



Understanding Neighborhoods with...

Diversity + Exposure in **Daily Encounters**

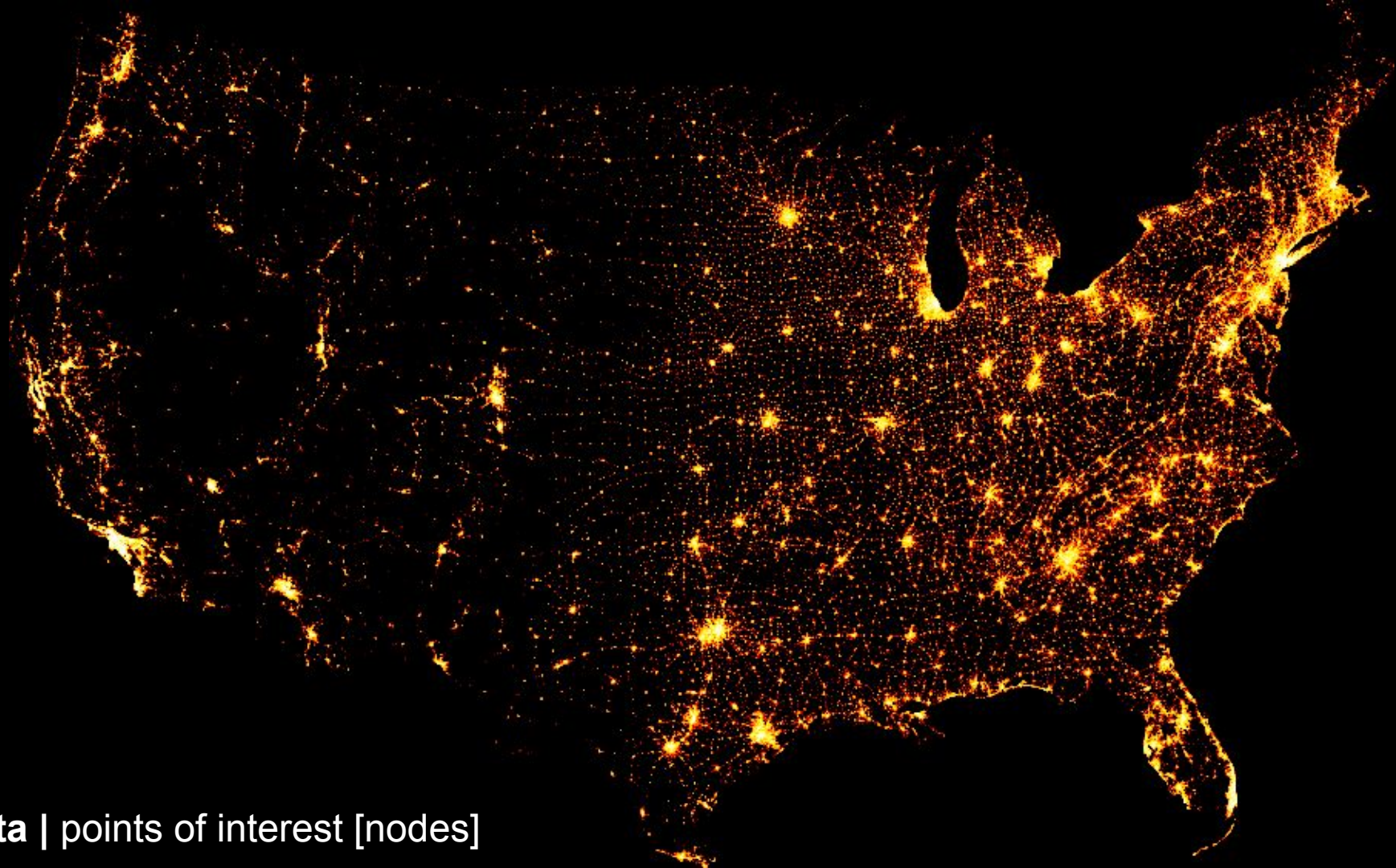
Andrew Renninger



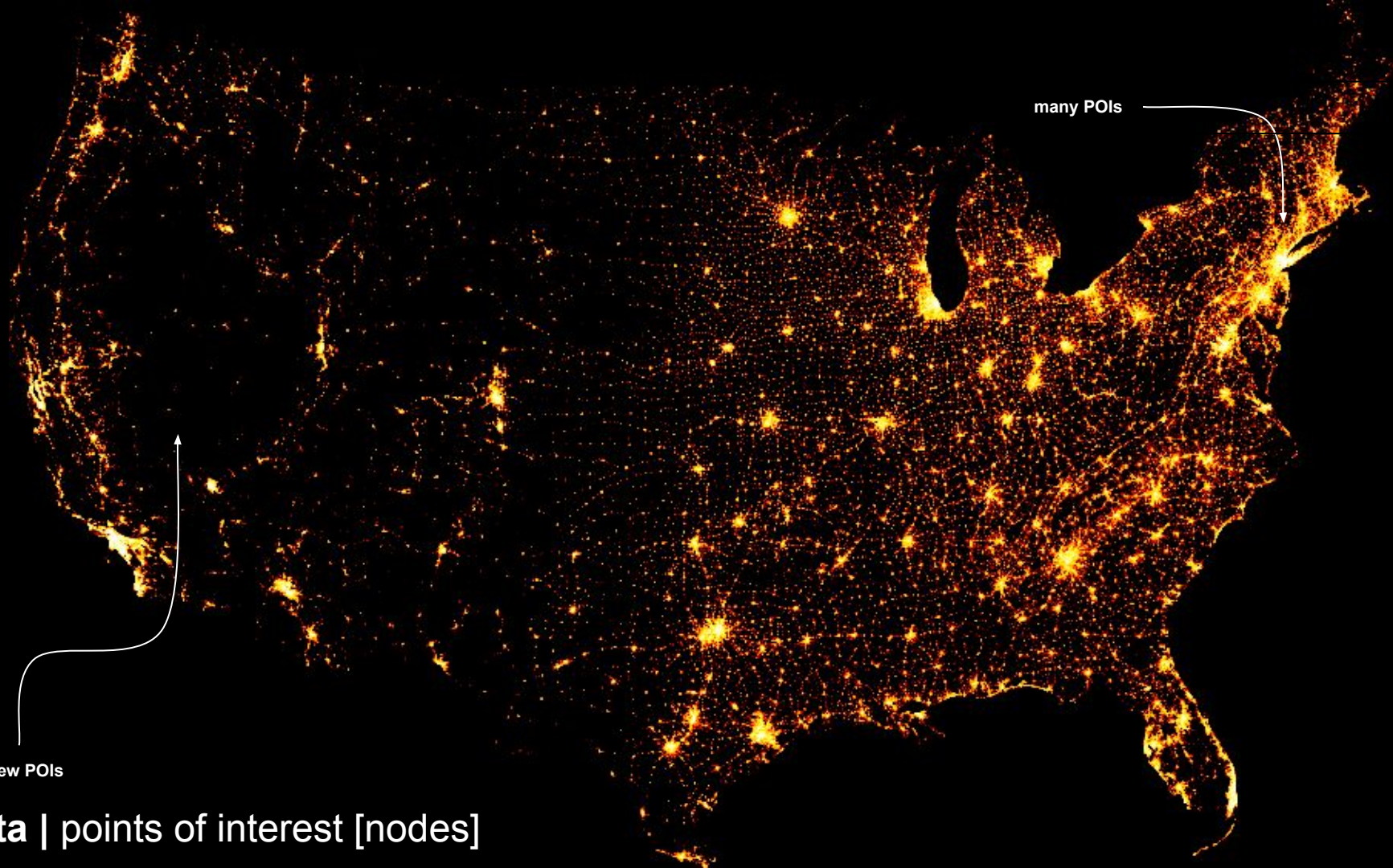
Question I

Given growing literature on “experienced isolation”—the propensity for people to interact with others like them throughout day-to-day activity—what are we missing?

- + **What are the relevant scales of isolation?**
- + Micro/person (Moro) // Macro/city (Athey) // Meso/cluster (Not much?)
- + **Where are contiguous zones and what defines them?**
- + Integrative modeling, prediction + inference (Watts)
- + **Are these patterns changing over time?**
- + Remote work (Barero) // Changing preferences (Ramani)



Data | points of interest [nodes]



few POIs

many POIs

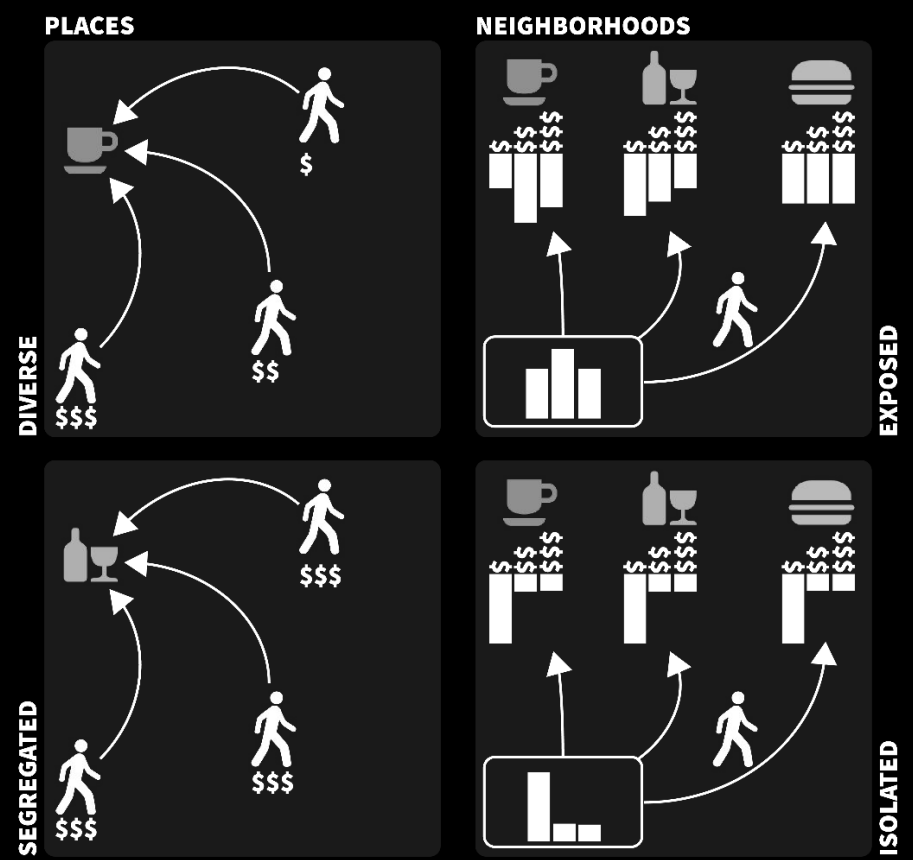
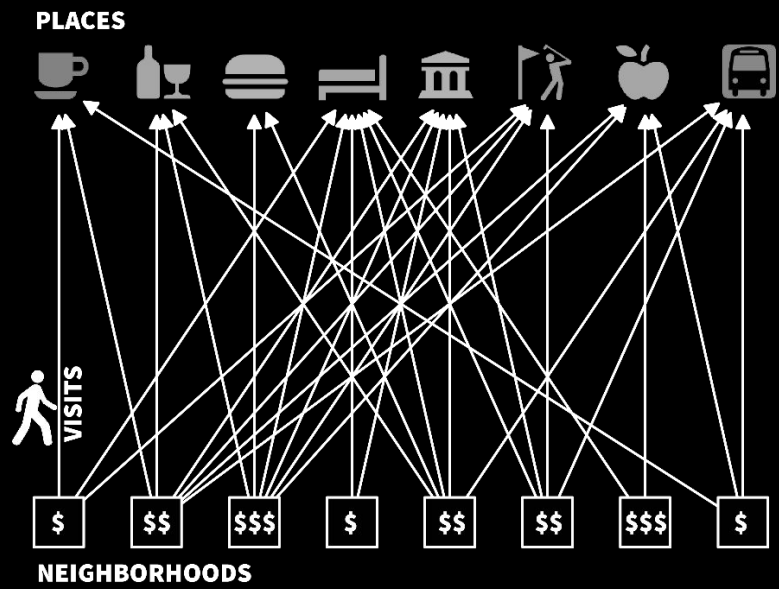
Data | points of interest [nodes]



Data | visits [edges]

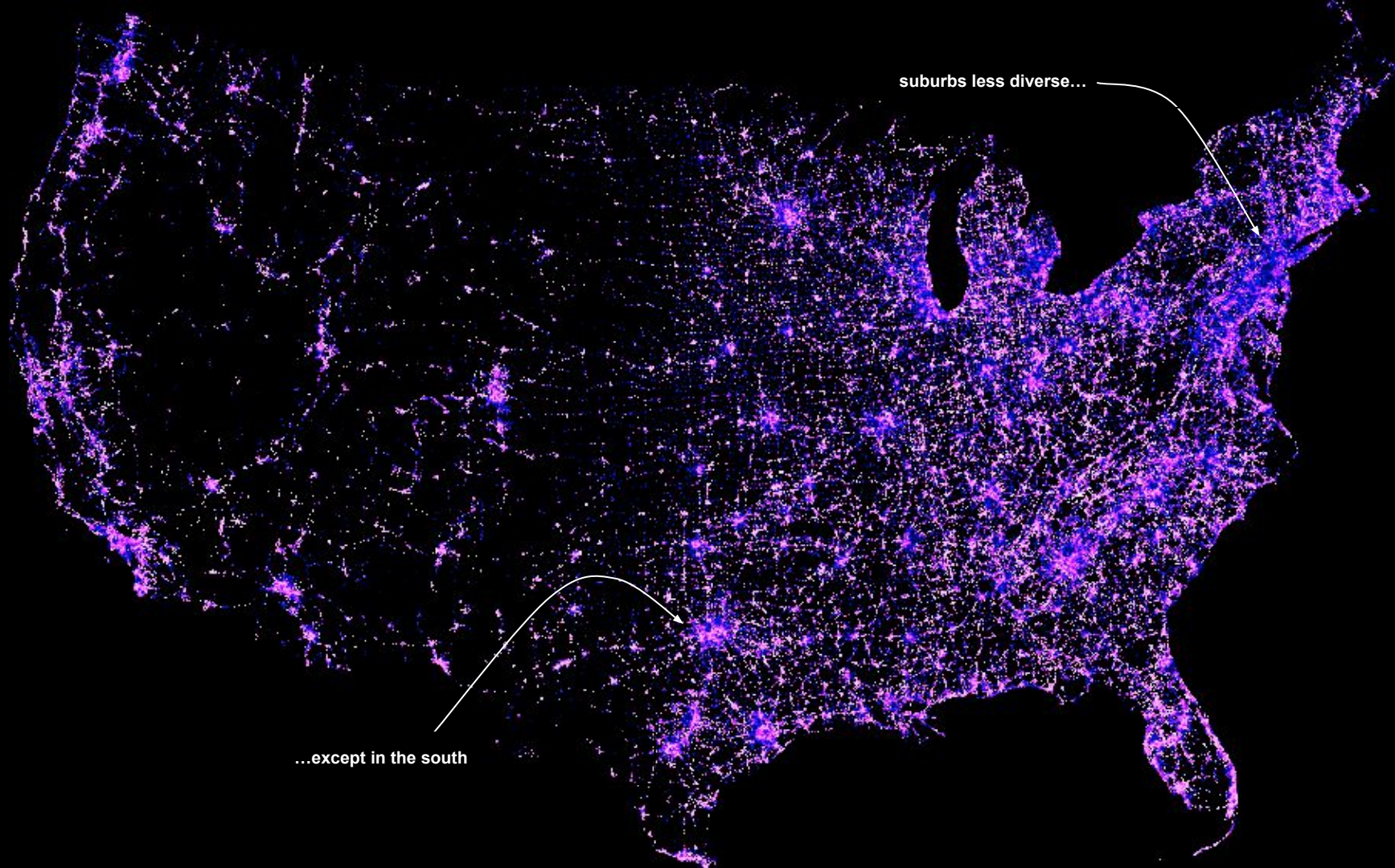


Computing segregation + isolation

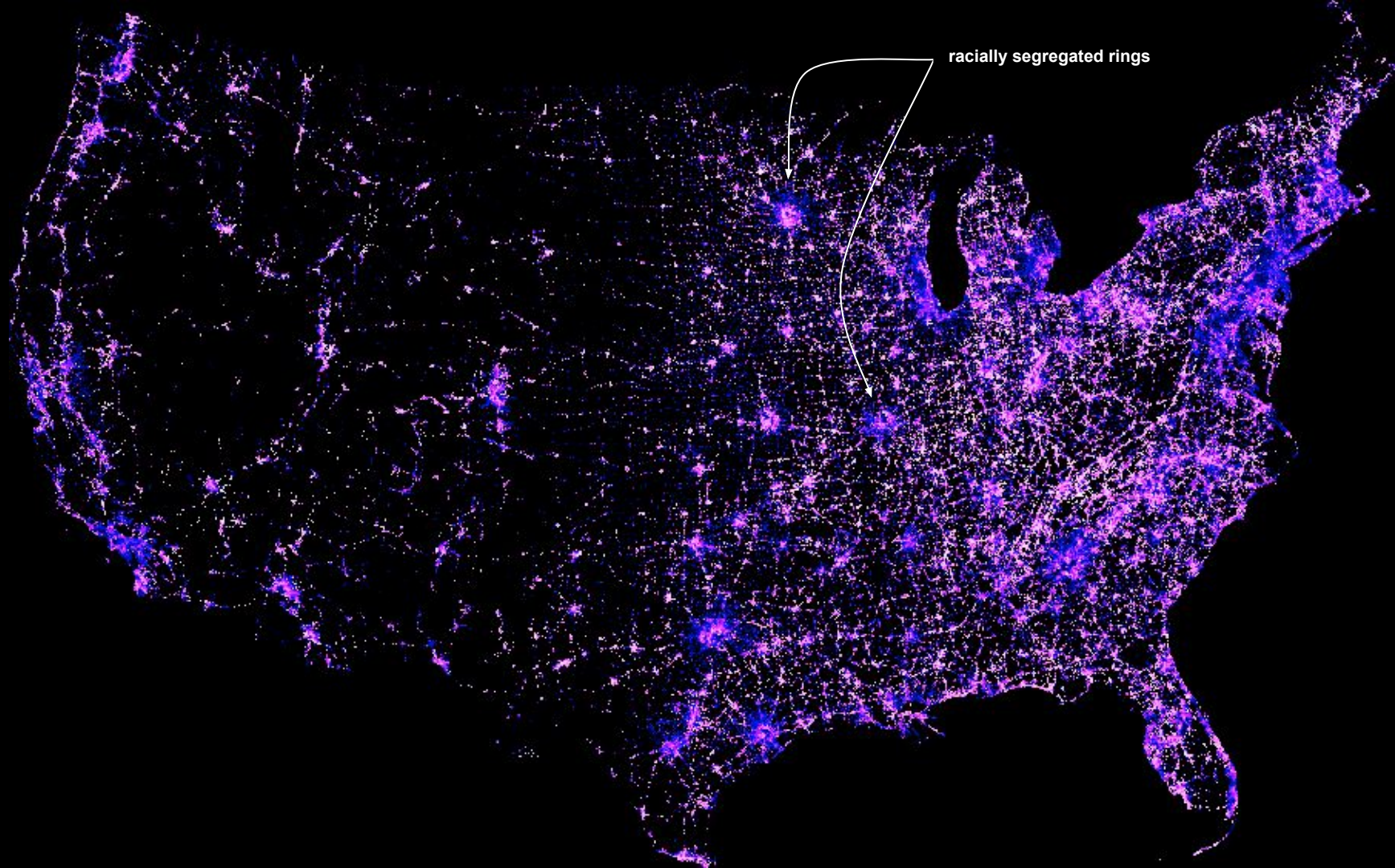


...and we can do the same thing with race, using % nonwhite instead of median income.

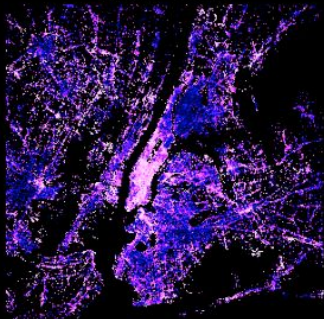
INCOME



RACE



New York



Los Angeles



Chicago



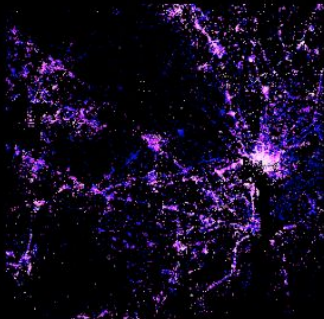
Dallas



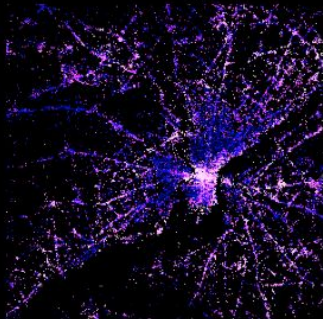
Houston



Washington



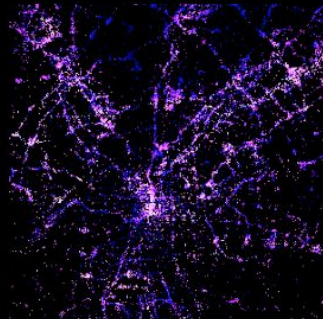
Philadelphia



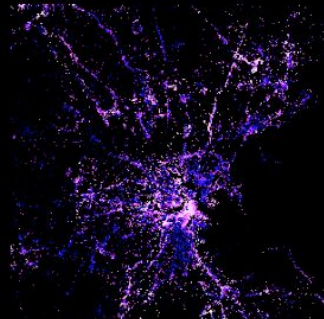
Miami



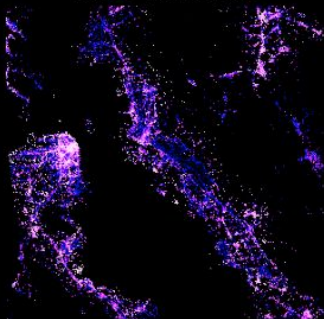
Atlanta



Boston



San Francisco



Phoenix



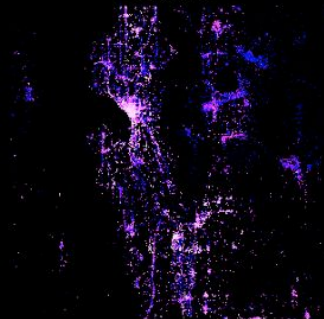
Riverside



Detroit



Seattle



INCOME

New York



Los Angeles



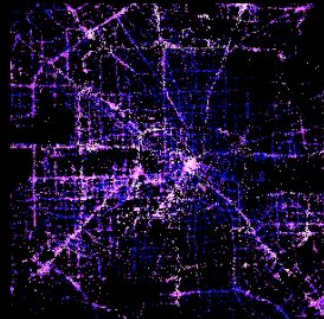
Chicago



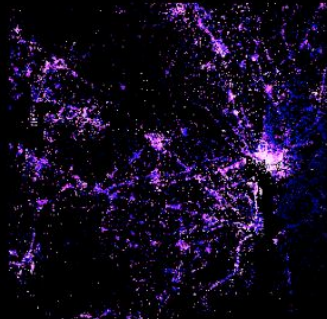
Dallas



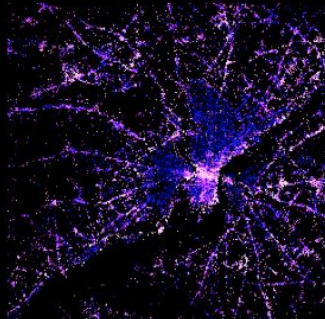
Houston



Washington



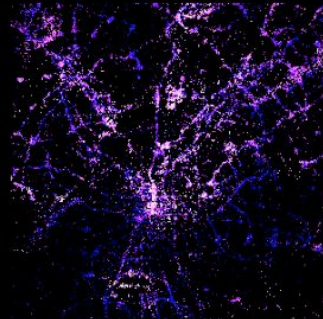
Philadelphia



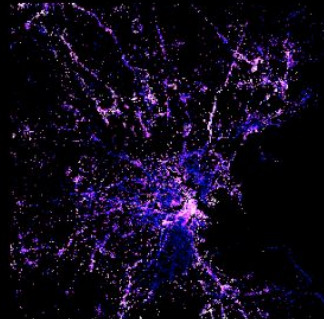
Miami



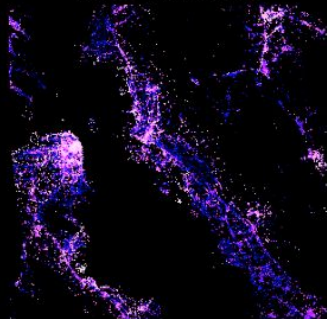
Atlanta



Boston



San Francisco



Phoenix



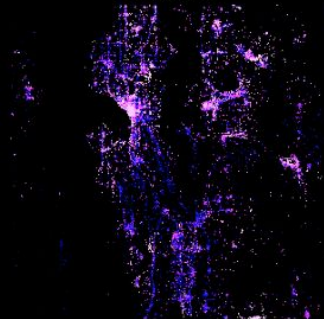
Riverside



Detroit



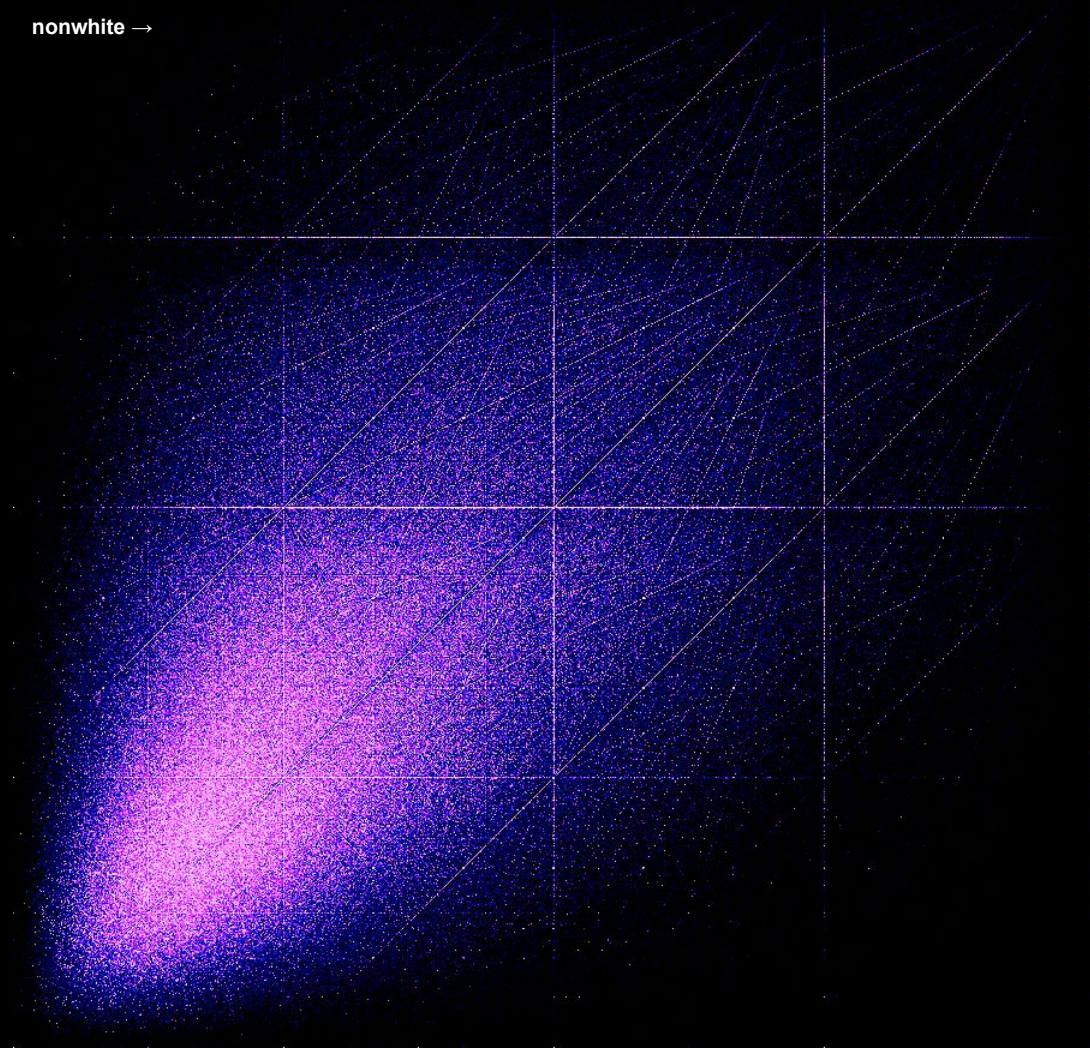
Seattle



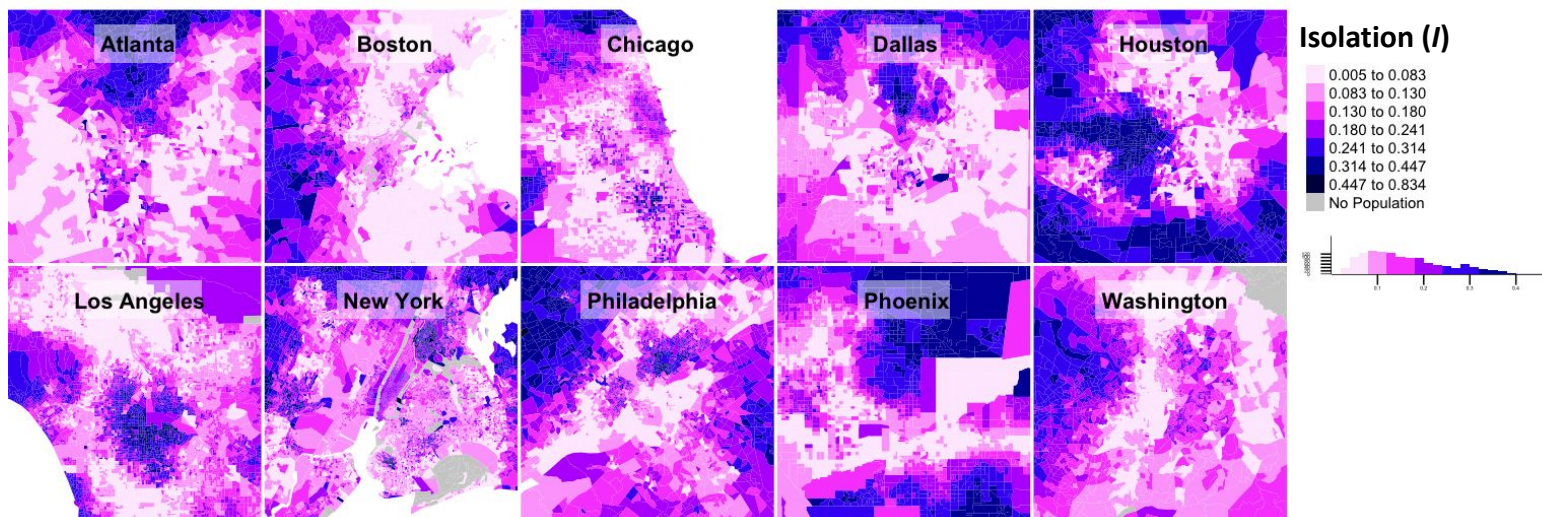
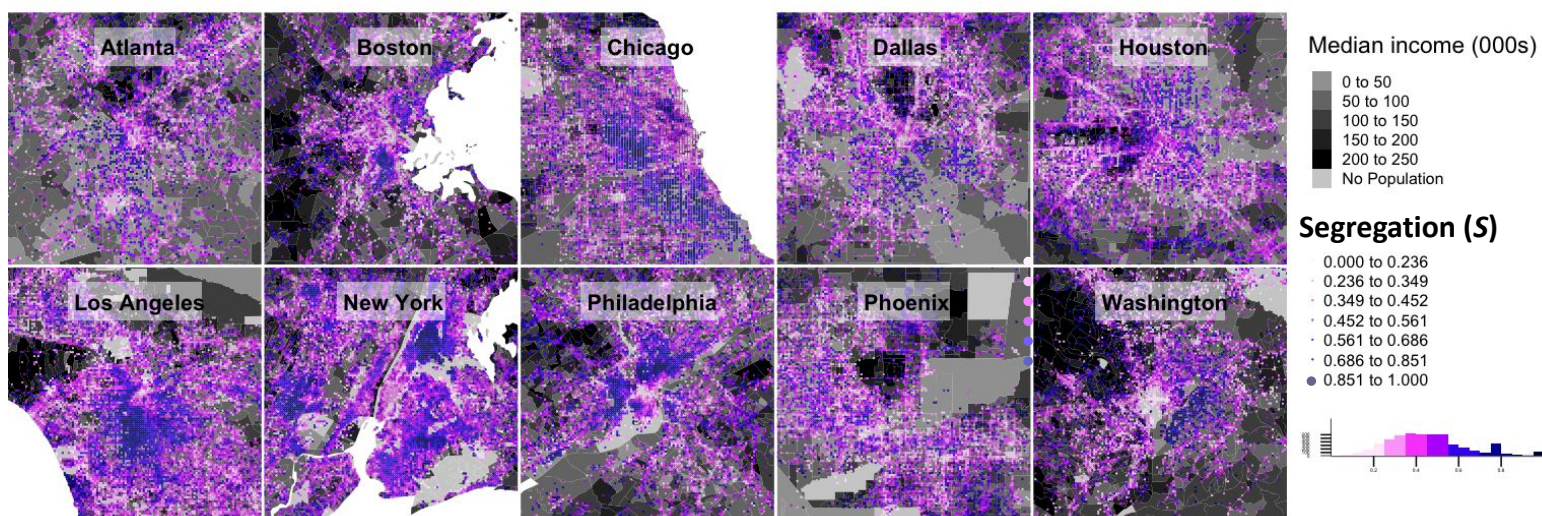
RACE

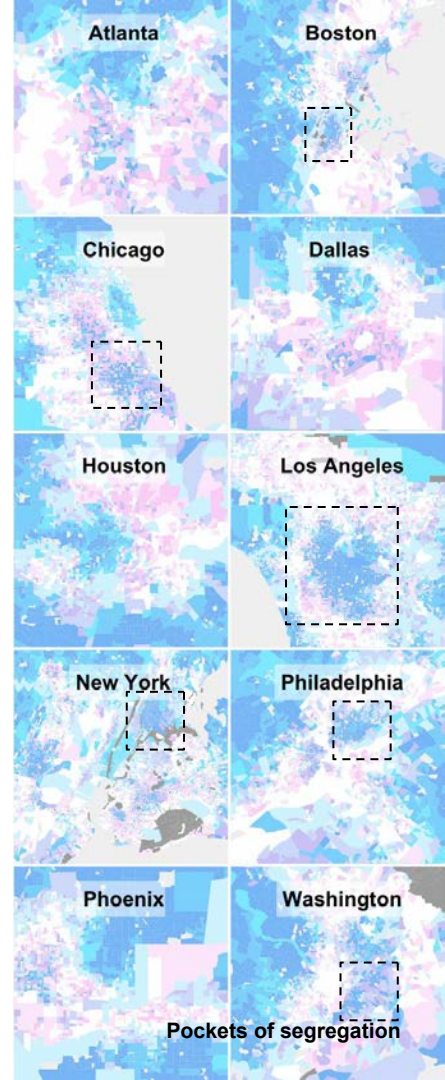
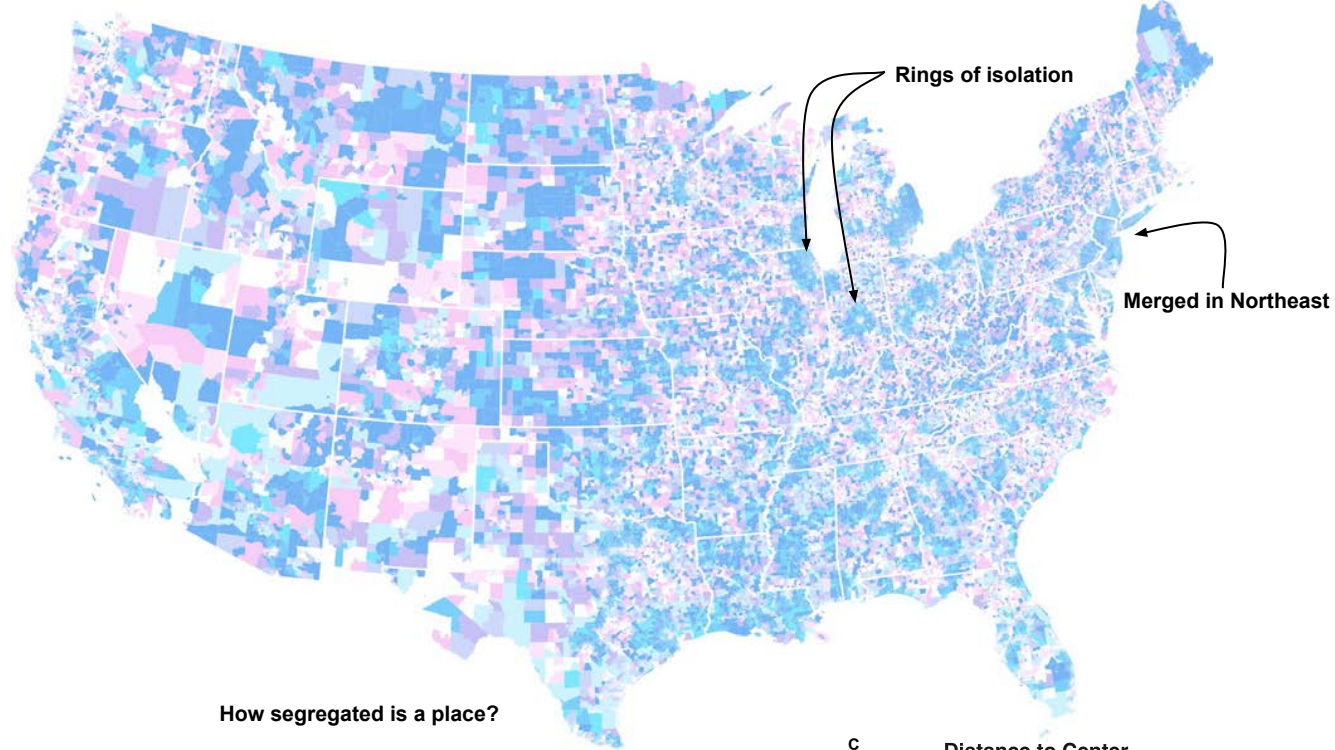
nonwhite →

income →



Moving from segregation to isolation





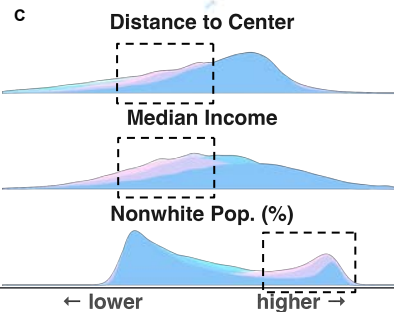
How segregated is a place?

Isolated + segregated

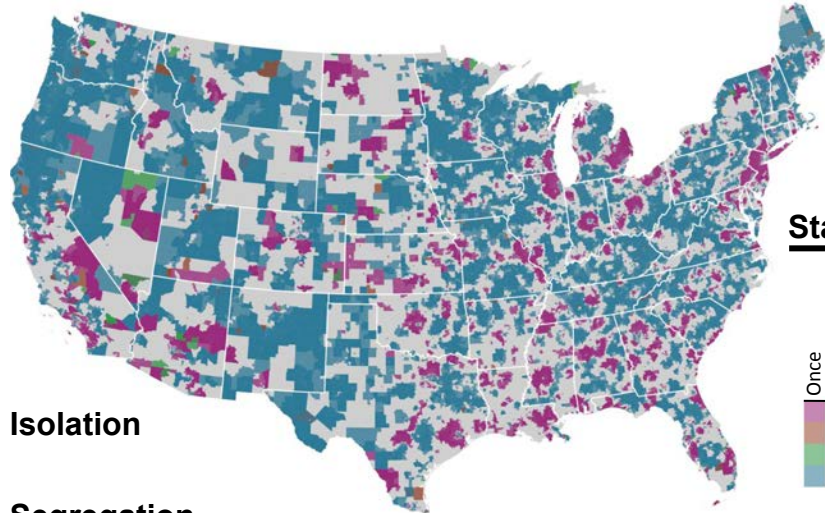
Diverse visitors, residents
seek uniformity

Residents travel to diversity,
area not visited by it

Integrated + open

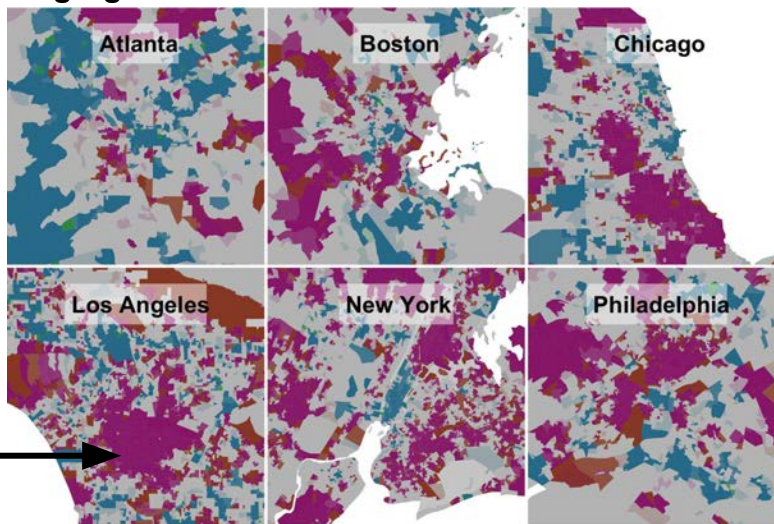


Identifying clusters with spatial autocorrelation [LISA]

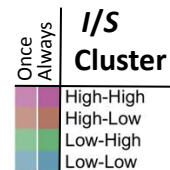


Isolation

Segregation

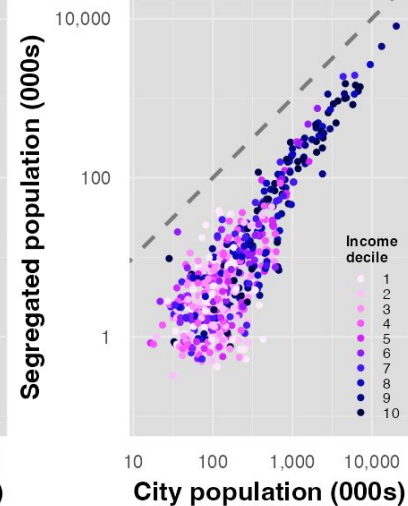
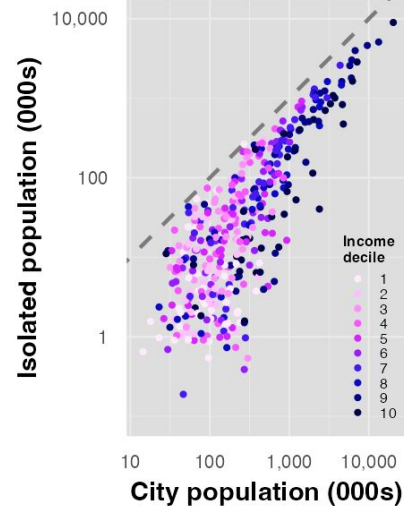


Stacking zones



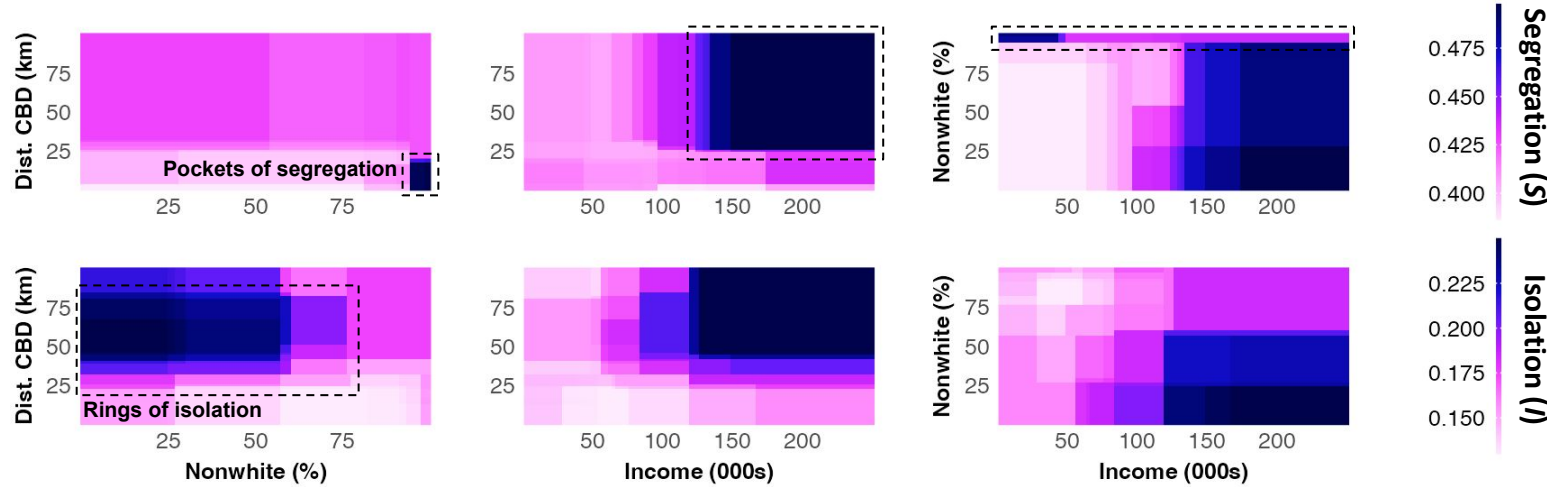
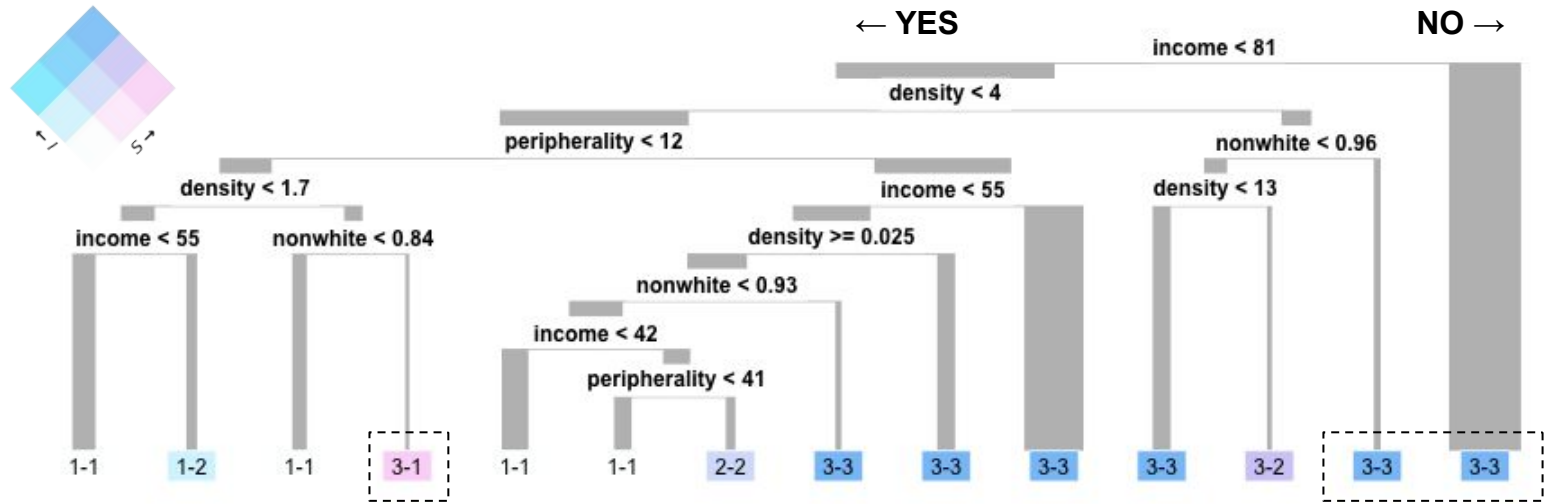
count of isolated zones

10 15 20 25



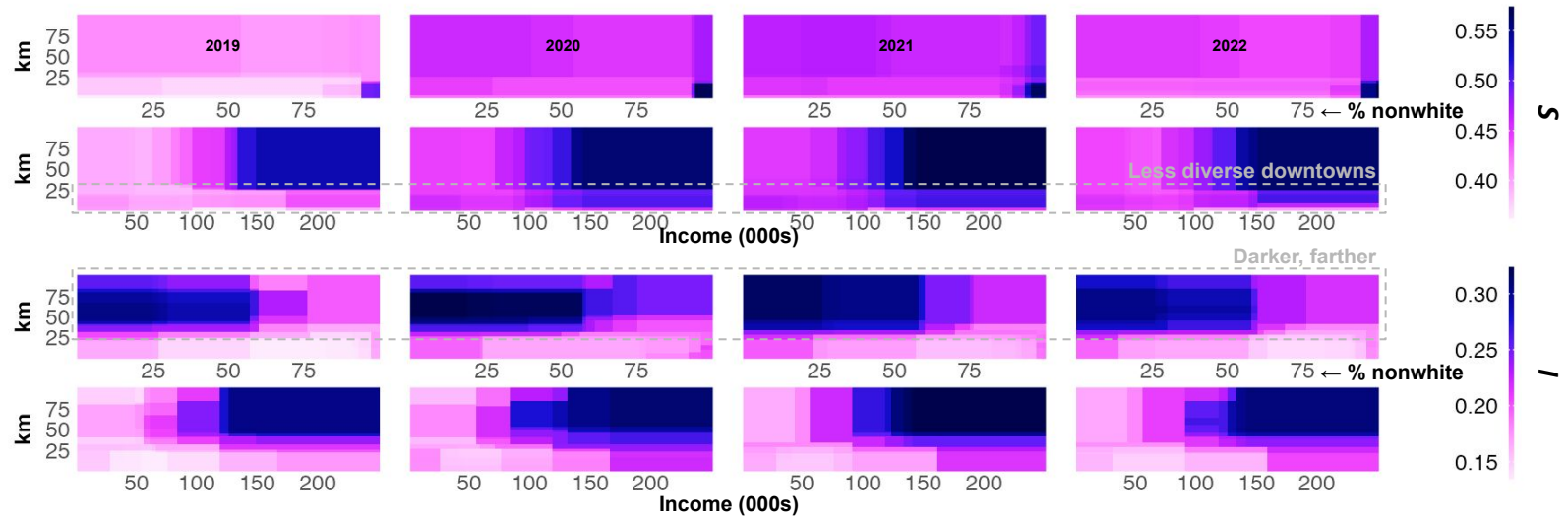
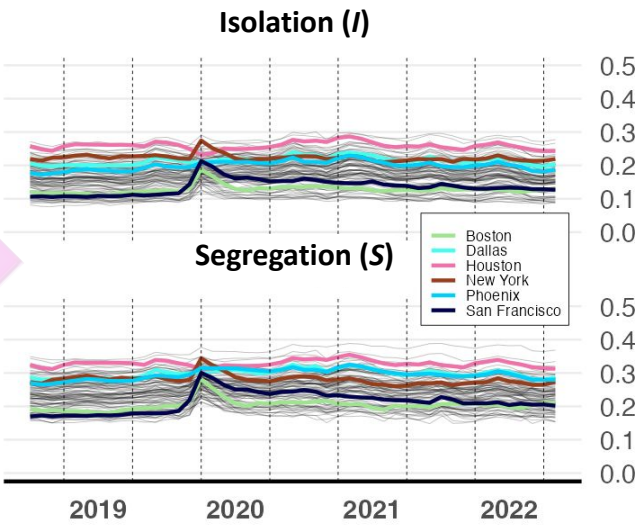
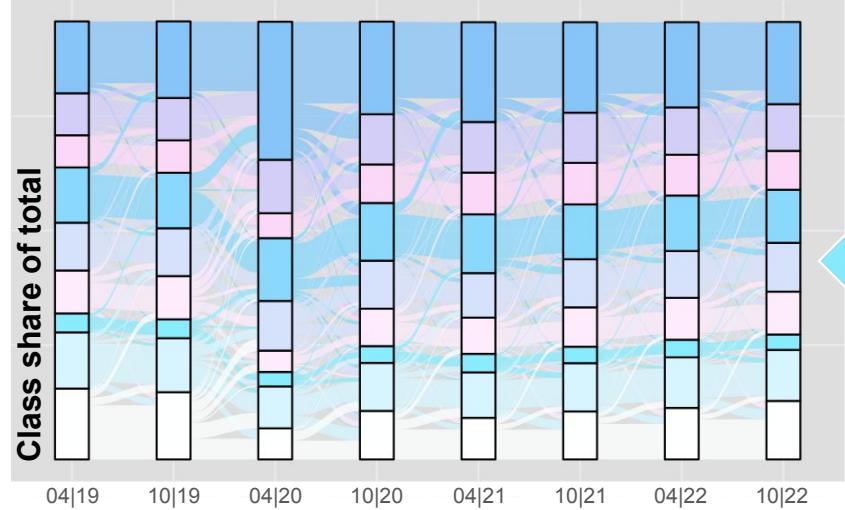
Drivers?

- + Income
- + Race
- + Structure



Is it stable?

- + Shocks
- + Drift?



Lessons?

- + Pay attention to who goes where [importers/exporters]
- + Mind the larger zones and what they mean for cities

