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Metropolitan dynamics and institutional fragmentation in the United States.

1950-2010

ÉCOLE POLYTECHNIQUE
FÉDÉRALE DE LAUSANNE

Goal of this presentation

- Glimpse at the metropolitan process and its history in the United States
- Formulate hypothesizes about its political implication for people in these areas.
- Present an ongoing research project and get feedback.

Context: metropolis matters

- Globalization
  - Global network of cities.
  - External dimension.
- Metropolitanization
  - Local networks of municipalities in urban regions.
  - Internal dimension.

Context: research project

- *Democracy in the Metropolis*
- Doctoral project conducted at the Swiss Federal Institute of Technology in Lausanne (EPFL), in collaboration with Stanford University.
- How people relate to metropolitan areas and how it affects their civic and political engagement?
- Historical Atlas of Metropolitan Areas
  - Assemble data and compute series of indicators on the evolution of metropolitan areas since 1950.
  - http://metroatlas.github.io
  - All data is accessible, every analysis is reproducible

Metropolis

Local governments

Citizens

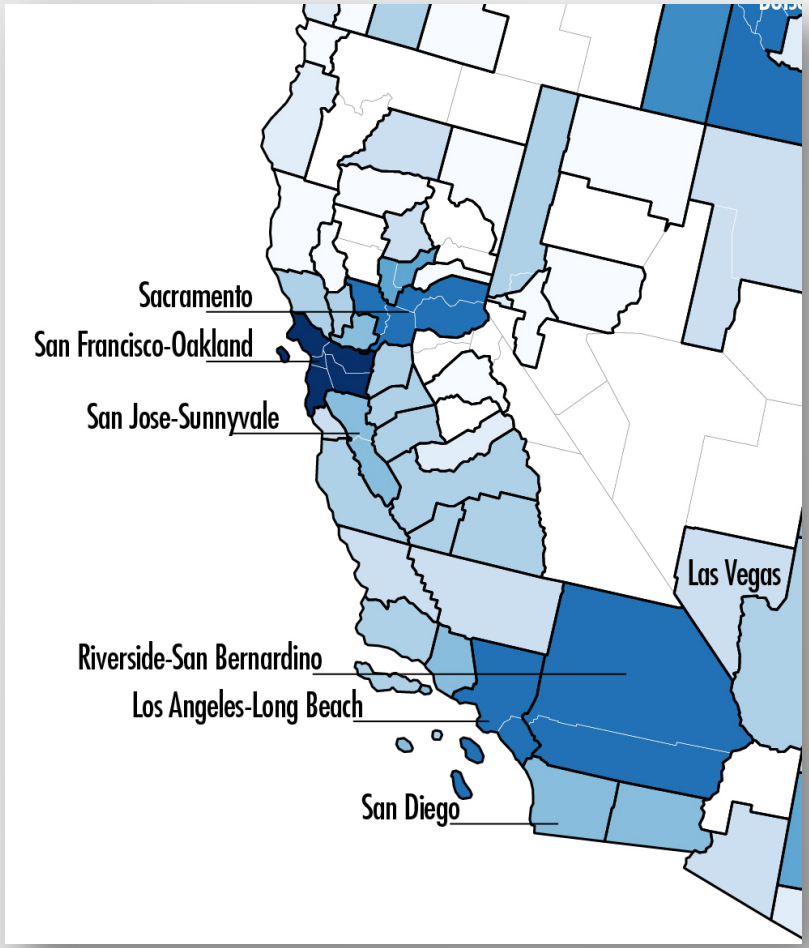
Metropolitan areas are measures of everyday spatial life

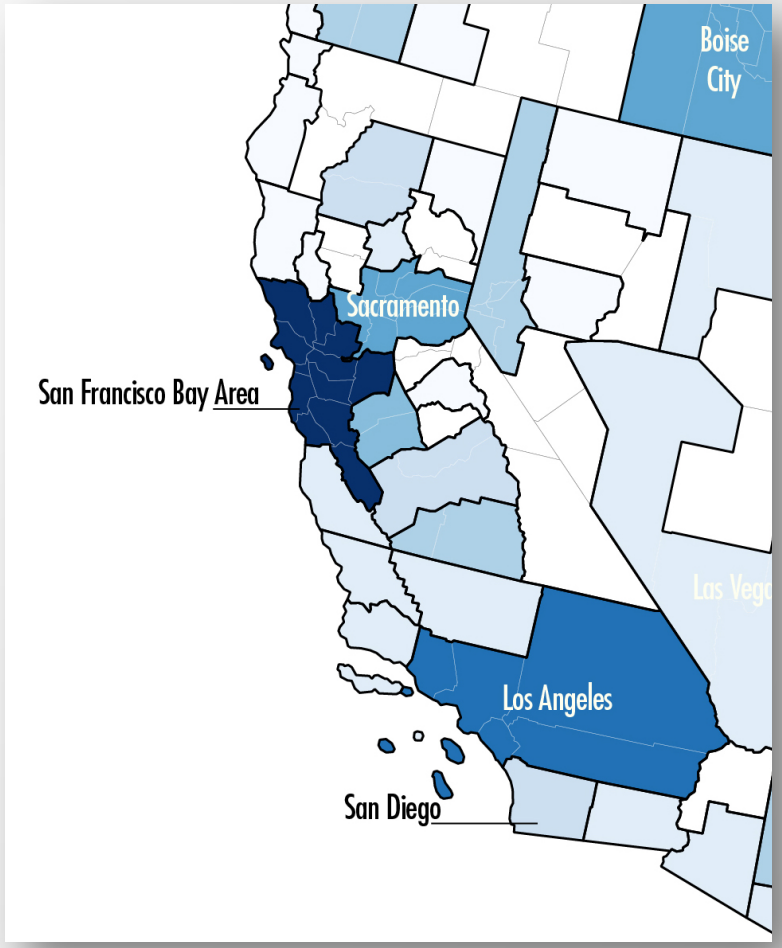
- Statistical definition, not administrative.
- Core Based Statistical Areas (CBSA) have two criteria:
  - Urban core (>10’000)
  - Commute matrix
    - “High degree of social and economic integration with the core as measured by commuting ties”
- Caveats
  - Use of commuting as a proxy, there are other types of mobility (leisure, school…)
  - Use of a core-based definition. In practice, there is at least one core. But there can be more than one.
  - Granularity: measure at county scale.
- This definition is largely shared by other countries.

Metropolitan area definition is generalizable

- The definition is core-based.
- Cores can be neutralized by grouping Core Based Statistical Areas according to their commuting ties to form Combined Statistical Areas (CSA).
  - This grouping neutralizes the single-core effect except for metro areas without urban cores, which there is no case of in practice.
- Primary Statistical Areas (PSA) are either single or multi-core.
- Data is largely available across all US counties: this definition is as close as we can get to a generalizable definition of people's everyday space.

California CBSAs and PSAs





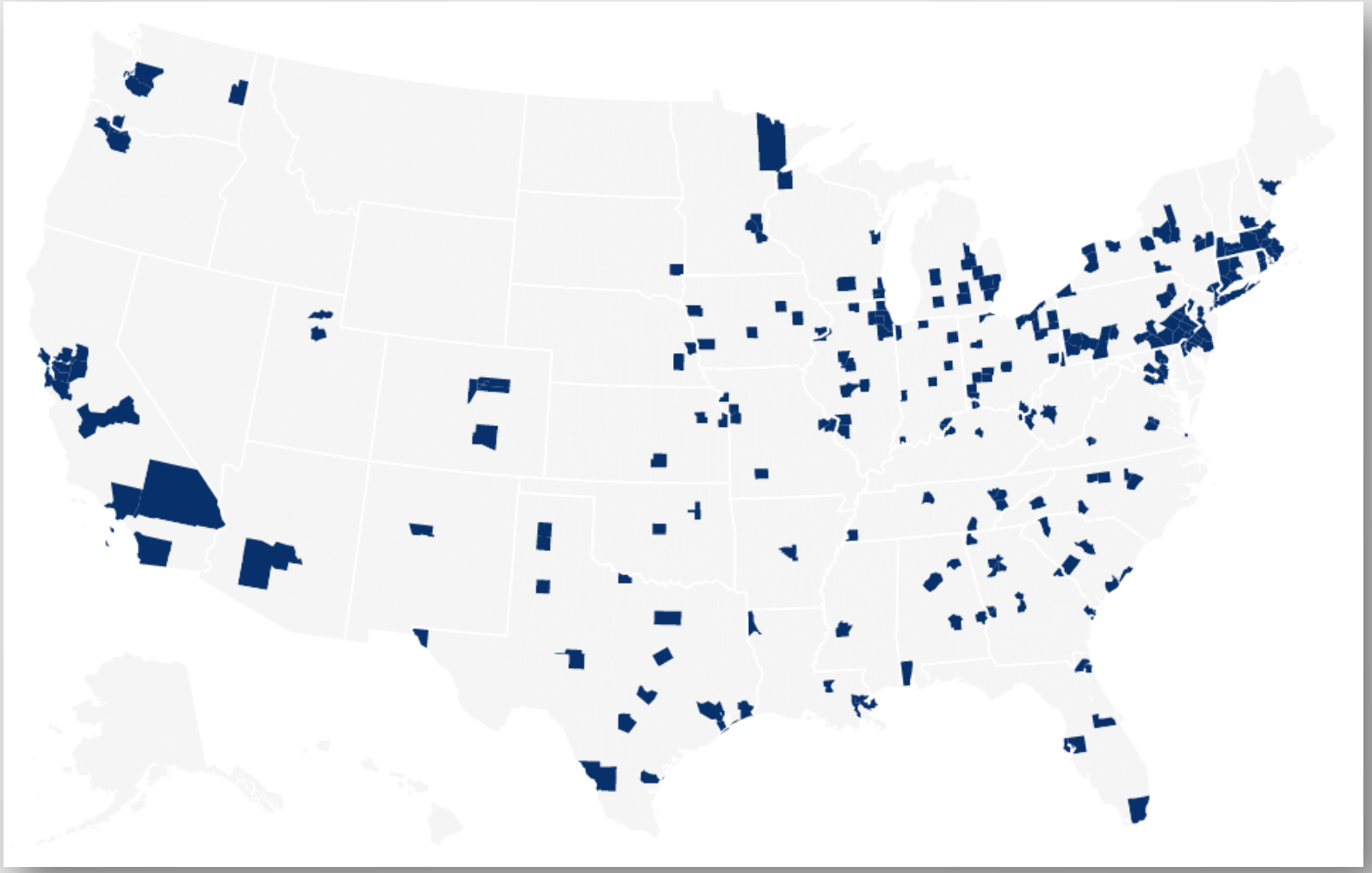
Metropolitan areas are a 20th century phenomenon

- Before WWII
  - Clear separation between big cities and rural places
    - Small rural places
    - Mono-centrix industrial cities
  - Not many in-between places
- After WWII
  - Upscaling of urban environment
    - Out of big cities boundaries
    - Engulfing previously rural small places and towns
  - The bulk of the growth has happened in small municipalities or unincorporated communities in large urban environments revolving around multiple urban cores

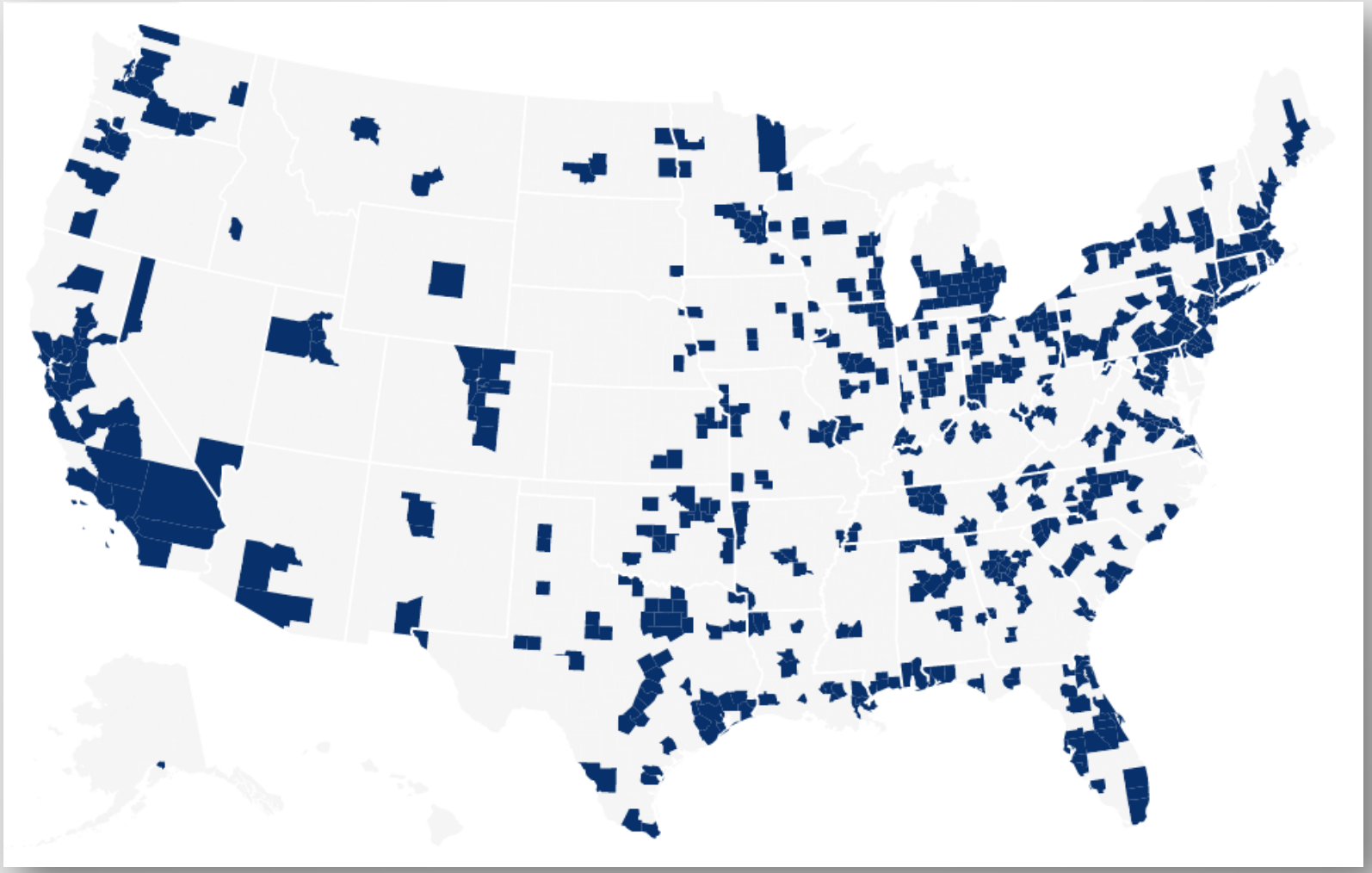
Mobility produces the Metropolis

- Metro areas are a product of mobility:
  - Early public transit (streetcars) have led to the extension of new suburbs outside of the core cities
  - Car has led to the advent a more diffuse, less centric urban development
    - Highways: Interstate Highway System
- Metropolis or region?
  - Edward Soja:
    - Metropolis is core-based
    - Region is diffuse urbanization
  - I do not distinguish between the two, PSA already neutralizes cores

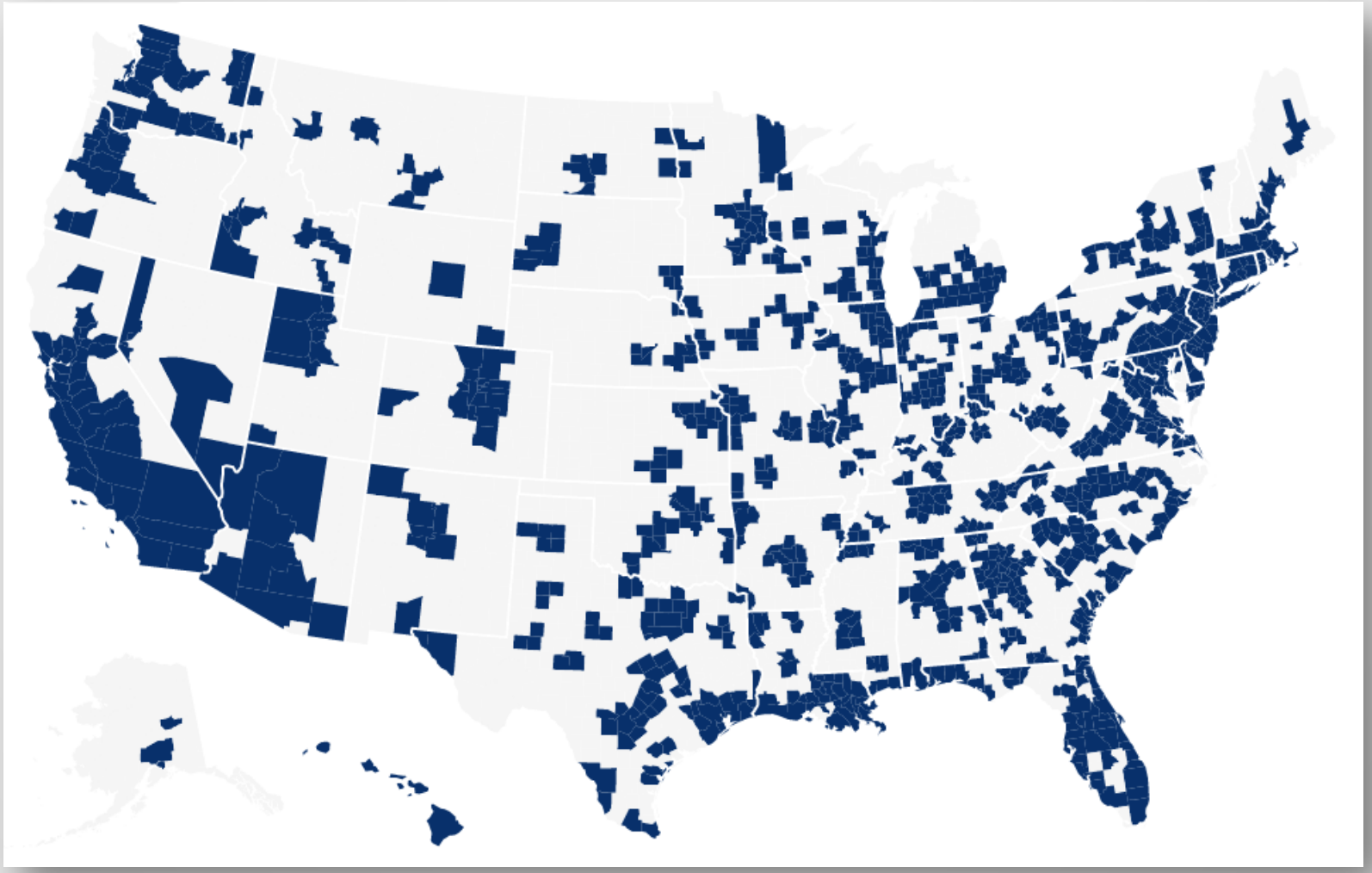
1950: industrials cities and rural communities



1980: suburban America



2010: metropolitan regions



Metropolis

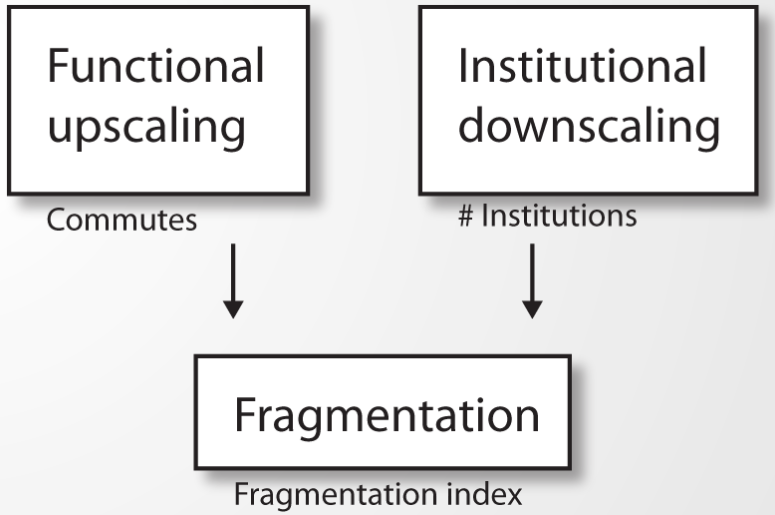
From big cities and rural communities to multi-core urban regions

Local governments

Citizens

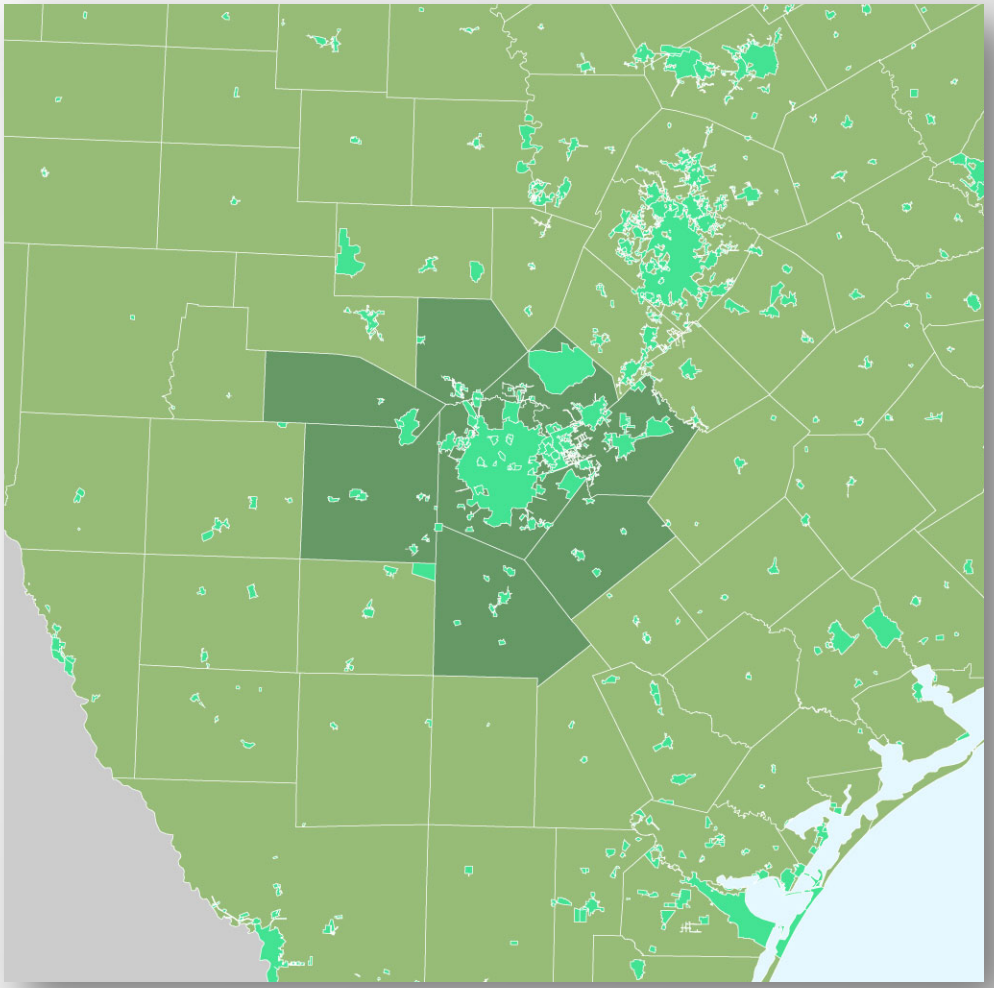
The political effect of metropolitanization is fragmentation

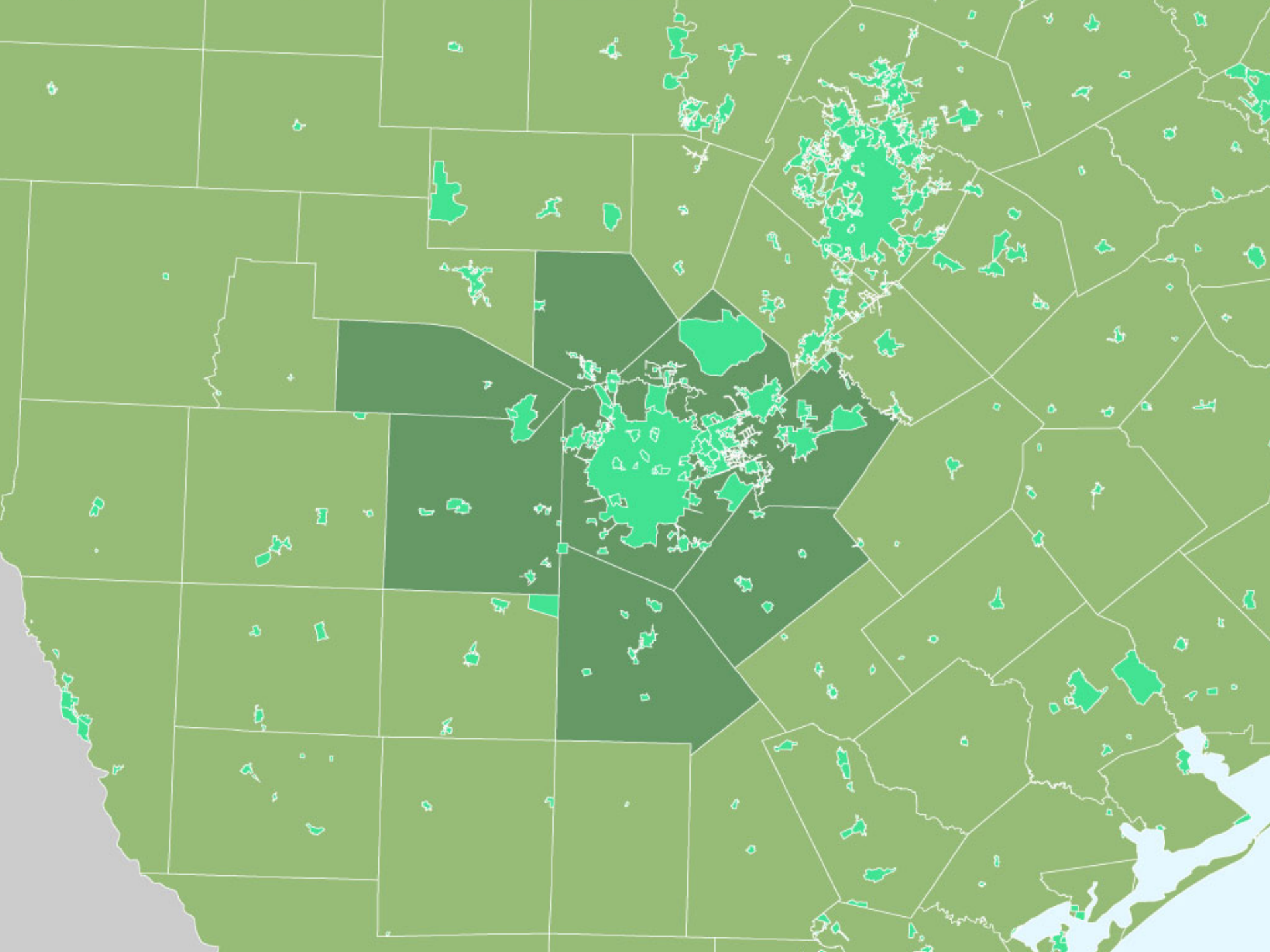
- Institutional fragmentation is the scalar distance between the space of everyday life and the space of political action.
- Two contributing factors:
  - Increase in commuting and other forms of everyday mobility
  - Decrease of political scale by the creation of new municipalities (municipal incorporation)



San Antonio, TX

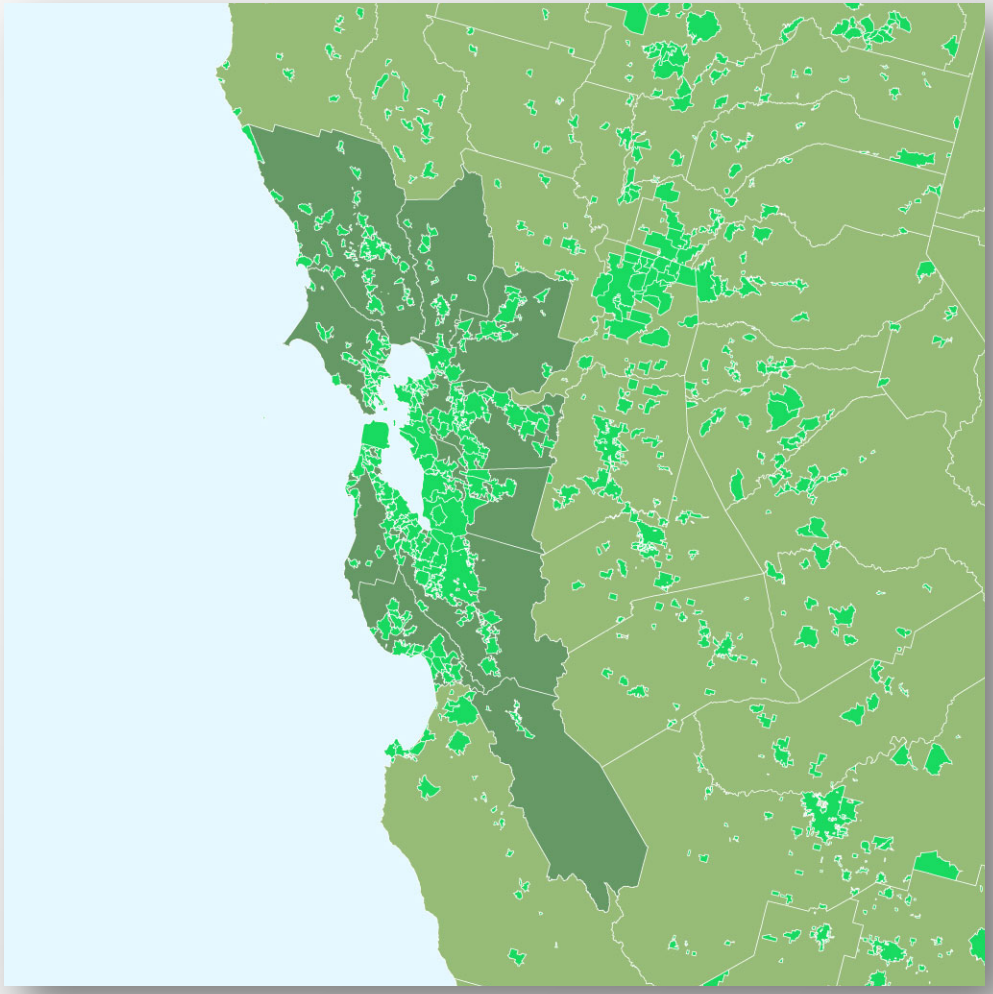
- Very low fragmentation.
- Two central cities, one of overwhelming importance.
- San Antonio hosts 65% of the metro population.
- Consolidation of the central city territory by annexation.

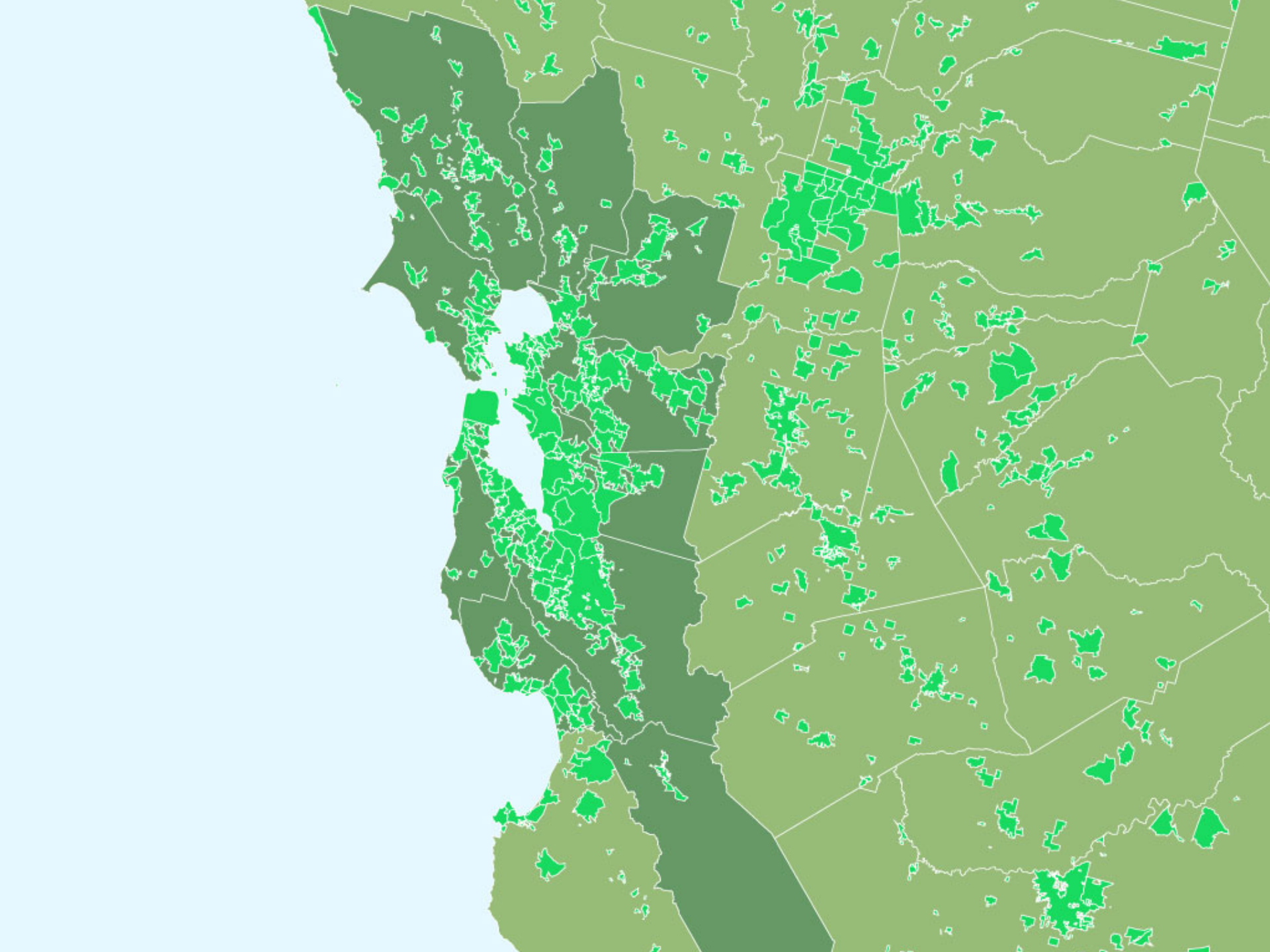




San Francisco Bay Area, CA

- Very high fragmentation.
- Several central cities.
- San Francisco hosts only 10% of the metro population.
- Creation of new municipalities.





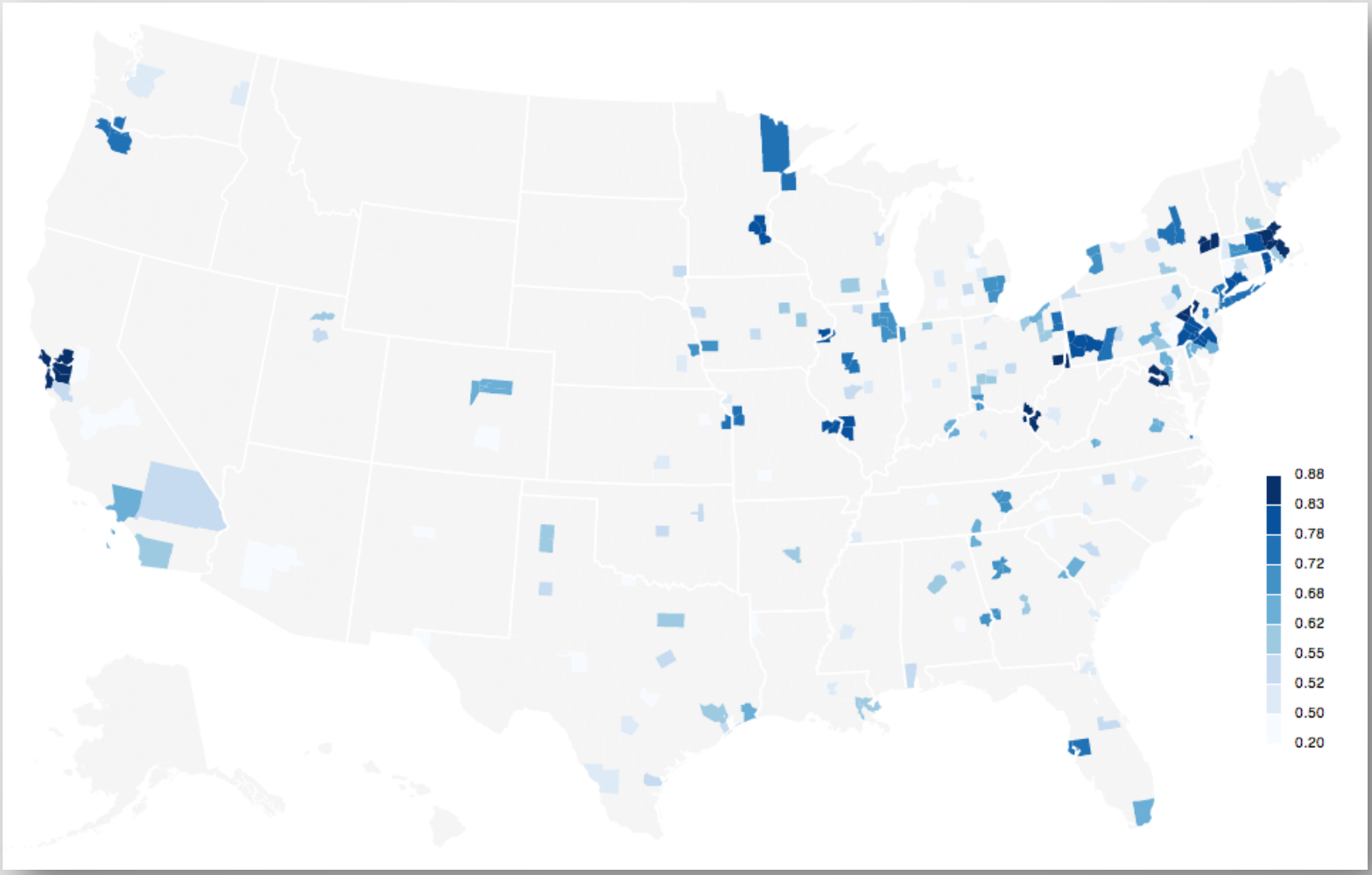
Measuring fragmentation

- Two main ways of defining fragmentation:
  - Count of government
  - Market share (population, expenditures, GDP…)
- Generalized Hischmann-Herfindahl Index [1950]
  - Market share of population
- For a CBSA C, composed of N institutions *i*—counties and incorporated places—with a population of Pop_i, the fragmentation index F_c is:

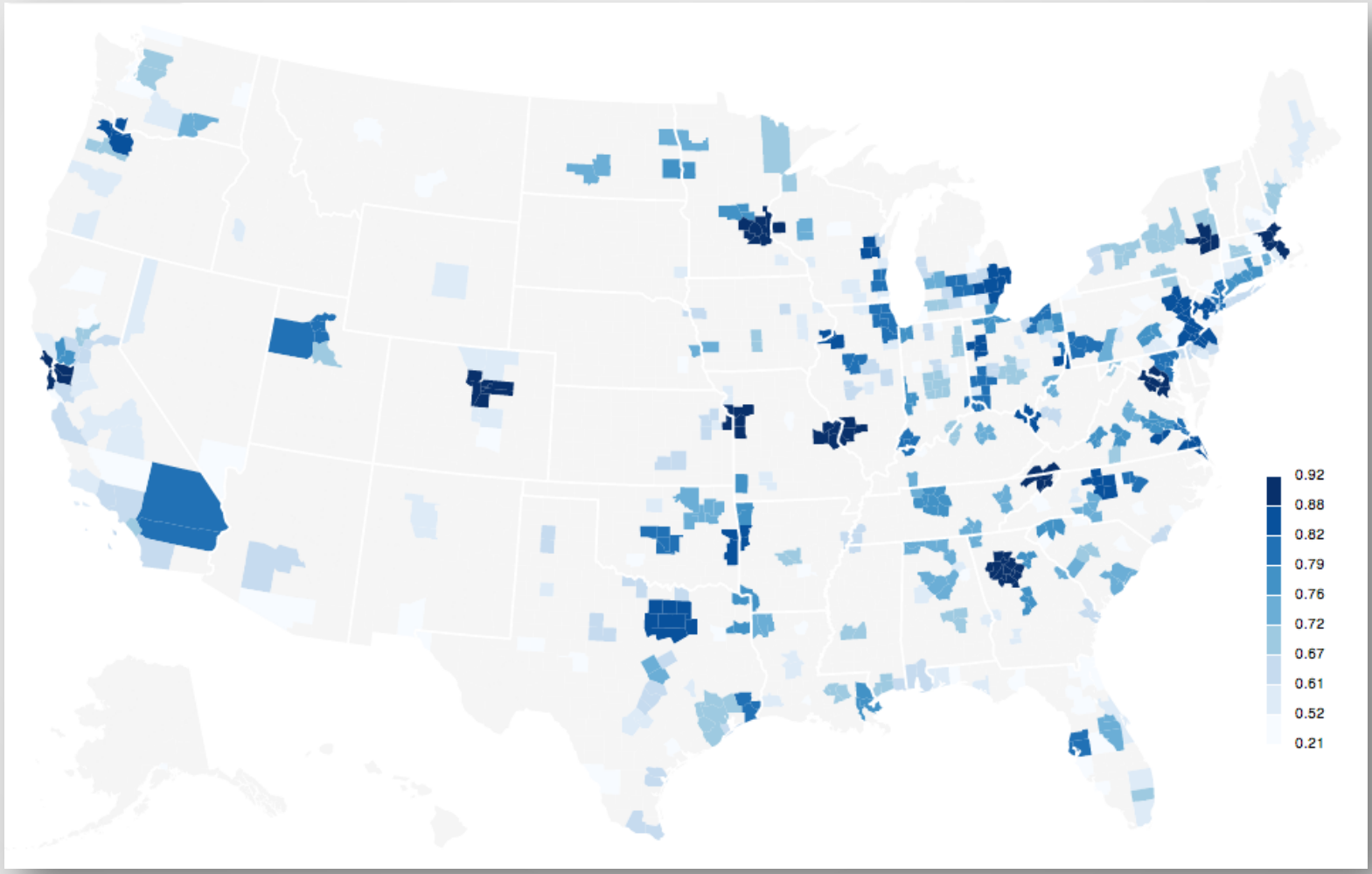
$$F_c = 1 - \sum_{i=1}^{N_c} \left(\frac{Pop_i}{\sum_{i=1}^{N_c} Pop_i} \right)^2$$

- A CBSA with only one county and no incorporated place would have a fragmentation index of 0.
- A CBSA with a population distributed in many counties and incorporated places would have a fragmentation index tending to 1.

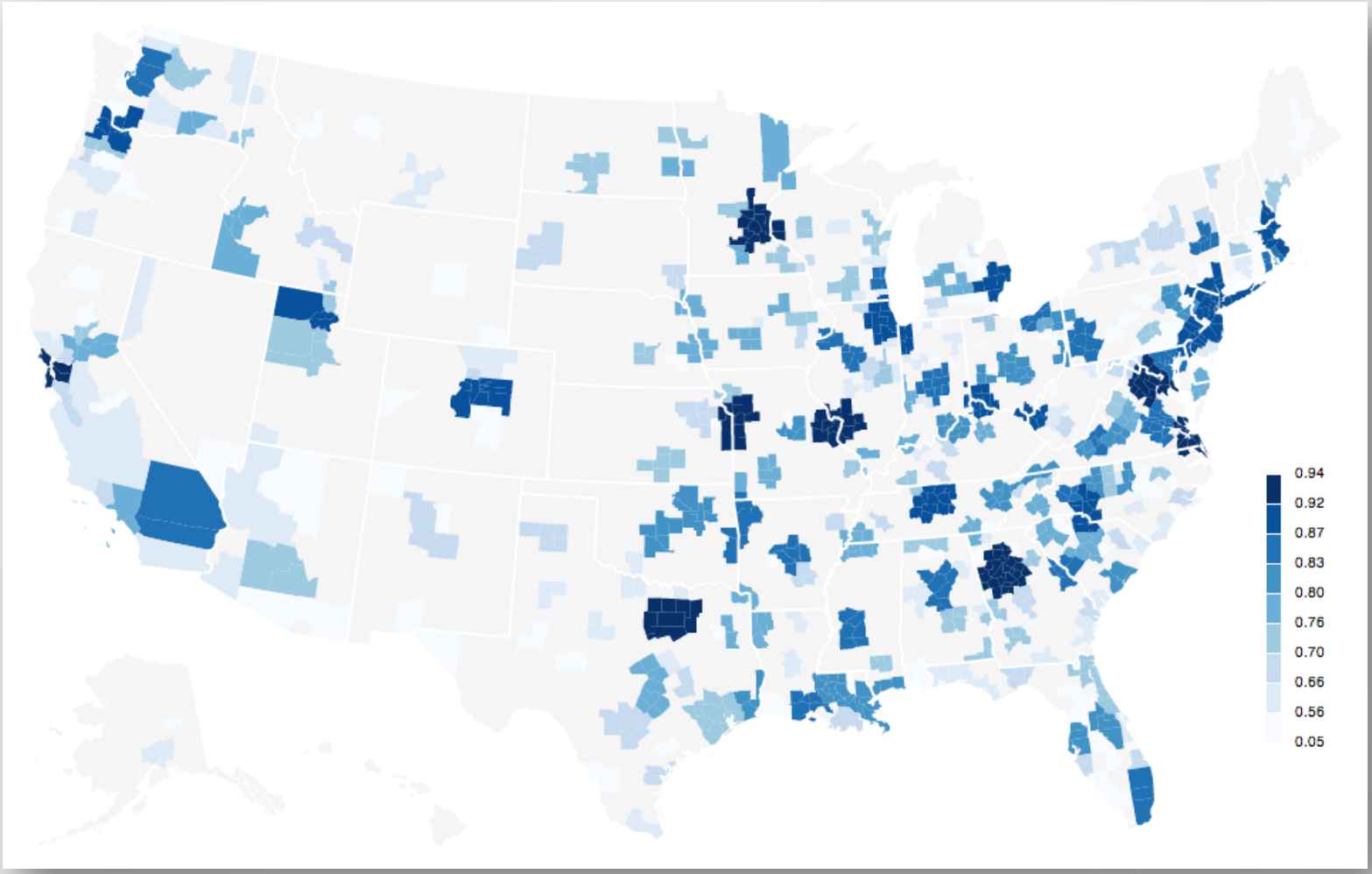
1950: cities and suburbs



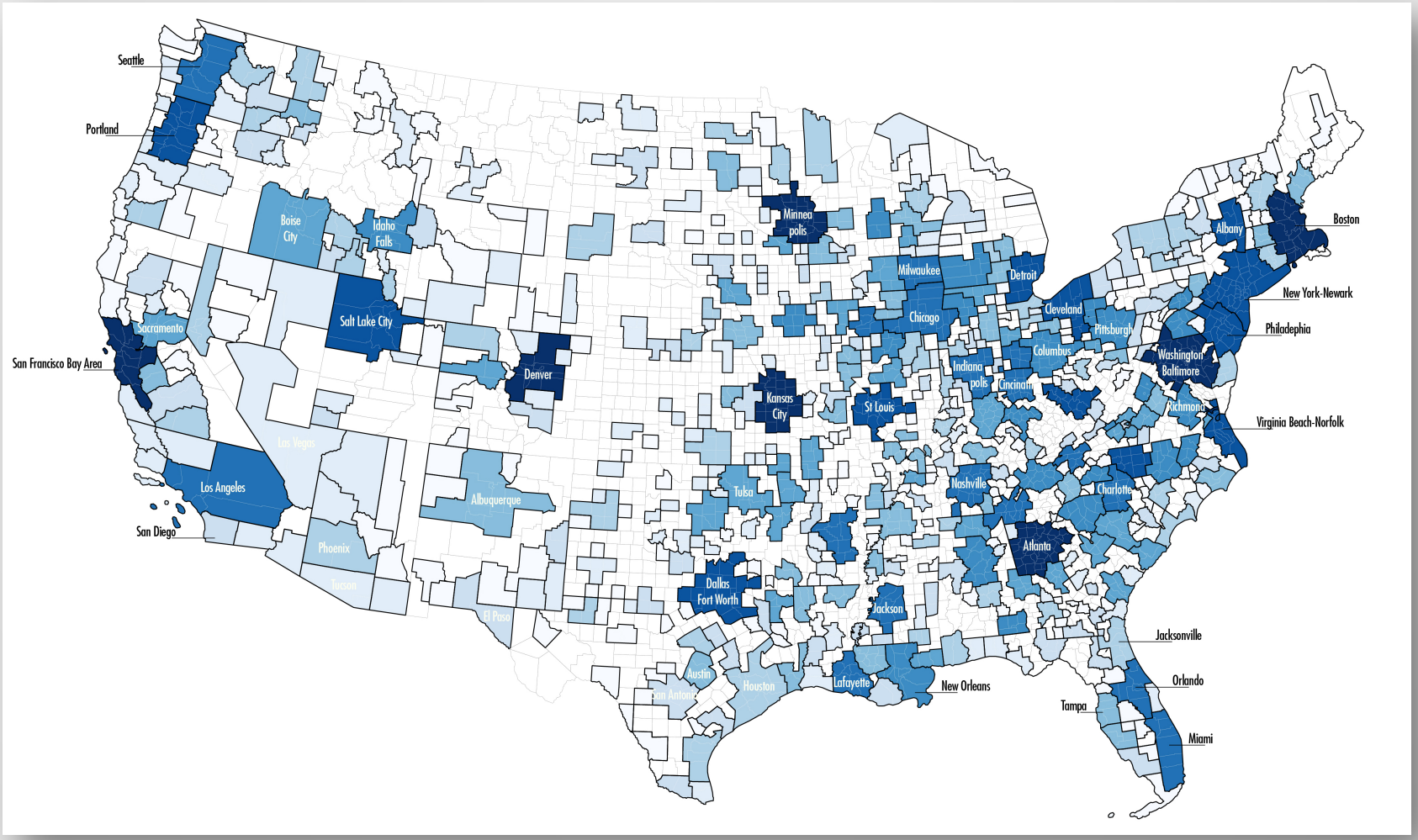
1980: out of the county



2010: integrating regions



2010: primary statistical areas

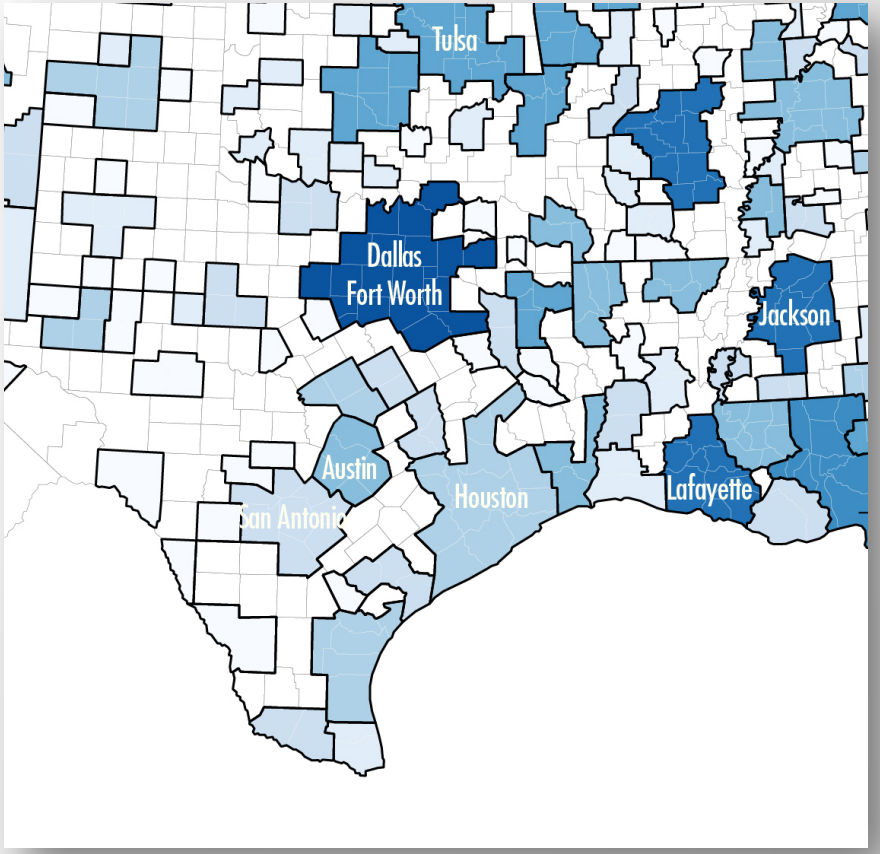


Central latitudes of mainland USA are more fragmented

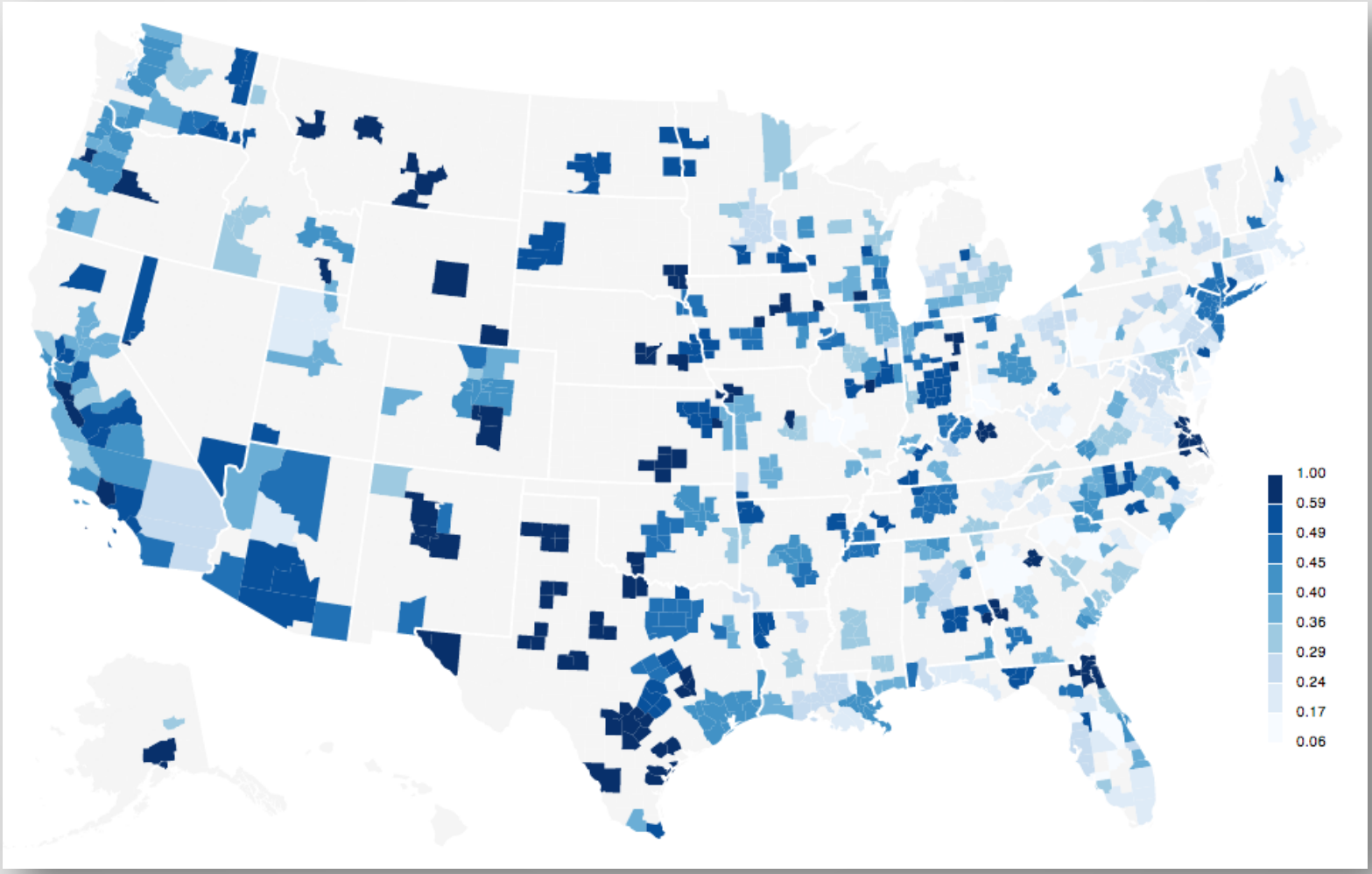
- The fragmentation belt, where political power is more diffuse in metropolitan areas.
  - NorthEast (Gottman's Megalopolis)
  - Central Midwest
  - San Francisco
- North and South are less fragmented:
  - Great Lakes Region, Oregon, Washington
  - Florida, Texas
- But there are exceptions
  - Dallas-Fort Worth, early bi-core metro area
  - Atlanta

Metro areas are merging

- Separated metropolitan areas are becoming more integrated, merging into a single PSA.
- This is likely to disturb the « fragmentation belt » pattern.
- Metropolitan areas are more and more networks of cities.
  - The importance of suburbanization is decreasing.



Proportion of population in central cities



Metropolis

From big cities and rural communities to multi-core urban regions

Local governments

Institutional fragmentation is on the rise, concentrated in the central latitudes

Citizens

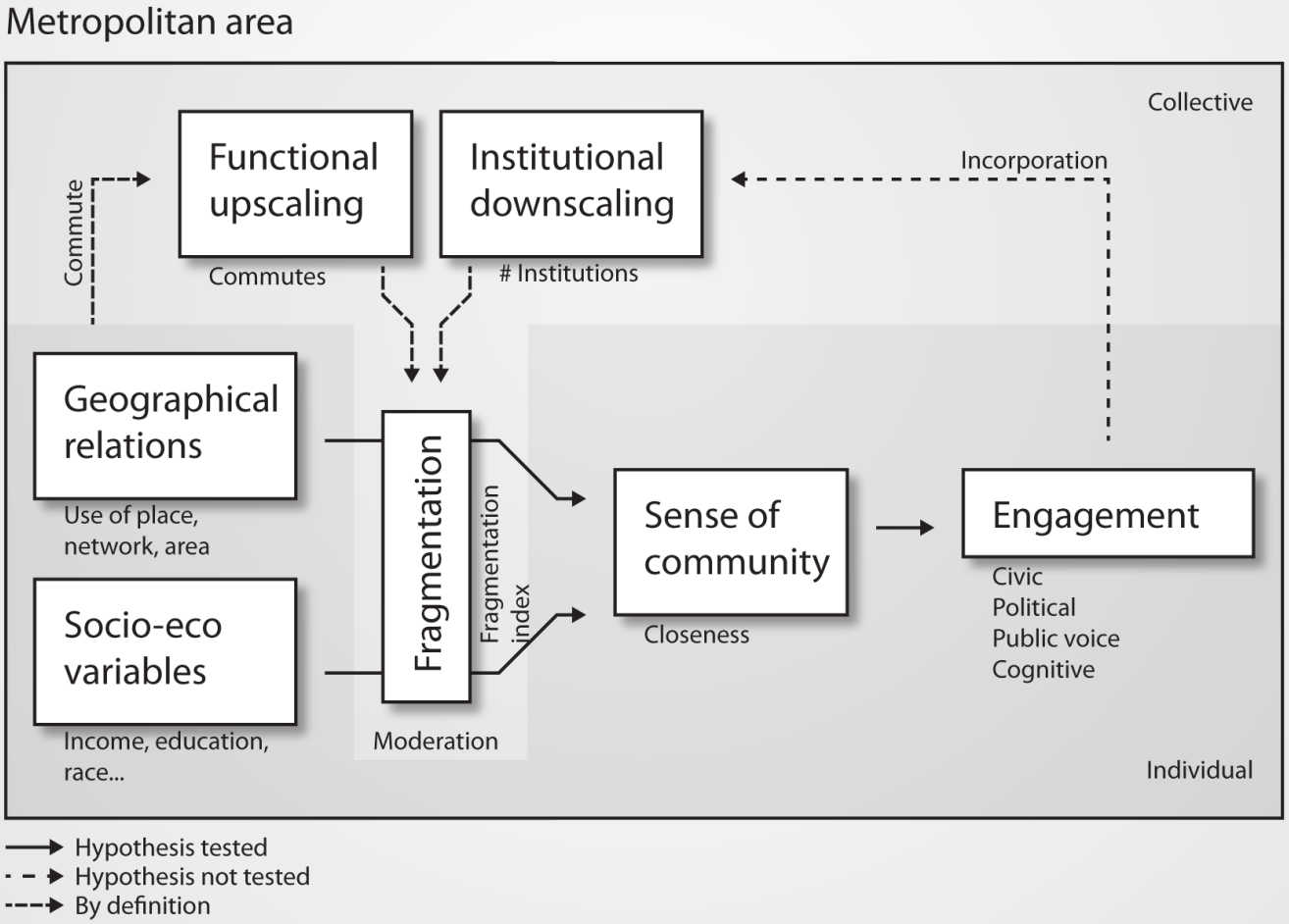
Institutional fragmentation changes policy-making

- Local governments have a lot of autonomy in the US
  - Tax
  - Public services
  - Land use
- No metropolitan governments
  - Few exceptions: Twin Cities, Indianapolis
  - Many failures to pass
  - State incentive to coordinate is the usually the strongest form of metropolitan policy-making

Institutional fragmentation mediates civic and political engagement

- Political engagement
  - Traditional political engagement, with party and election driven activities.
  - Multi-topic, vertical
  - e.g. vote, campaign, campaign contribution…
- Civic engagement
  - Topic-based, horizontal
  - e.g. donate to an association
  - Lasting coalitions or ad-hoc mobilizations
- There is a generational shift from political to civic engagement.
  - Young people are less politically engaged.
- Fragmentation changes the incentives to engage either politically or civically.

Institutional fragmentation mediates civic and political engagement



Institutional fragmentation fosters civic engagement

- Metropolitan fragmentation reinforces the generational trend.
- In very fragmented institutional environments, votes and elections affect a small share of the space of interest.
- Coordination is key to influence policies in this context.

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Fragmentation gives incentives to act civically more than politically

Next steps

- Other ways to measure:
  - Metropolitan areas: vary the commuting threshold
  - Fragmentation:
    - Zeigler-Brunn Index
    - Metropolitan Power Diffusion Index
- Finer granularity:
  - 10y instead of 30y
- Model of engagement in fragmented metropolitan environment
  - Build a dataset of political and civic engagement