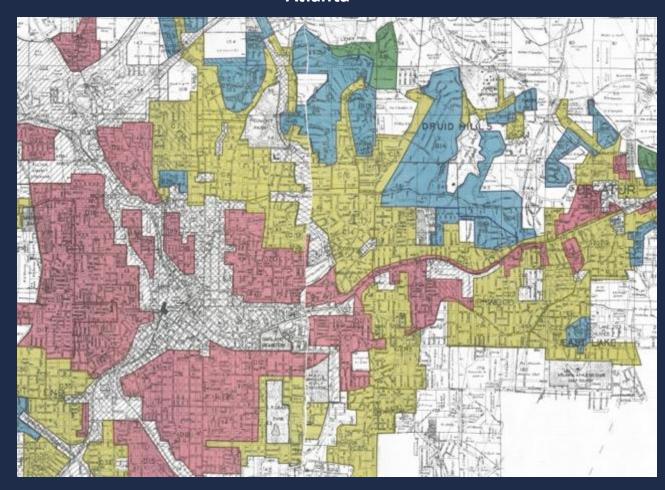
Figure 1. Lemon leaf (left) shows how nutrients can still be supplied to the leaf even when the main artery is cut off, while in the ginkgo leaf (right), the sections which have been cut off die out.

Image Source: E. Katifori, Rockefeller University

The challenge is that we have deliberately prevented our cities from being properly networked

- (Mostly) mal-intended public policies and private actions have isolated communities, mostly based on race
 - Highways and public infrastructure
 - Urban renewal/public housing superblocks
 - Housing finance/redlining
 - School attendance zones
 - Political gerrymandering
- By disconnecting neighborhoods, these policies have undermined the connectivity that drives urban value





Interstate highway system tore holes in the networks of cities, mostly in Black, low-income neighborhoods

- More than 475,000 households and more than a million people were displaced nationwide as a direct result of federal highway building
- These highways were used explicitly to divide White and Black communities
- The highways facilitated white flight, which further segregated urban areas
 - Subsidized by Federal home lending programs, designed to exclude Black buyers, all-White suburban enclaves rapidly expanded in suburban America

The downtown connector in Atlanta destroyed the Sweet Auburn district



Racially-motivated interventions that interfere with the proper functioning of the network are ubiquitous in cities

- In West Palm Beach, curbs were built to prevent cross streets from connecting Black neighborhoods to White neighborhoods
- A wall was built to cut Grosse Point Park off from Detroit

Detroit

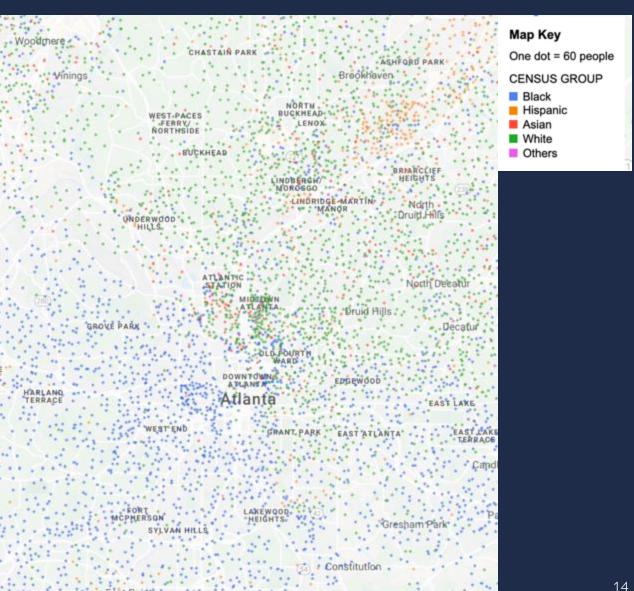


West Palm Beach

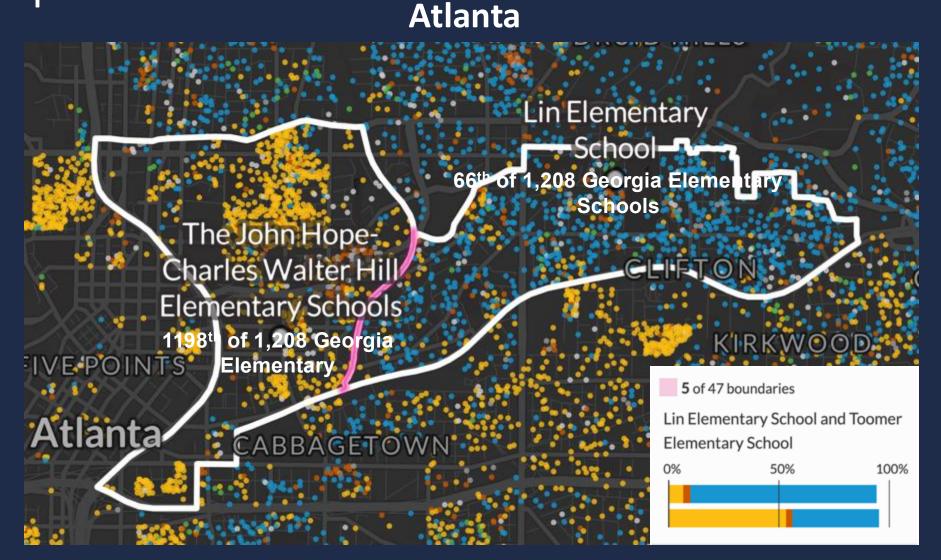


Our cities reman deeply segregated as a result

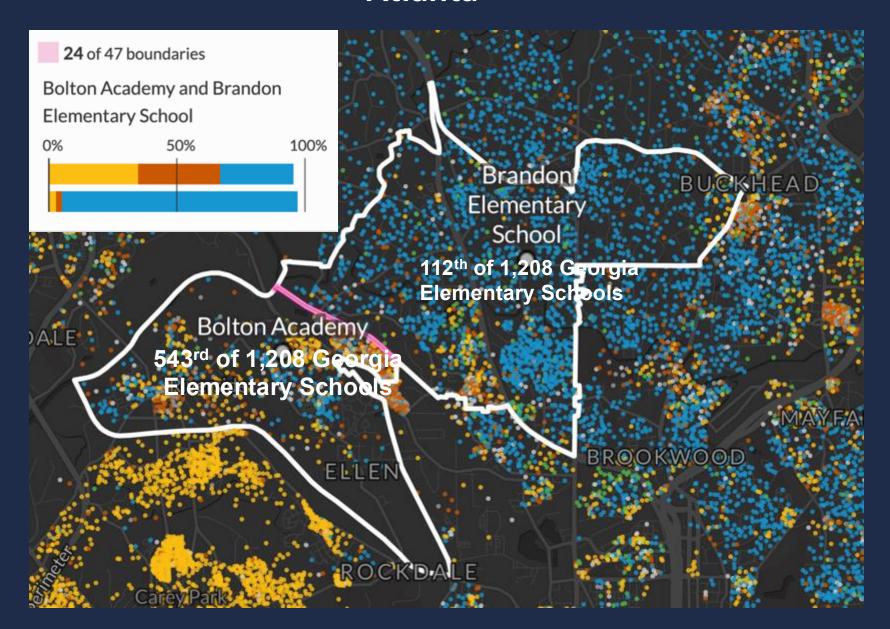
- GI Bill and post-war Federal housing policies encouraged White families to move from cities to suburbs
 - School desegregation efforts accelerated that trend
- Fair housing laws later opened suburban districts to middle class Black families, which drained inner city neighborhoods of economic diversity
- Inner city neighborhoods became less racially and less economically diverse



This segregation persists, and has been codified by laws and practices



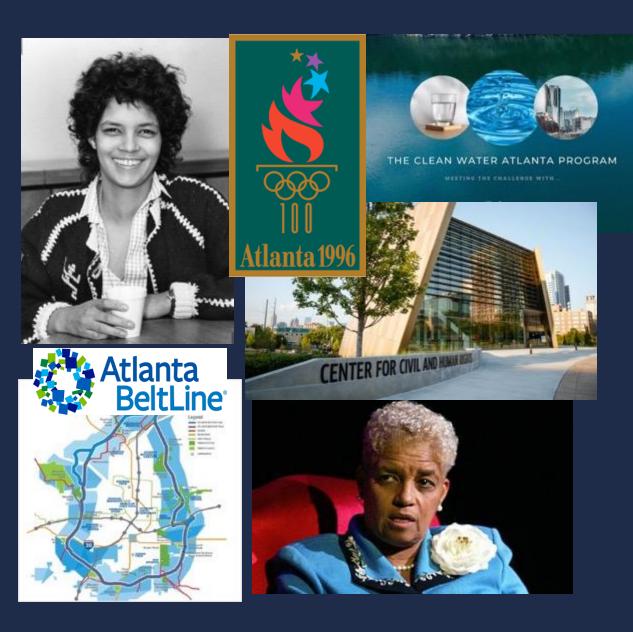
Atlanta



What are the short and long term implications?

- To what extent have we made progress in improving the outcomes in our cities?
- What has the role of government agencies been? How does it play out in policy and resource allocation decisions in places like ARC?
- What are the long term solutions? What should we be doing differently?

Shirley Franklin is the former Mayor of the City of Atlanta



- The 58th Mayor of Atlanta, she was the first woman to hold the post and the first Black woman to be elected mayor of a major Southern city
- Originally from Philadelphia, she is a graduate of the Philadelphia High School for Girls. Franklin received her B.A. in Sociology from Howard University and her MA in Sociology, from the University of Pennsylvania
- Served as the Commissioner of Cultural Affairs under Mayor Maynard Jackson
- Served as Chief Administrative Officer under Mayor Andrew Young
- Co-Founder of the National Center for Civil and Human Rights
- Time named Franklin one of the five best big-city American mayors
- Recipient of Profile in Courage Awards by the John F. Kennedy Library Foundation

The weekly presentations should be short and to the point

- Teams of two students each
- Presentations will be four slides long
- Format:
 - Slide One Definition of the issue. What is the problem that needs to be solved?
 - Slide Two Conceptual approach. What is the best approach to developing a policy recommendation?
 - Slide Three Fact base. What key facts do we need to know in order to effectively apply the conceptual approach?
 - Slide Four Policy Recommendation. Which policy do you advise the Mayor to adopt?

Issues To Be Addressed

- 1. Should the City invest in "the Stitch"?
- 2. Should the City invest in fixed-rail transit on the BeltLine?
- 3. Should the City create a guaranteed income program?
- 4. Should the City pedestrianize Peachtree Street downtown?
- 5. Should the City build infill MARTA stations?
- 6. How should the City deal with homeless encampments?
- 7. Should the City support intercity high speed rail?
- 8. Should the City execute the TrailsATL Plan?

A conceptual model is a representation of expected theoretical relationships associated with a specific problem

- It shows the key concepts being applied to understand the nature of the problem
- Concepts are really just variables that can take on different values in the relationships you are trying to model
 - "If we increase X, the Y should decline by Z%"
- You are trying to uncover causal relationships
 - How does the change in one variable impact the behavior of other variables
- Is the relationship valid?
- How strong is that relationship?

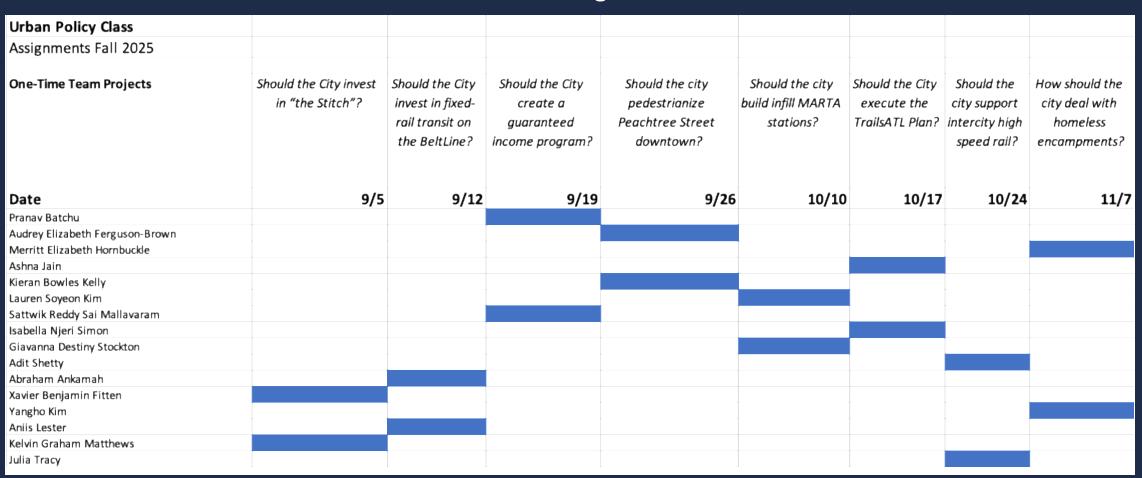
Case Study: Homelessness

- Why is it a problem?
 - Homelessness causes suffering for those in that condition
 - Personal wellbeing
 - Impacts on children
 - Homeless causes public harm
 - Public health
 - Inconveniences
- What is the conceptual model?
 - What are the drivers/causes?
 - What are the interventions?
 - What impact will those interventions have?



The one-time presentations are a chance to work and think like a team

One Time Presentation Assignments and Schedule



Semester Long Project

Discovery Phase Training

Semester-long project will be to develop a strategy to improve outcomes in a specific neighborhood

- Policy Question: How can the City eliminate racial inequities in [Neighborhood]?
- Apply the lessons and learnings from the class sessions

Methodology

Discovery

- What do we know about the neighborhood?
 What is its history?
- What are its assets and deficits?
- What gaps in outcomes do we see?

Strategic Investment Options

- What should be the vision for the neighborhood?
- What interventions are necessary to achieve that vision (i.e., changes in control parameters and introduction of attractors)?

Policy Recommendation

- What is our recommended plan?
- How is it consistent with the neighborhood's history?
- How does it leverage the neighborhood's assets and deficits?

In the Discovery Phase, your goal is to develop a deep understanding of your neighborhood

- Get the facts
 - Demographics (who lives here?)
 - How does it perform (education, health, housing, economics, etc.)?
- Research it's history: how did the neighborhood achieve its current level of distress? What happened?
- Inventory its assets (what does the neighborhood have going for it?)
- Inventory its deficits (what are the major obstacles to improved performance?)

