

LECTURE 1:

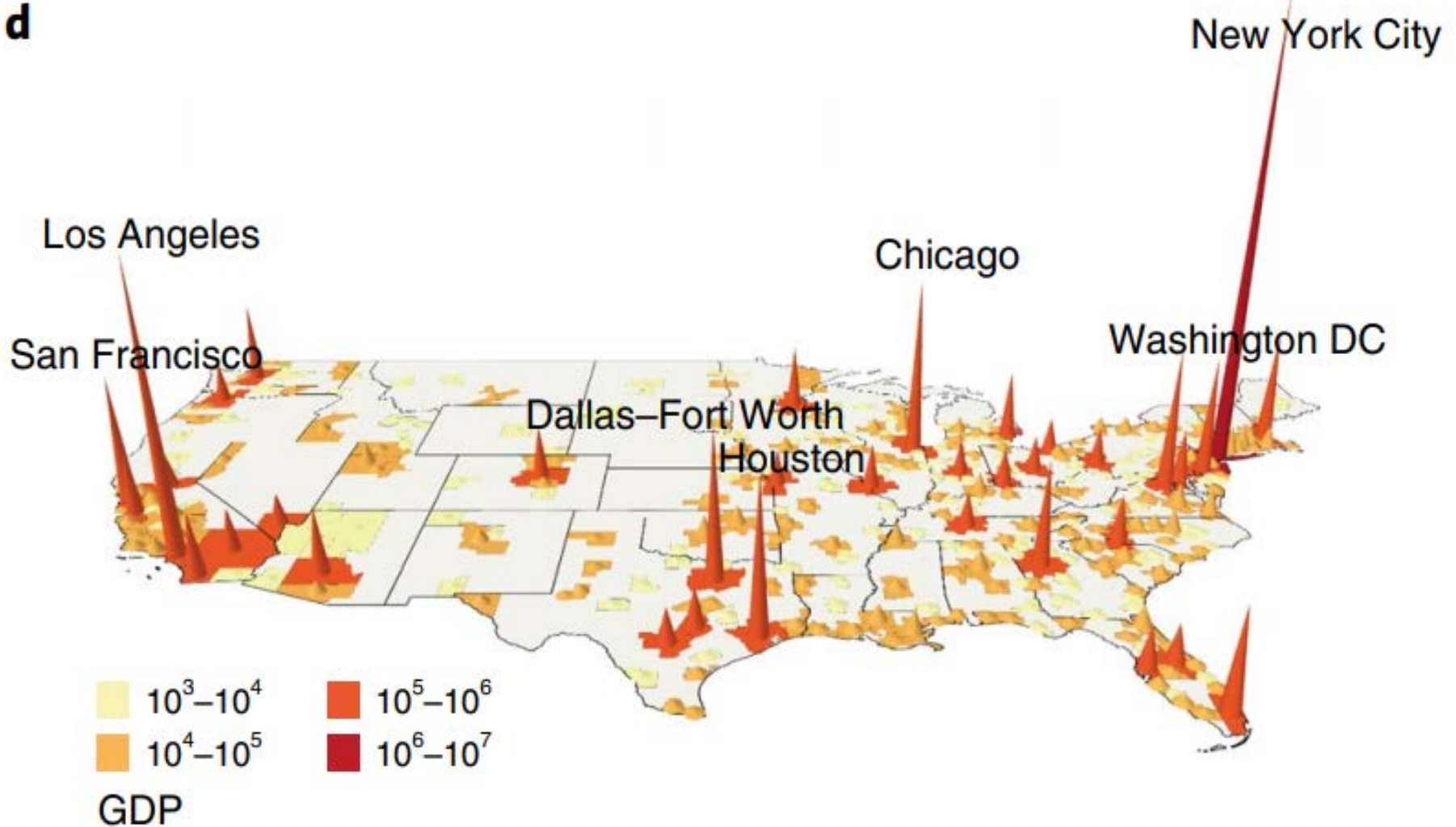
AGGLOMERATION THEORY





Spatial concentration of economic act.

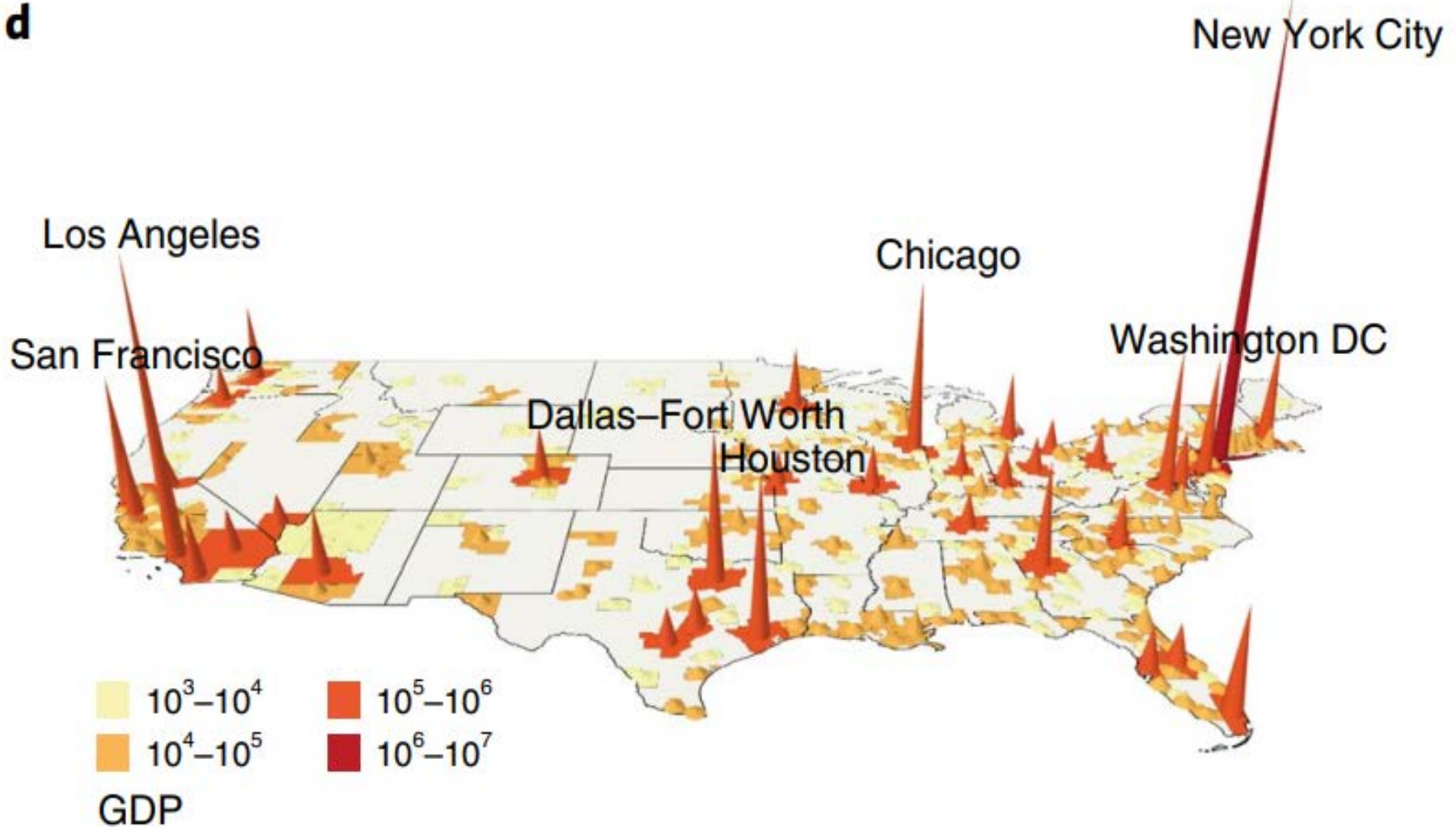
d



Balland, P.A., Jara-Figueroa, C., Petralia, S., Steijn, M., Rigby, D., and Hidalgo, C.
(2020) Complex Economic Activities Concentrate in Large Cities, *Nature Human Behavior*

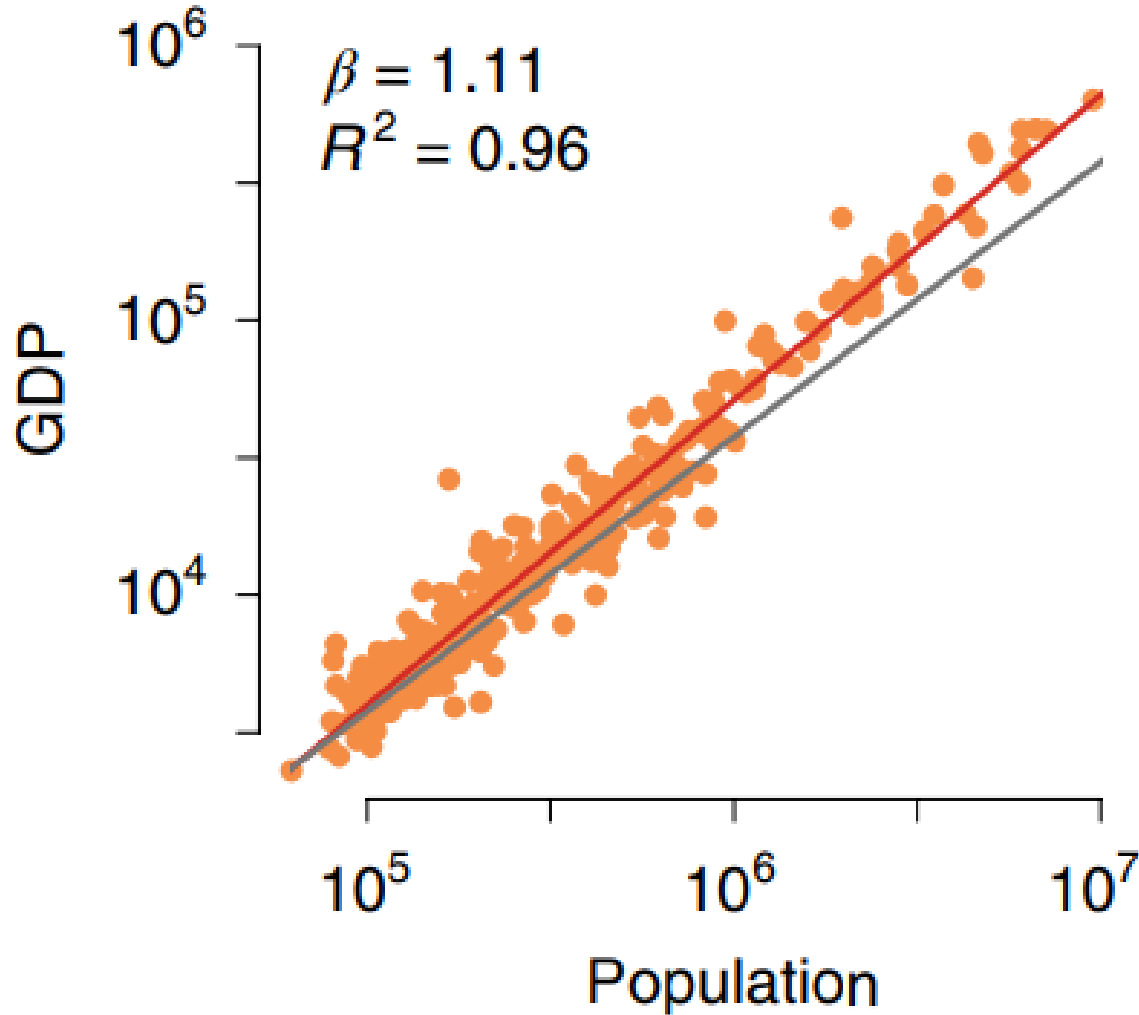
Spatial concentration of economic act.

d



Worldwide, Tokyo, San Jose, New York, Boston, Kanagawa, Shenzhen, Osaka, San Diego, Los Angeles, and Seoul account for 2 % of the population but 24 % of the world's patent applications

Urban scaling



Balland, P.A., Jara-Figueroa, C., Petralia, S., Steijn, M., Rigby, D., and Hidalgo, C.
(2020) Complex Economic Activities Concentrate in Large Cities, *Nature Human Behavior*

Agglomeration makes us richer



Agglomeration makes us smarter



Agglomeration makes us greener



Agglomeration makes us healthier



Agglomeration makes us happier



Where do agglomeration effects come from?

- Agglomeration as a **sharing** mechanism
- Agglomeration as a **matching** mechanism
- Agglomeration as a **learning** mechanism

Typology from Duranton and Puga, 2004

Sharing

- A large numbers of firms or workers benefit by drawing on a common pool of resources:
- Sharing of public goods and infrastructure
- Sharing of a pool of intermediate good suppliers
- Sharing from the same pool of workers

Matching

- Refers to the process of pairing people and jobs
- Better quality match as the size of cities increase (less unproductive matches)
- Less unemployment for highly specialized inventors/scientists
- Less “hold-up” type of problems

Learning

- **MAR spillovers:** the agglomeration of *large* firms *within the same industry* facilitates innovation (knowledge exchange)
- **Porter spillovers:** the agglomeration of *small* firms *within the same industry* facilitates innovation (knowledge exchange/production)
- **Jacobs spillovers:** the agglomeration of *small* firms from *different* industries facilitates innovation (knowledge production)

RV/UV and innovation

- Recently, Frenken et al. (2013) have tested the role of RV and UV on innovation more directly (more direct measure of knowledge spillovers)
- RV has been shown to be associated with overall innovation rate in US cities
- UV leads to breakthrough innovation (superstar patents)

Remote working

- We can all agree that offices are a **thing of the past**
- Remote working means you can work from **anywhere** - it will create a pool of super mobile city-hopping people
- Location-independent academics and entrepreneurs tend to be **everywhere**
- If massive remote working happens – it will weaken 2 of biggest negative agglomeration externalities
 - offices transformation can **lower housing costs**
 - less commuting means **less congestion**

Online higher-ed

- Looming digital disruption of higher-ed
- Tech start-ups and top Universities will most likely team-up to deliver a hybrid digital/F2F experience
- As with other digital products it would lead to a winner-takes-all phenomenon
- Small college towns are most at risks – big cities would reap the rewards

Cities in a post-corona world

- Cities will **keep thriving** in a post-Corona world but this crisis exposed how our complex society make us **vulnerable to extinction**
- As borders are closing - **a real threat to cities in the post-Corona world is anti-immigration policy**. The cities/countries that will shout a big 'welcome' will be the winners
- In a world where people can roam more freely, the most **livable cities/places** will have an **unmatched comparative advantage**. Cities have the opportunity to transform now (and they do)