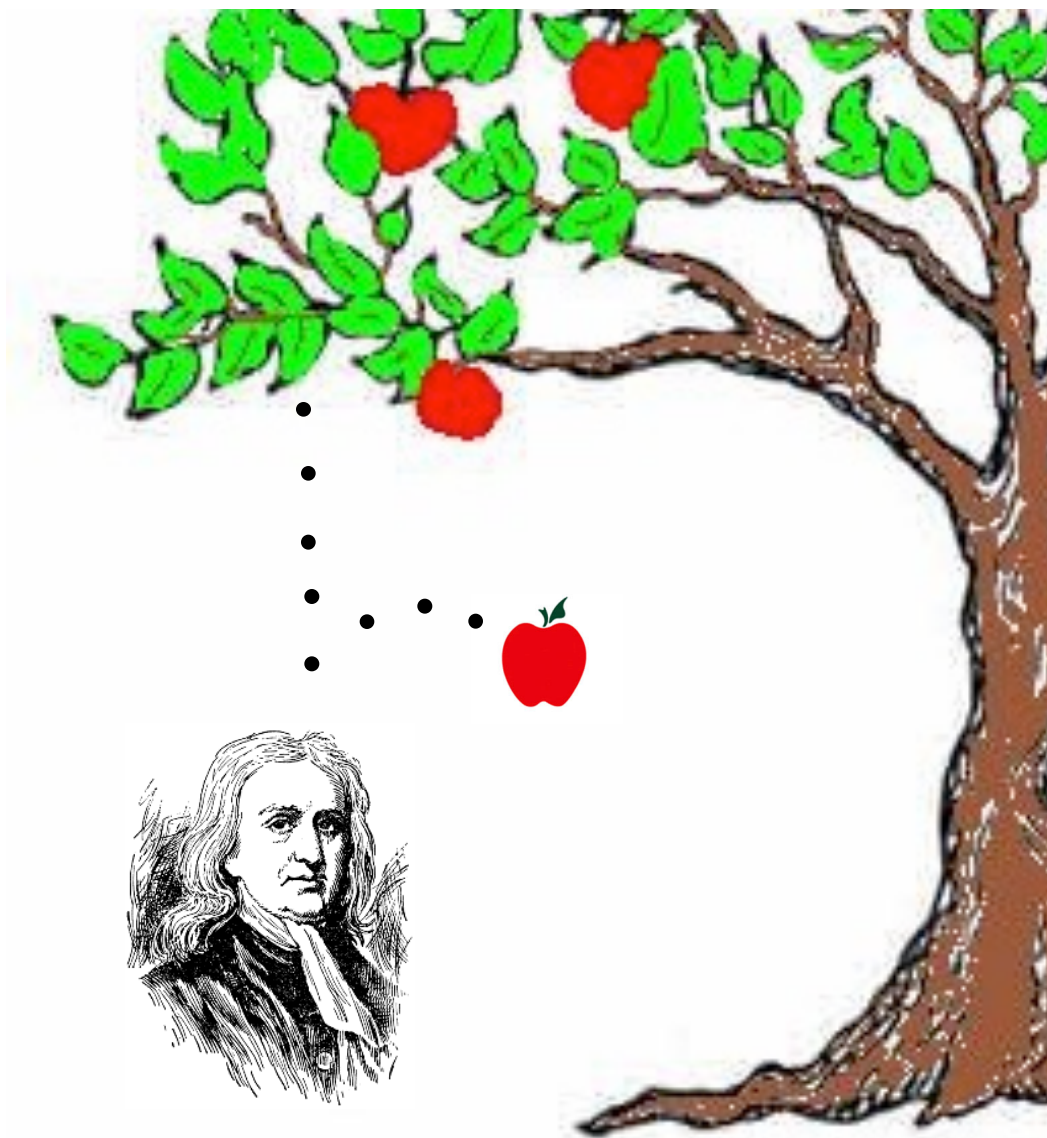


Lecture 4

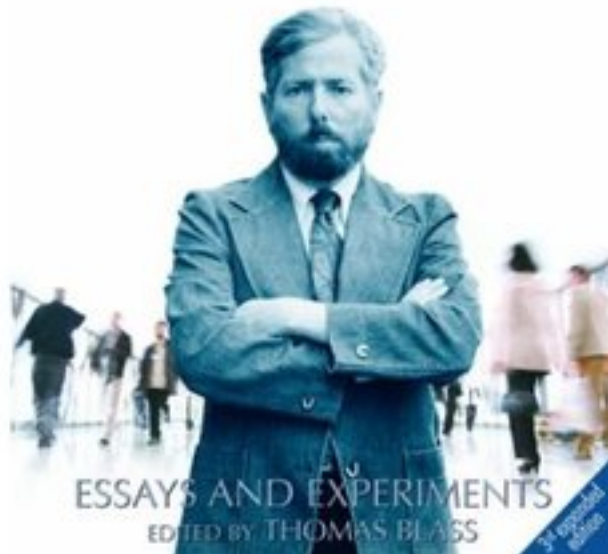
Jane Jacobs's four conditions for **urban life**



<start-people-recap>



STANLEY MILGRAM
The Individual
in a Social World



A city consists of streets, squares and buildings that exist in objective, geographic space. But there is also a psychological representation of the city that each inhabitant carries around in his head. When a man comes to a strange city, at first he does not know his way around. He sticks close to a few known reference points, such as his hotel or the main shopping street, and quickly feels disoriented if he strays from these few familiar paths. With increasing experience, he begins to build up a picture in his mind of how the streets connect with one another, the relationship among paths, and specific turns he must take to move from one point to another. He acquires a representation of the city which we may call a psychological map. A psychological map is the city as mirrored in the mind of an individual. The acquisition of an adequate representation of the city may be a slow process, filled with confusion, and inevitably only partial in its achievement. Very few individuals, if any, have a total grasp of all of the streets and intersections of a major metropolis, but each of us holds at least the fragment of such a map.

In this paper, we shall describe a psychological map of New York City constructed by our research team. But before going further, I would like to raise some general questions about psychological maps and review some of the work that has been carried out in this field. We start with the notion that the person has a psychological representation of some features of the environment. The first question, then, in constructing a mental map, concerns the units of the environment that are to be mapped. In previous research, the scale of maps has varied from those of small campuses to the maps people have in their head of the entire world (Saarinen, 1971; Hooper, 1970; Stea, 1969; Gould, 1967). There is an important difference, of course, in acquiring a mental map of one's campus and that of the world. The campus map is mediated by direct experience, moving about the university buildings and piecing scenes together into some cognitive structure. The image of the world is learned not from direct exposure, but through formal schemata of it as represented in maps and atlases.

Once we have decided what units of geography are to be mapped, we need to decide which psychological features are of greatest interest. The most basic question

This paper was written in collaboration with Judith Greenwald, Suzanne Kessler, Wendy McKenna, and Judith Waters. It was first published in *American Scientist*, Vol 60, No. 2 (March-April 1972), pp. 194-200. Copyright © renewed 2000 by Alexandra Milgram. Reprinted by permission

Kevin Lynch:

THE IMAGE OF THE CITY





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A Pattern Language

Towns · Buildings · Construction



Christopher Alexander

Sara Ishikawa · Murray Silverstein

Max Jacobson · David Sasaki

Shlomo Angel

253 patterns of good urban design (1977)

<end-people-recap>

What's a great city?

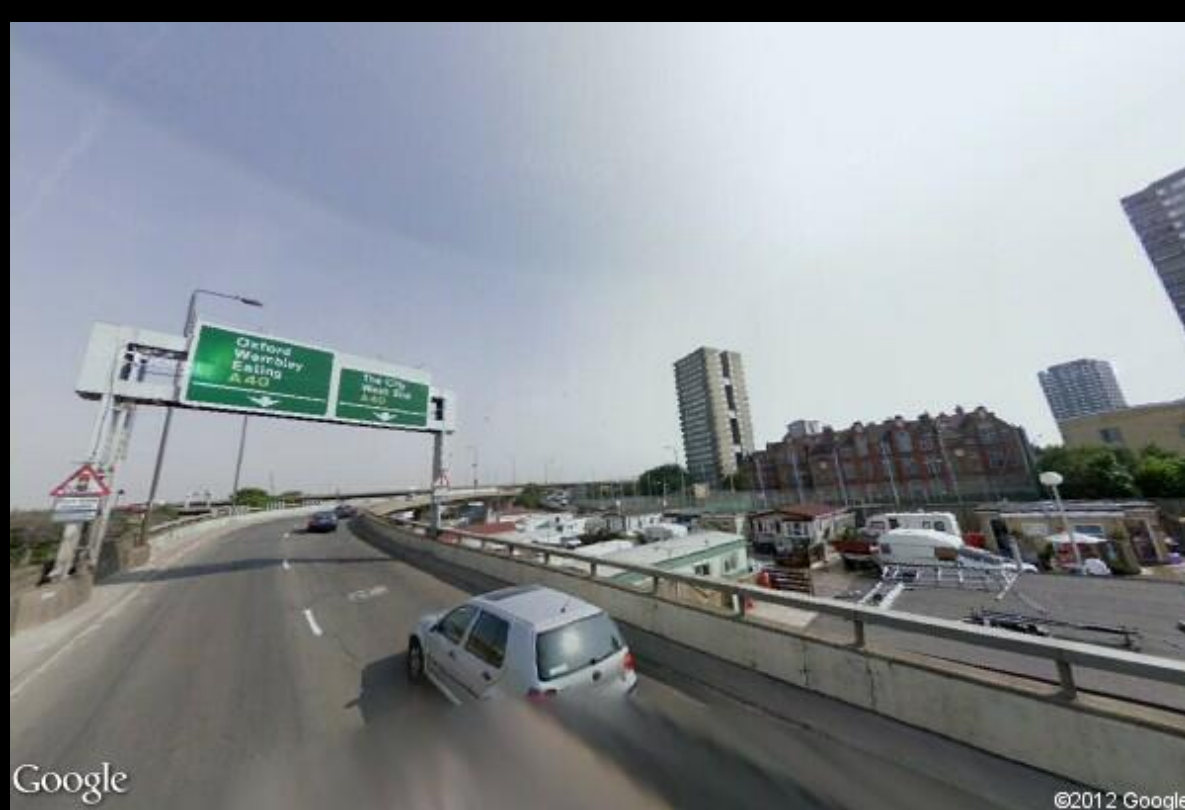
A Pattern Language

Towns · Buildings · Construction



Christopher Alexander
Sara Ishikawa · Murray Silverstein
WITH
Max Jacobson · Ingrid Fiksdahl-King
Shlomo Angel

“**Cars** give people wonderful freedom and increase their opportunities. But they also destroy the environment, to an extent so drastic that they **kill all social life.**”





cars aren't always bad



“Isolated buildings are symptoms of a disconnected sick society”



“There is evidence to show that high buildings make people crazy”

glassed offices



tall buildings aren't always bad



landmarks



Jane Jacobs

The Rockefeller Foundation gave grants for urban topics:

To Kevin Lynch (MIT) for studies of urban aesthetics
(***Image of the City*** in 1960)

To Jane Jacobs for studies of urban life
(***The Death and Life of Great American Cities*** in 1961)

The Death and Life of Great American Cities

the most influential book in city planning
(“social capital”, “mixed primary uses”, “eyes on the street”)

critique of the 1950s urban renewal policies
(attacking Moses for “replacing well-functioning neighborhoods with Le Corbusier-inspired towers”)

Glaeser:

“Moses spent millions and evicted tens of thousands to create buildings that became centers of crime, poverty & despair”

Death caused by elimination of pedestrian activity
(highway construction, large-scale development projects)

Life meant pedestrians at all times of the day
("sidewalk ballet")

promoting **life** = promoting **diversity**

Diversity requires 4 **essential conditions**:

- 1.** Mixed land uses
- 2.** Small blocks
- 3.** Buildings from many different eras
- 4.** Sufficient building densities

I. Mixed land uses

What: 2+ primary uses (entire city & streets)

Why: (residential/ business) areas used at a certain time of the day

How: Promote “sidewalk ballet” & “eyes on streets”

1) throughout the day

2) for different purposes (company employees, residents, & visitors)

2. Small blocks

What: City blocks should be short

Why: They decrease travel distance (super-blocks increase it)

How:

- 1) result in more intersections;
- 2) slow down cars.

3. Buildings from many different eras

What: Buildings should be mixed with regard to age and types

Why: To ensure diverse economic activity

How:

- 1) Promote coexistence of high-/low-income residents & jobs
- 2) Accept new, small-scale construction and economic changes.

4. Sufficient building densities

What: The district has a sufficient concentration of buildings

Why: To attract people.

How:

- 1) There are buildings to go to ;-)
- 2) Minimizing *vacuum areas* (large-scale, single-use areas)

The four measures are **complementary**

Building density would have **no effect**:
if the buildings were too standardized,
if the blocks were too long,
if the buildings only served a single use.

Problem

4 conditions haven't been empirically tested

March 2015

Operationalizing Jane Jacobs's Urban Design Theory: Empirical Verification from the Great City of Seoul, Korea

Journal of Planning Education and Research
1–14

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Abstract

Jane Jacobs's *The Death and Life of Great American Cities* (1961) had an enormous influence on urban design theories and practices. This study aims to operationalize Jacobs's conditions for a vital urban life. These are (1) mixed use, (2) small blocks, (3) aged buildings, and (4) a sufficient concentration of buildings. Jacobs suggested that a vital urban life could be sustained by an urban realm that promotes pedestrian activity for various purposes at various times. Employing multilevel binomial models, we empirically verified that Jacobs's conditions for urban diversity play a significant role with regard to pedestrian activity.

Legend

- City Boundary
- Administrative Districts
- Subway Lines
- Subway Stations
- Han River
- Parks and Open Space

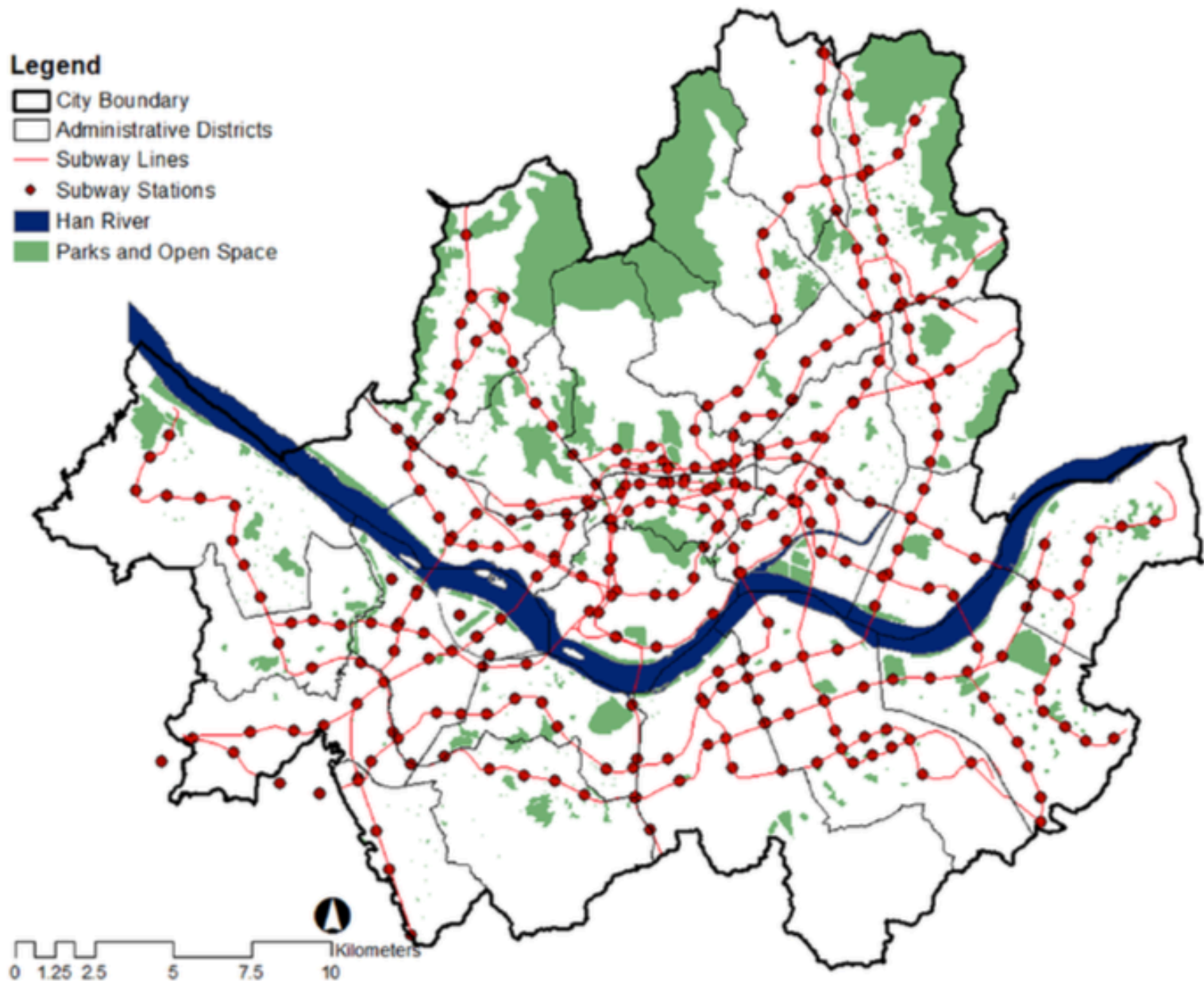


Figure 1. The city of Seoul.

Left homogenous high-rise buildings

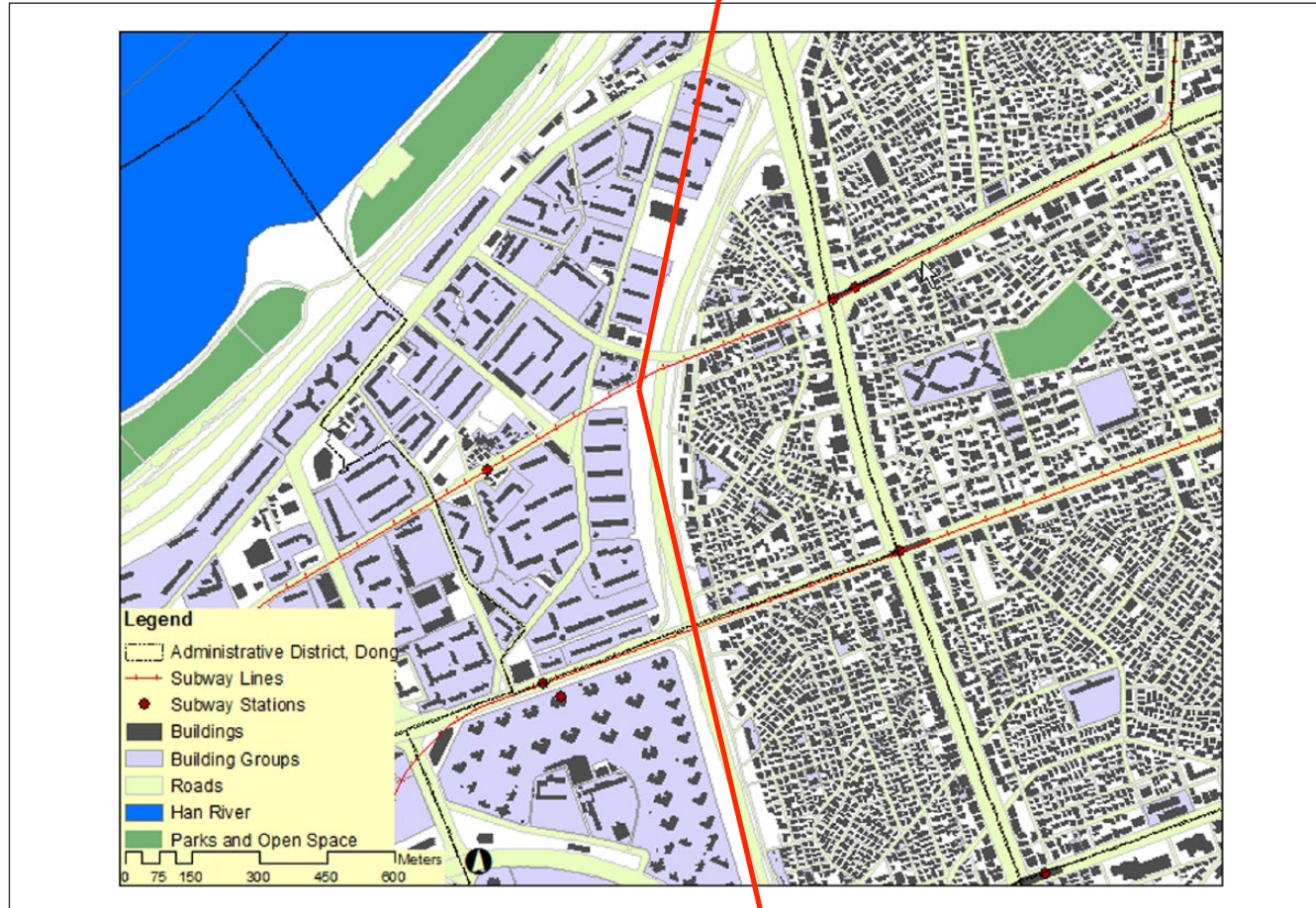


Figure 2. Comparison of neighborhood built environment in Seoul.

Right dense buildings, mix use,
small blocks

I. Mixed land uses

Mixed land use

LUM5

Entropy index of five categories for land use mix (i.e., residential, daily neighborhood life, nondaily use, office, and others)

R_nres_daily

Balancing index between residential and nonresidential daily uses

Htype_mix

Entropy index of four categories of housing types (i.e., single-family, multifamily, apartment, others)

Mdist_nres_daily

Mean distance of all buildings to the nearest nonresidential daily use building

Mdist_com

Mean distance of all buildings to the nearest commercial use building

Mdist_off

Mean distance of all buildings to the nearest office building

2. Small blocks

Small block and contact opportunities	Nden_intersect.	Net density of intersections (number of intersections/net administrative district area)
	Ratio_4w_intersect.	Ratio of 4-way intersections (number of 4-way intersections/all intersections)
	Mdist_intersect	Mean distance of all buildings to the nearest intersection

3. Buildings from many different eras

Aged building and small enterprises

Bldg_age_mean

Bldg_age_sd

Enterprise_size

Average built year of all buildings

Standard deviation for the built years of all buildings

Average no. of employees per firm

4. Sufficient building densities

Density and concentration

Nden_pop(a)

Net population density

Nden_emp(b)

Net employment density

Nden_interact(a/b)

Net density interaction (pop/emp)

Nden_nres_daily

Net density of nonresidential daily use floorages

Nden_nres_ndaily

Net density of nonresidential nondaily use floorages

Nden_off

Net density of office use floorages

They used all those variables to explain

Dependent variables

Model A

Model B

Model C

Model D

Model E

Walking_all

Walking_am_pt

Walking_daytime

Walking_pm_pt

Walking_night

1 = walking; 0 = driving (all day 7AM–12PM)

1 = walking; 0 = driving (peak time 7AM–9AM)

1 = walking; 0 = driving (9AM–6PM)

1 = walking; 0 = driving (peak time 6PM–8PM)

1 = walking; 0 = driving (8PM–12PM)

Conclusion...

This study is significant because it helps bridge the gap between Jacobs's theories of a vital urban life and the planning practice. In particular, we confirmed Jacobs's claims that mixed use, old buildings, high building concentrations, and border vacuums contribute to a vital urban life.

And social media?

It's biased, sure. But...

it's possible to profile **land use** of **many** cities

Land Use from

Foursquare

Google Places

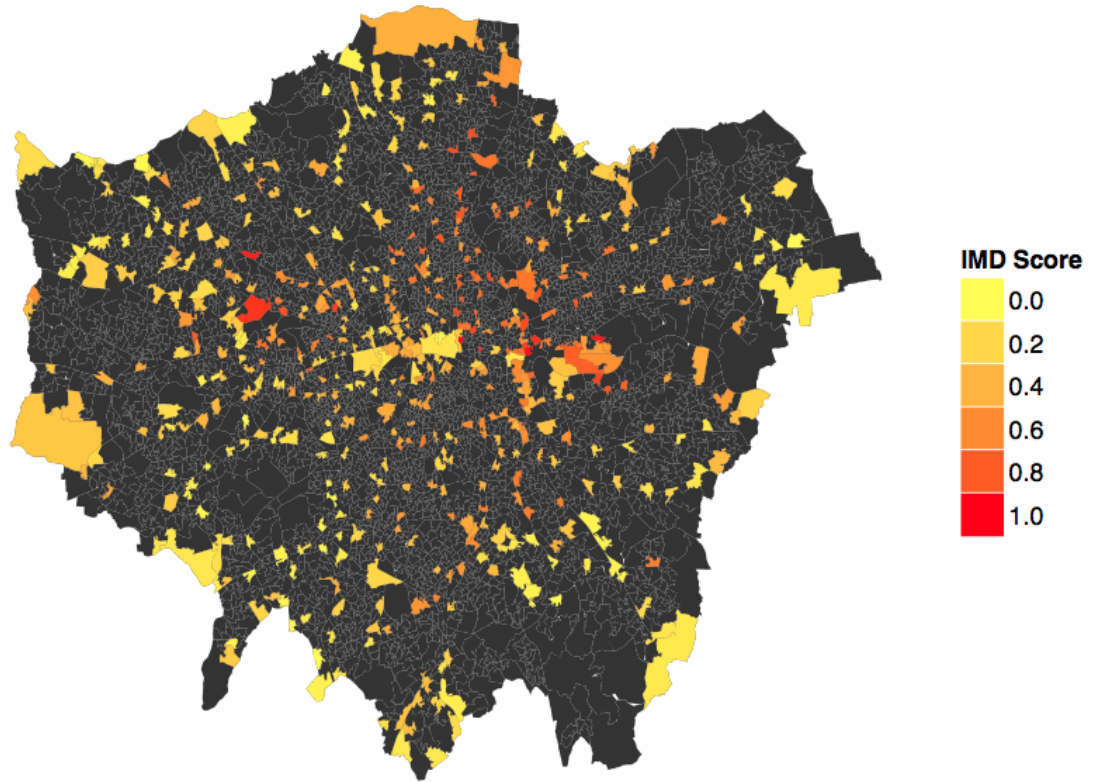
Open Street Map (urban crowdsourcing)

Index Multiple Deprivation + Open Street Map

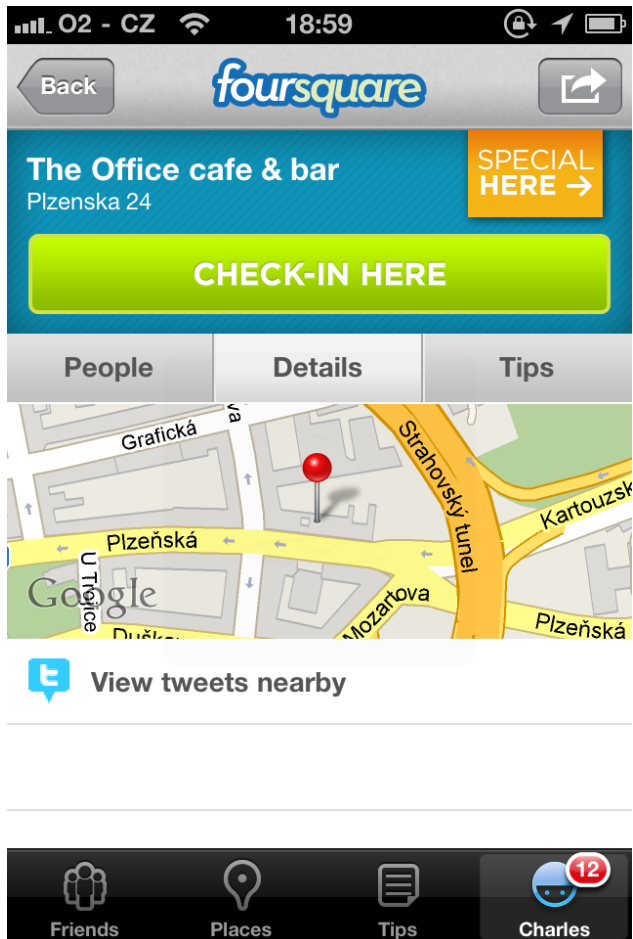
IMD

(Index of Multiple Deprivation)

1. Income
2. Employment
3. Health
4. Education
5. Housing
6. Crime
7. Living Environment



Foursquare



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OpenStreetMap



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  user="..." uid="..."  
  changeset="..." timestamp="...">  
  <tag k="name" v="..."/>  
  <tag k="amenity" v="..."/>  
</node>
```

West Midlands

POIs: 37.370
categories: 435



POIs: 27.885
categories: 465

Greater Manchester

POIs: 43.874
categories: 421

POIs: 24.321
categories: 381



 Foursquare
 OSM

Greater London

POIs: 178.756
categories: 503

POIs: 79.343
categories: 896

correlation (deprivation, place)

<i>Themes</i>	<i>Category</i>	<i>Greater London</i>	<i>Greater Manchester</i>	<i>West Midlands</i>
<i>Foursquare</i>				
Health harmful food	Fried Chicken	0.31	0.15	0.19
	Fast Food		0.22	0.31
	Wings	0.11		
Faith	Mosque	0.27	0.22	
	Church	-0.18	-0.15	
Non-local cuisines	African	0.32		0.25
	Caribbean	0.37		0.21
	Asian			0.23
	Italian	-0.26	-0.36	-0.25
	Indian	-0.27	-0.17	
	Spanish		-0.20	
	Chinese		-0.22	
Beauty & aesthetics	Dentist's Office	-0.22	-0.21	-0.15
	Nail Salon		-0.17	-0.19
	Salon Barbershop	-0.15		-0.35
Sports	Golf Course	-0.24	-0.28	-0.42
	Cricket	-0.13		-0.23
	Tennis Court		-0.23	
Open spaces	Other Outdoors	-0.15	-0.24	-0.25
	Lake	-0.12	-0.13	
	Campground		-0.22	-0.23
	Field	-0.15	-0.23	
	Playground		-0.22	
	Trail		-0.21	
	Outdoors and Recreation		-0.14	
Bus service	Bus	0.15		0.23
	Bus Station	0.28	0.32	
	Bus Stop	0.18		
<i>OSM</i>				
Road system elements	traffic signals	0.29	0.25	
	crossing	0.25		
	mini roundabout			0.24

Themes

Bus service

Bus
Bus Station
Bus Stop

*Health harmful
food*

Fried Chicken
Fast Food
Wings

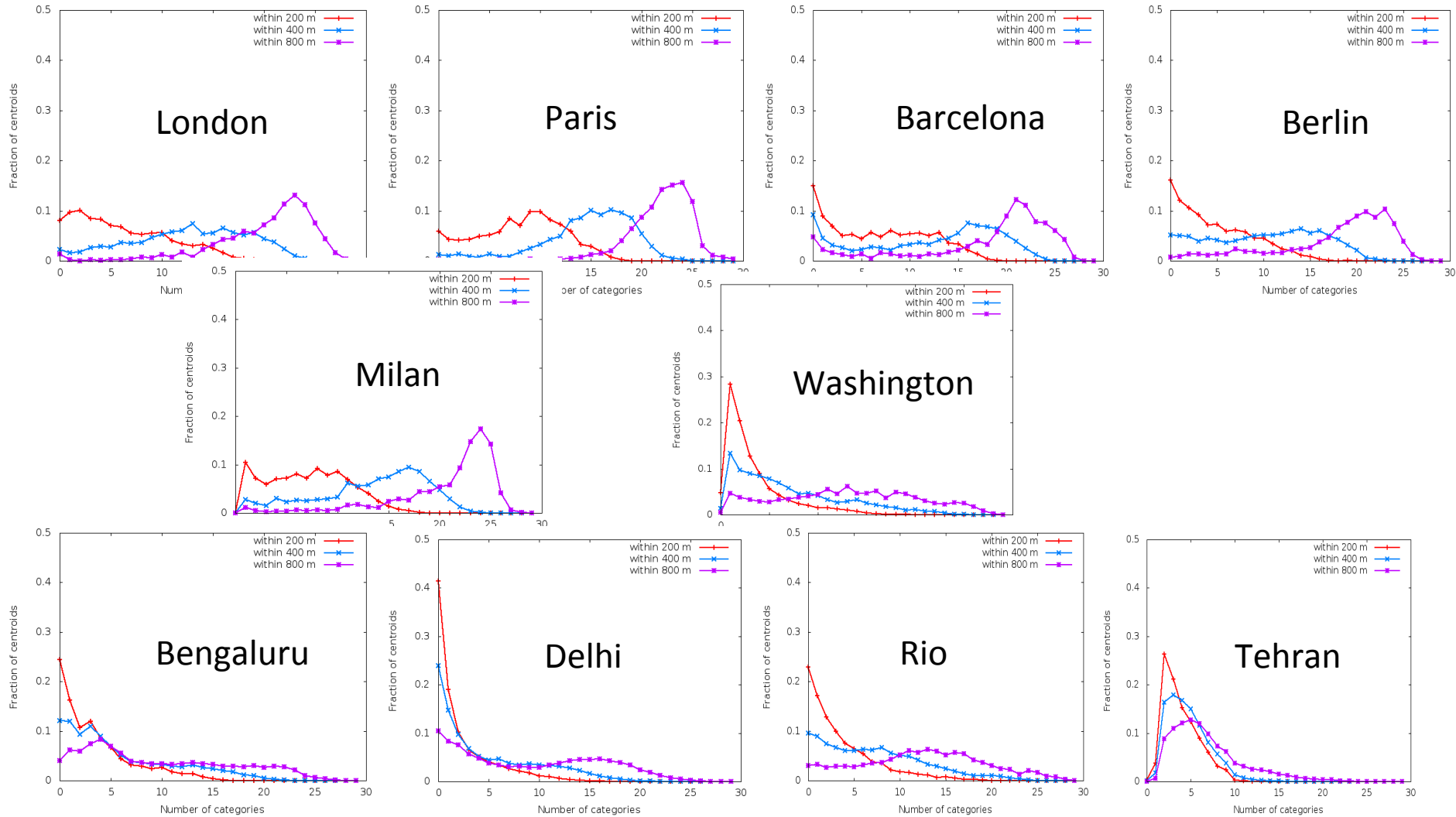
Sports

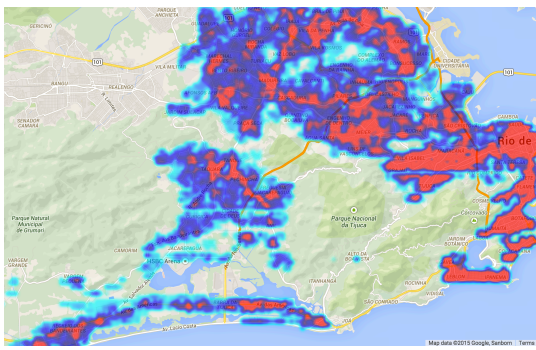
Golf Course
Cricket
Tennis Court

Beauty & aesthetics

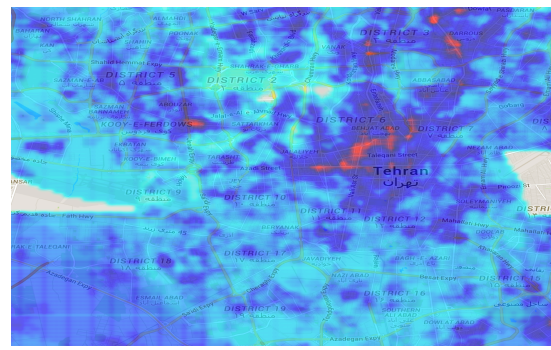
Dentist's Office
Nail Salon
Salon Barbershop

Google Places

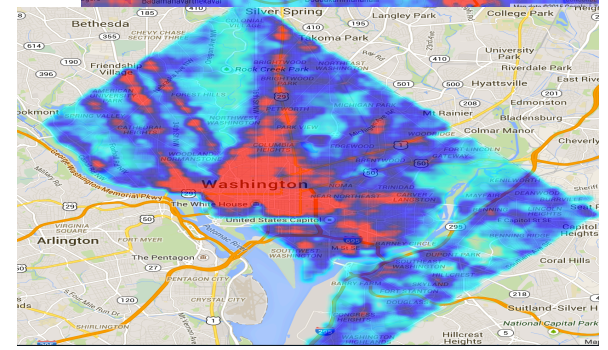




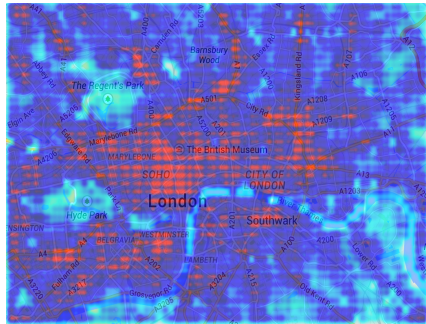
Rio



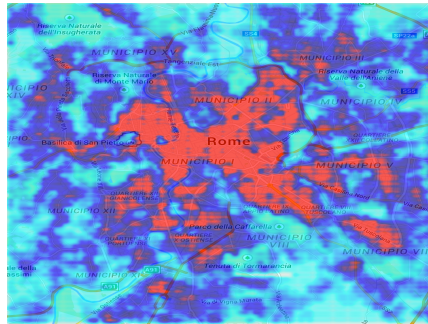
Tehran



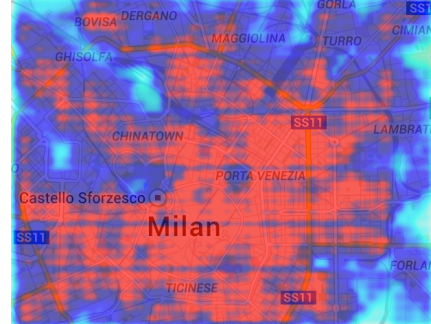
Washington



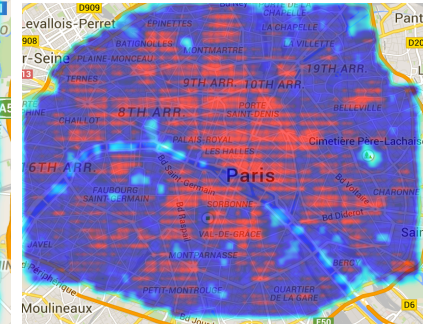
London



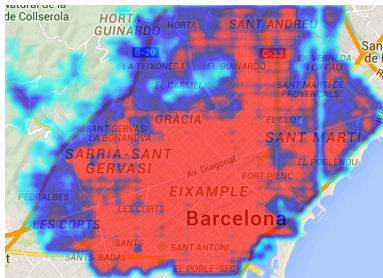
Rome



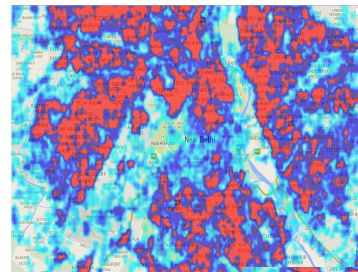
Milan



Paris

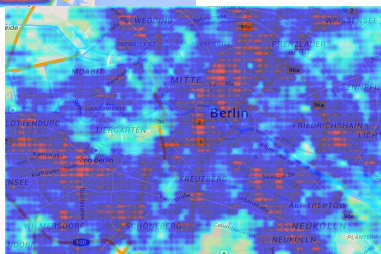


Barcelona

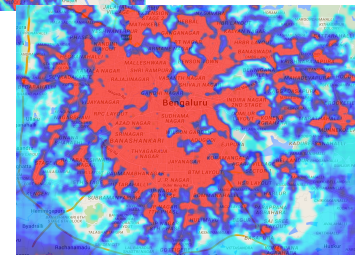


Delhi

Berlin



Bengaluru



**THANK
YOU!**



Receipt

Item

1. Item Name
2. Item Code
3. Quantity
4. Price

Price

1. Price
2. Tax
3. Total

Subtotal

1. Subtotal
2. Tax
3. Total

Grand Total

1. Grand Total
2. Tax
3. Total

Footer

1. Footer
2. Footer
3. Footer

Questions