

Understanding London's Urban Metabolism:

Baseline setting, reproducibility

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Session 3: Big data and real estate. Paper session

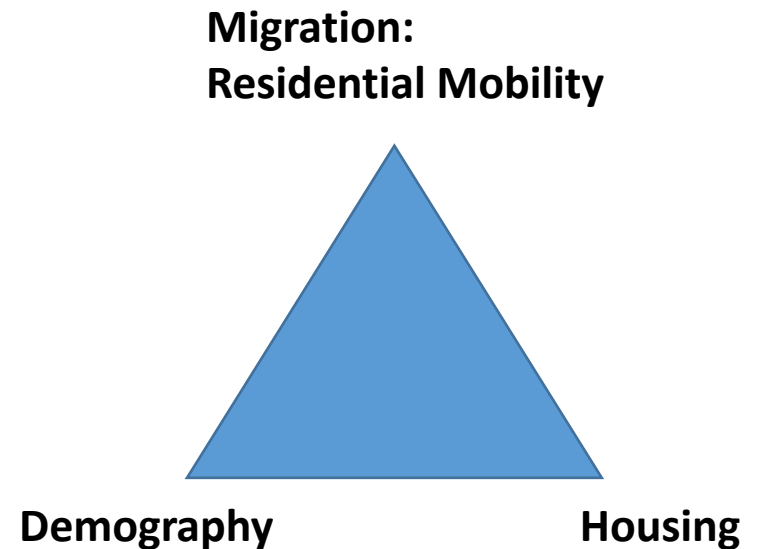
12th June 2018



Introduction

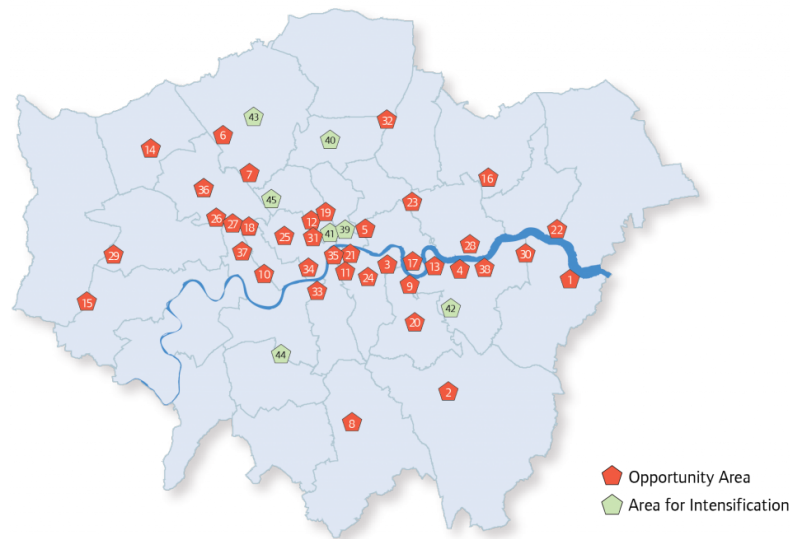
How does **residential mobility** and its relation to housing affect London's **Urban Metabolism**?

Supervisors: Dr. Adam Dennett // Dr. Hannah Fry



Context

The Mayor of London, Sadiq Khan, said: “With London’s population expected to increase by 70,000 every year, reaching 10.8 million in 2041, it’s vital we properly plan for growth with new affordable homes in every area of the capital.



- 1. Projected to grow to just over 10 million in the next 20 years as a result of natural change and more importantly migration. (GLA estimates)**
- 2. Policies to increase housing supply include large scale developments (GLA 2015b)**

Context

INDEPENDENT News InFact Politics Voices **IndyLife** Sport

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London microflats attract investors after millennials priced out of traditional housing market

Private accommodation offering "communal" living draws in young people priced out of homes in London

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Meet the 20-somethings priced out of London, leaving for a new life elsewhere

Starting over in a different part of the UK is the choice of an ever-growing number of younger people. Suzanne Beame looks at why they moved



London The Observer

Goodbye London: why people are leaving the capital

London-born Rafael Behr has left the capital, and he's not the only one. As prices spiral, many are seeking a gentler life elsewhere. Here he explores his motives and how he sees the city changing and meets three more residents who've gone

▲ Many 20-somethings are bucking the tradition of enjoying big city life and moving to Margate in Kent.
Photograph: Urban Images/Alamy

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Housing crisis: 350,000 UK households unable to rent or buy without help by 2020

70,000 people a year to be priced out even if the Government meets its housebuilding targets

Hazel Sheffield | Monday 16 November 2015 15:48 GMT |

1. Projected to grow to just over 10 million in the next 20 years as a result of natural change and more importantly migration. (GLA estimates)
2. Policies to increase housing supply include large scale developments (GLA 2015b)
3. Privately rented sector has become the most popular tenure for London households (Gleeson 2017, p. 10)
4. Renters are more mobile than owners (Courgeau 1985)
5. Indeed, London has been shown to constitute an 'escalator region' (Fielding, 1992)

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Esha Vaish **London The Observer**

Guardian
News
Money ▶ Pro

London: the city that ate itself

Pay The Obs
**Meet t
Londo**

Starting ove
ever-growin
looks at why

London is a city ruled by money. The things that make it special – the markets, pubs, high streets and communities – are becoming unrecognisable. The city is suffering a form of entropy whereby anything distinctive is converted into property value. Can the capital save itself?

Goodbye London: why people are leaving the capital

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Broad Research Question

How does
residential mobility
and its relation to
housing affect
London's **Urban
Metabolism?**



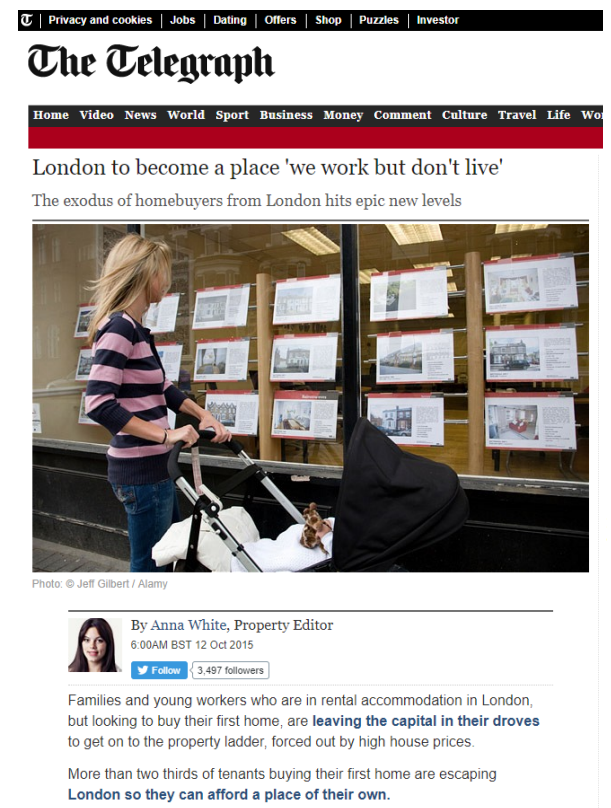
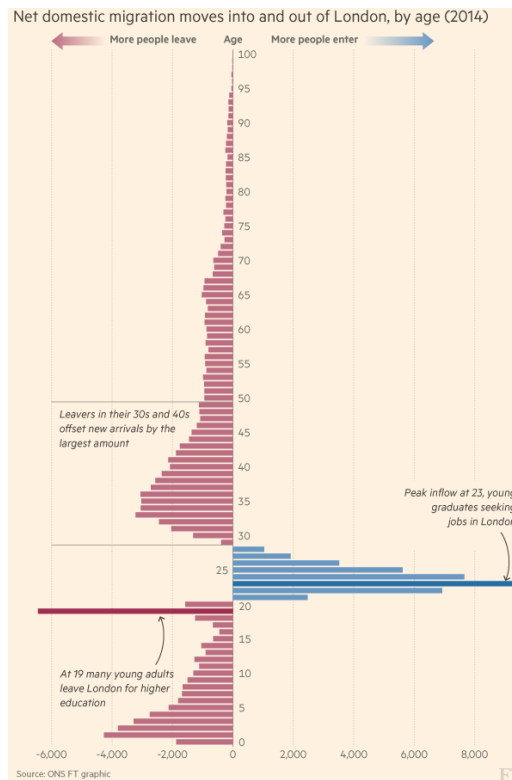
Sub-class of migration that
assumes **short-distance**
/least-effort home re-locations.



The interplay **residential
mobility, demographics** and
housing.

Baseline Setting

Anecdotal Evidence?



Data Limitations

Cross Sectional	Longitudinal
No information over time	

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No information over time	1. Time span
	2. Relative Cost & Effort
	3. Privacy

Data Limitations

Cross Sectional	Longitudinal
No information over time	1. Time span (takes a long time relative to a research career)
	2. Relative Cost & Effort (and as a result, cohort sizes)
	3. Privacy (Housing and life course Combined can be a sensitive)

Ways of being wrong: Types of Fallacies

Informal Fallacy:

“argument that may seem to be correct, but that proves on examination not to be so.” (p.124 Copi et al., 2016)

Copi, I.M., Cohen, C., McMahon, K.D., 2016.
Introduction to logic, 14th ed. Pearson Education
Limited.

Ways of being wrong



Cross-sectional studies

‘Accident cases’:

When one mistakenly applies a generalisation to an individual case that it does not properly govern

Aka: Ecological Fallacy

Longitudinal studies

‘Hasty generalization’:

When one moves carelessly or too quickly from one or a very few instances to a broad or universal claim.

aka: Anecdotal Fallacy
(or converse accident)

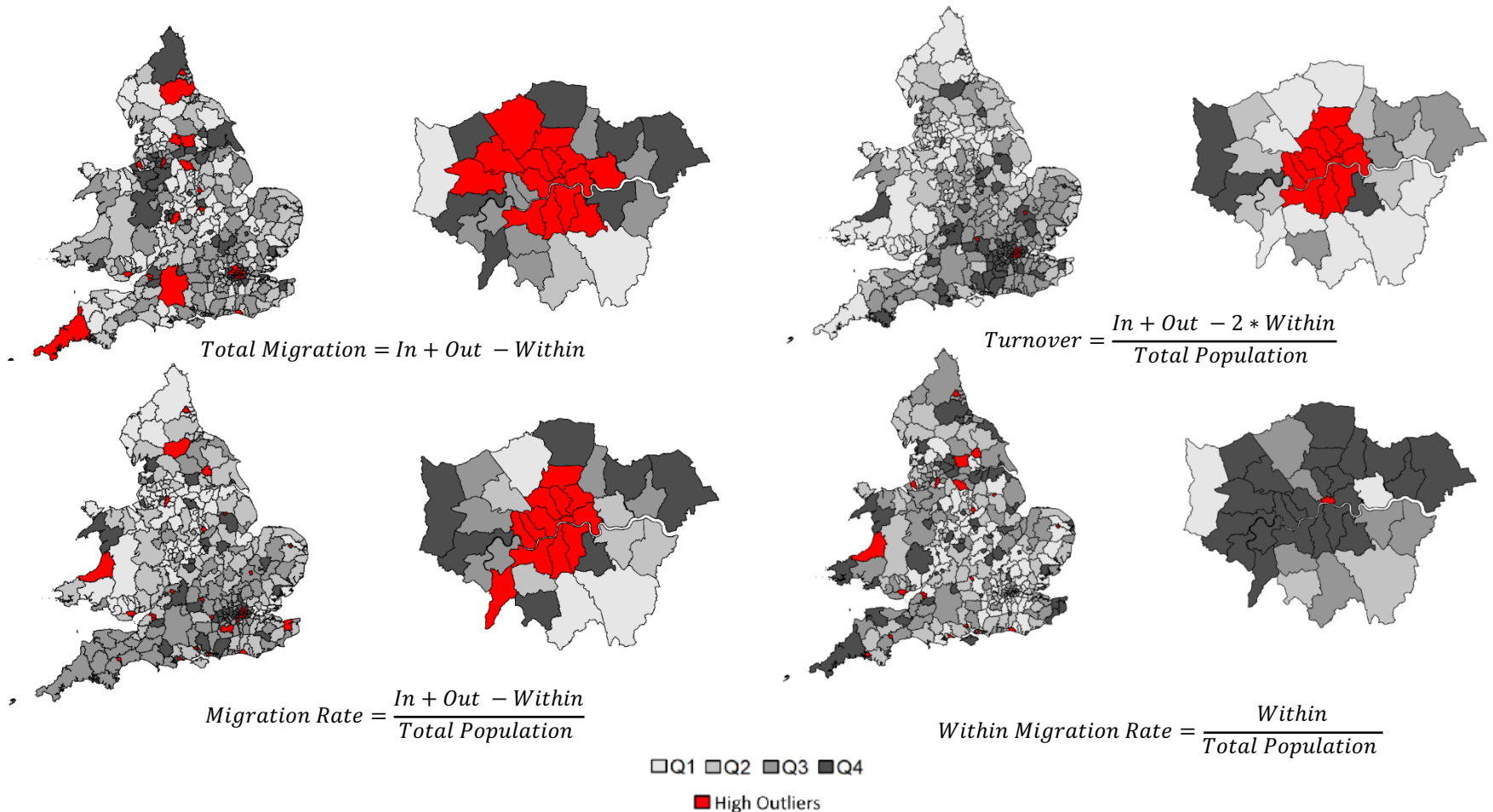
Ways of being useful

Cross sectional studies can be used to set a baseline for longitudinal research.

Baseline: Quantifying Migration

Aim	How can migration be quantified?
Hypothesis	London has an exceptionally dynamic migration profile. a) London has exceptionally high mobility, which is different to most of England and Wales.
Method	Tukey Fences applied to selected migration metrics (by magnitude, type and direction)
Data	Cross-sectional in England and Wales
Geography	Local Authority Level
Population	All internal migrants
Year	2011

Quantifying Migration



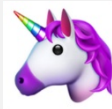
Why Baselining matters?

		Data	
		Same	Different
Methods	Same	Reproducible	Replicable
	Different	Robust	

After: @kirstie_j

doi:<https://dx.doi.org/10.6084/m9.figshare.5886475>

Why Baselining matters?

		Data	
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Methods	Same	Reproducible	Replicable Cross-sectional studies Longitudinal studies
	Different	Robust	 Generalisable

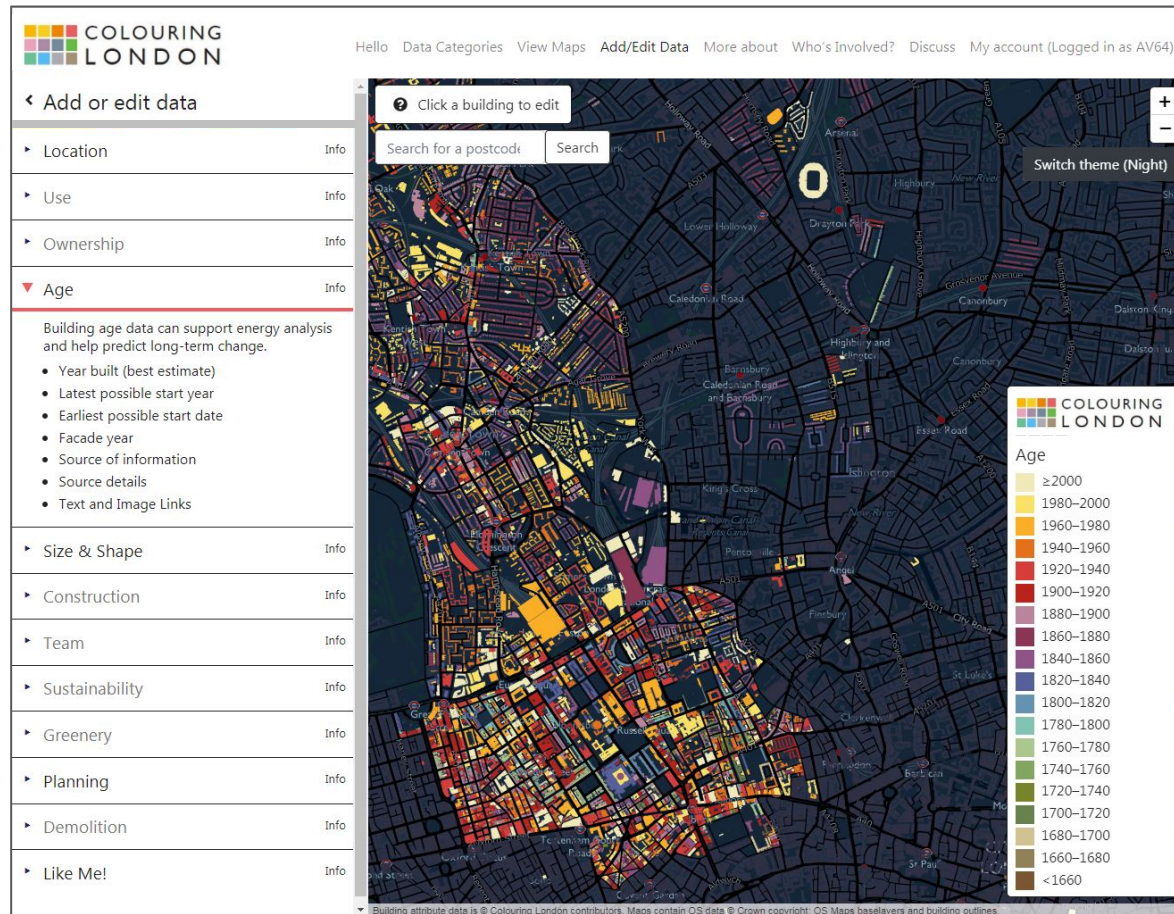
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"80% of data analysis is spent on the process of cleaning and preparing the data" Wickenham p1, 2014 (after Dasu and Johnson 2003)

"We are drowning in information but starved for knowledge."

John Naisbitt



<http://colouringlondon.org/>

SS-ASM19



21-23 Aug. 2019 — London, UCL



Funding from the EPSRC.

Hosted by CASA, UCL.

Centre for Advanced Spatial Analysis

@The Bartlett, University College London

Your jolly organisers: Bonnie, Matt & Obi

Doctoral Summer School for Advanced Spatial Modelling:

Skills Workshop and Hackathon

Get good people together, treat them well and good projects will come.

The purpose of this workshop is threefold: firstly, to **warm participants up to key quantitative methods** and **introduce them to core spatial modelling methods**; secondly, **apply these methods** in the context of **National Industrial Strategy** - and in doing so, think about new governmental geography products and what future cities could look like; finally, **foster collaborations opportunities** between PhD students from different institutions through the hackathon and subsequent conference attendance award.

The techniques covered in this summer school come from geographical analysis and the hackathon on urban and infrastructure problems will be an opportunity to apply these.

Have a look at the **Who are we looking for?** section and complete the brief application form by the **19th of July 2019**.

tinyurl.com/y4kwc9q2

Thank you.

 @Bonnie_0000