

# Approaches to FUA

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**Simin Davoudi**

**Professor of Environmental policy and Planning**

**Co-Director, IRES**

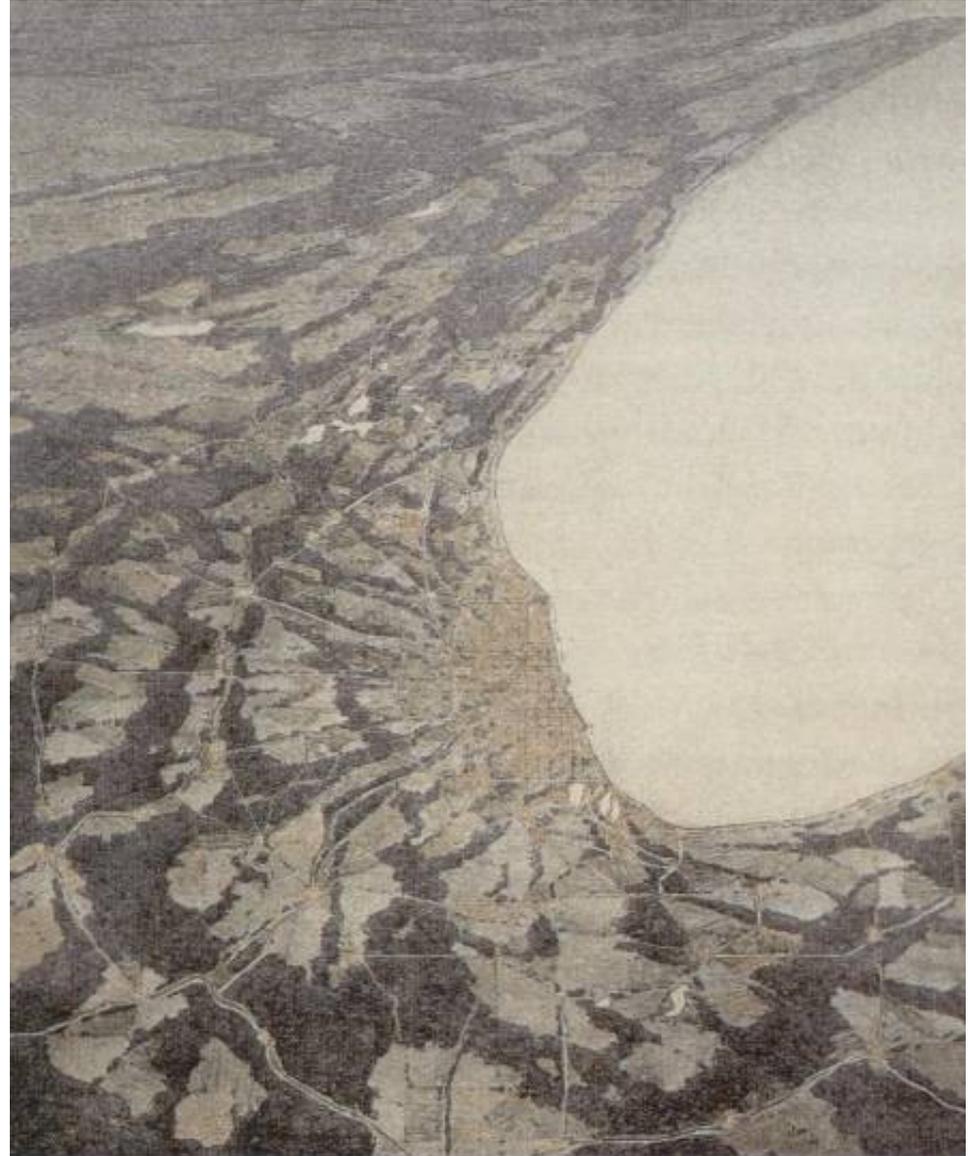
**Institute for Research on Environment and Sustainability**

**[simin.davoudi@ncl.ac.uk](mailto:simin.davoudi@ncl.ac.uk)**



# The origin of the city-region

- Coined by **Robert Dickinson** in 1947
- The Chicago Plan, 1909
- P. Geddes, 1915
- R. D. McKenzie, 1933



# **A complex web of multidirectional flows in FUA**

- **People** (daily commuting to work & non-work,; non-daily commuting; migration)
- **Goods** (manufacturing and semi-processed materials)
- **Services** (banking, educational, health, business)
- **Capital and assets** (investment, taxes, land / property)
- **Waste and pollution** (emission, water pollution)
- **Environmental resources** (water, minerals)
- **Knowledge** (technical info. social ideas & know how)
- **Social norms, values, lifestyles and identities**

# Leading to multiple functional boundaries

- ‘The boundaries of the modern community, instead of being precise lines, are blurred, if not indeterminate...’

(Hawley, 1950:248)

# Various methods but one common feature

- Defining and mapping the FUA in the last 50 years has been dominated by,
  - A focus on **economic relationships** that are
  - Defined narrowly by **labour market areas**, as
  - Measured by **travel-to-work data**
- Perpetuating an *urban-centric* and *economically-driven* conception of the FUA

# The FUA as a functional economic space

- Pioneered by Berry et al in 1968
- An enduring spatial imagination:
  - “*conceptual underpinning is clear: City-Regions are essentially functional definitions of the economic ... ‘reach’ of cities*” (ODPM, 2006)
- Depicting the FUA as a self-contained and coherent economic entity

# FUA in the USA: Metropolitan Areas

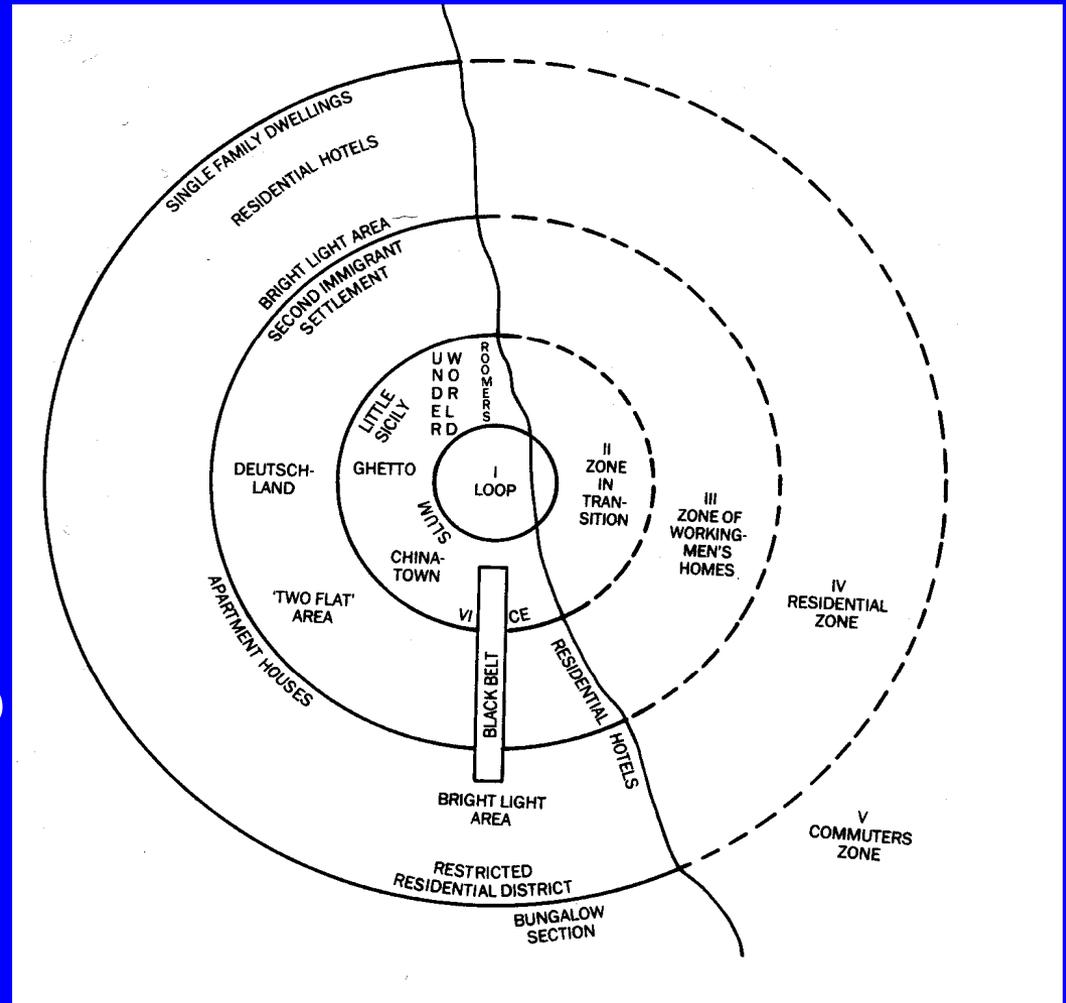
- FUA was first developed in the US
- Marked a shift from *population-based* to *economic-based* conception of metropolitan areas  
(N.B. Gras, 1922)
- In the 1950s, it was used to define: ...



# FUA in the USA: 'the metropolis'

- Defined largely on the basis of radial commuting patterns from the periphery to the centre.

(Ernest Burgess, 1925)

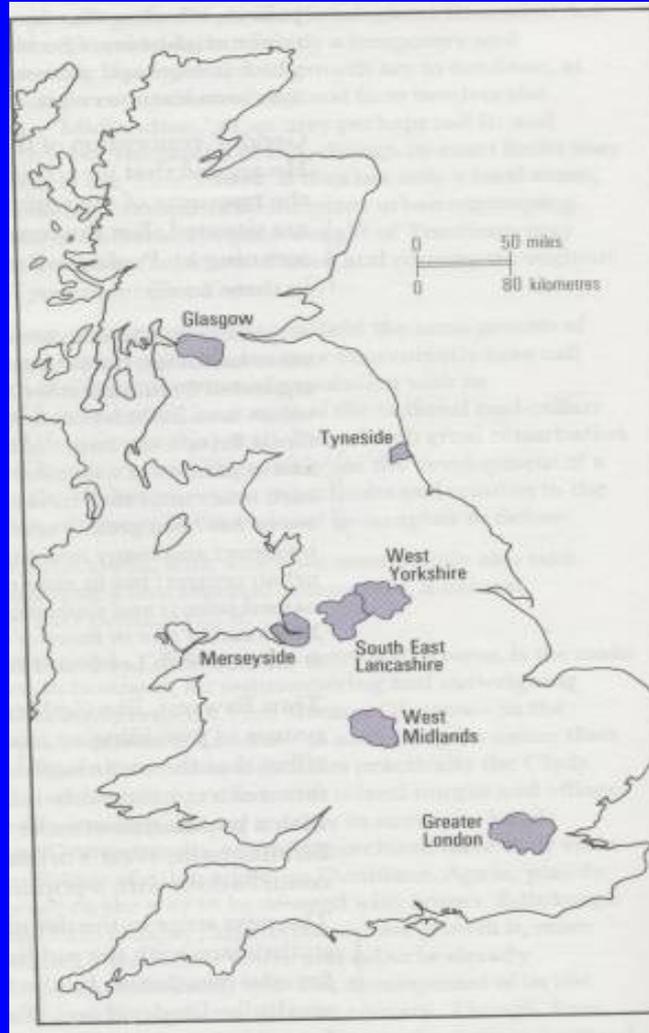


# FUA in Britain: Conurbation

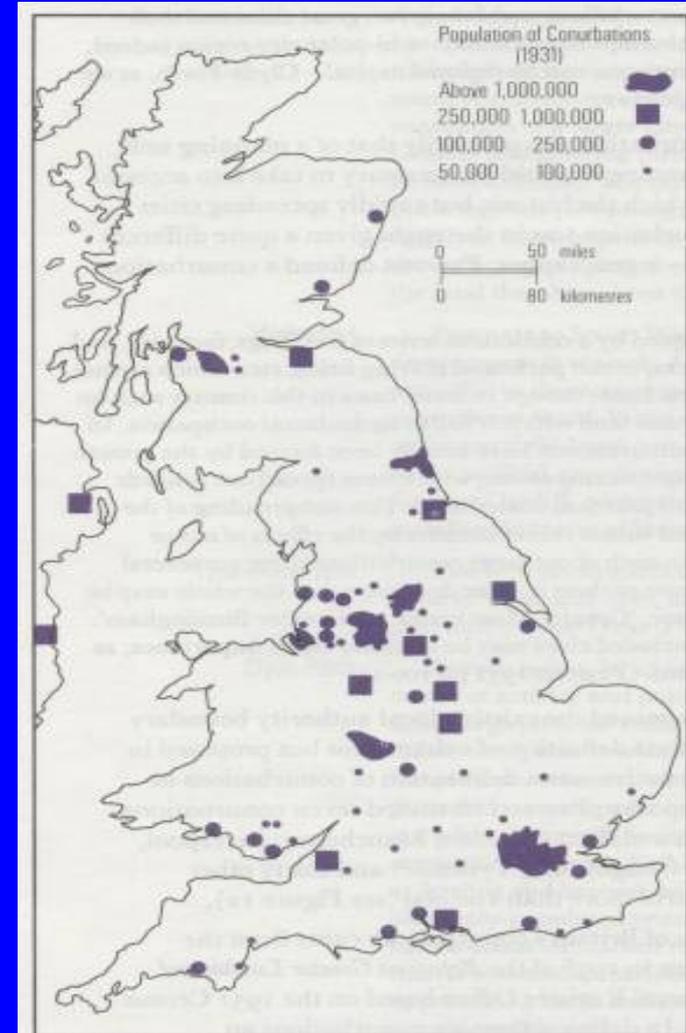
- **Conurbation**, coined by Geddes in 1915, was further developed by Fawcett in 1932:
  - *“a conurbation is an area occupied by a continuous series of dwelling which are not separated from each other by rural land”*  
(Fawcett, 1932:100)
- A *morphologically*- rather than *functionally*-defined concept

# FUA in Britain : Conurbations

- Fawcett's definition was adopted by Britain's General Register Office



GRO, 1956



Fawcett, 1932<sup>11</sup>

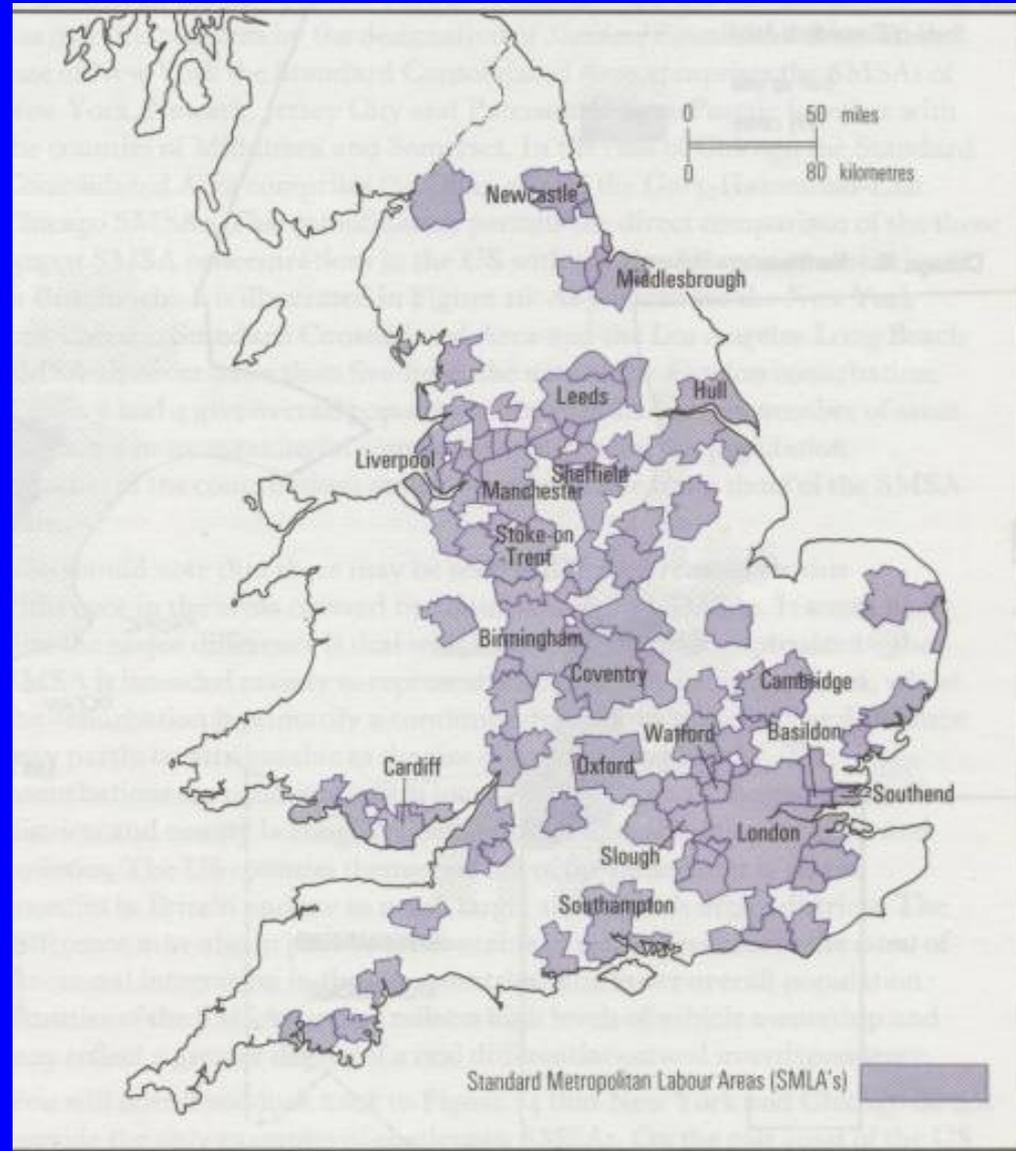


# FUA revisited in Britain: SMLA

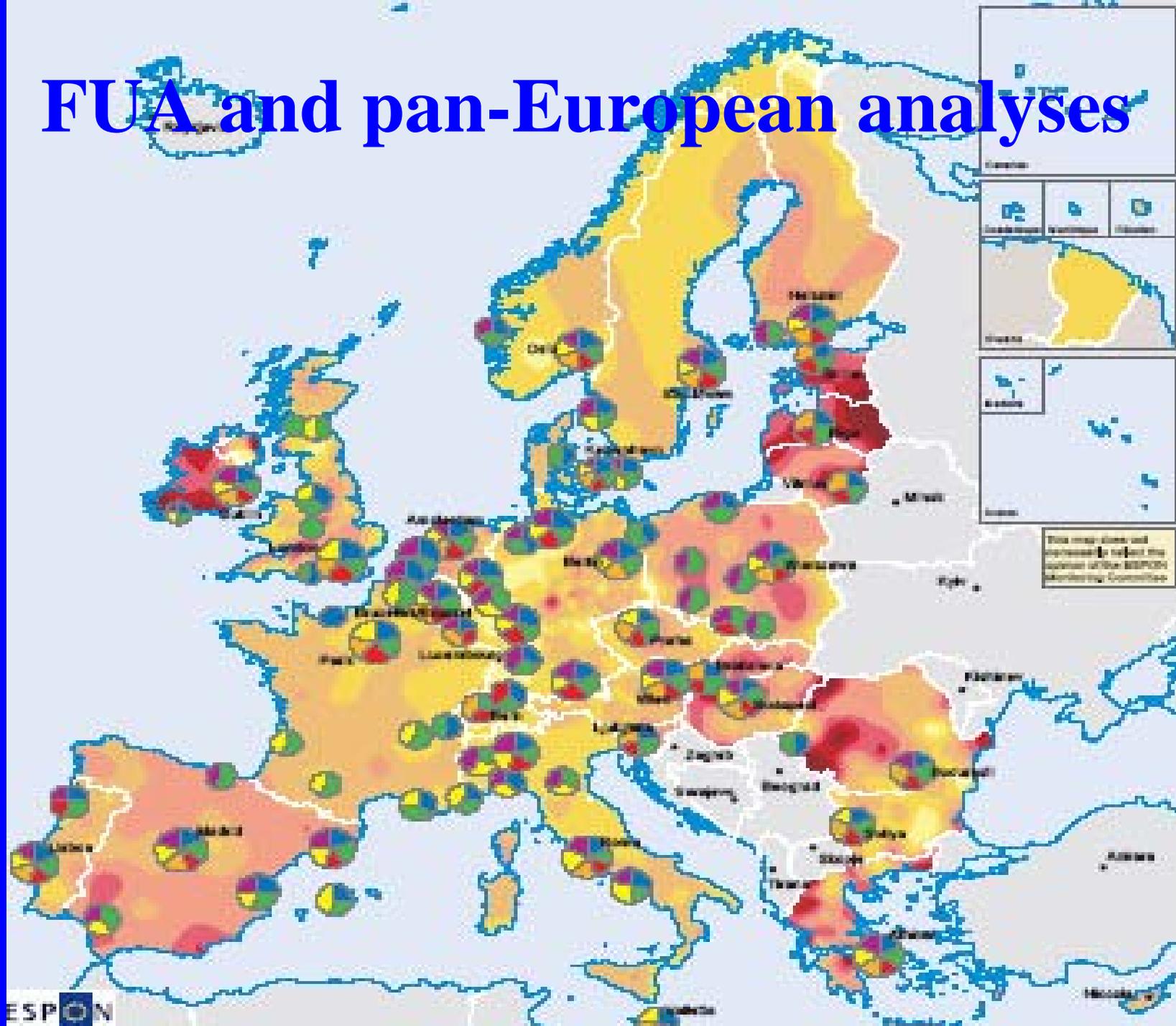
- **Standard Metropolitan Labour Areas**

(Hall et al, 1973)

- Growing attractiveness of the FUA in strategic policy making
- Call for co-aligning political and functional boundaries

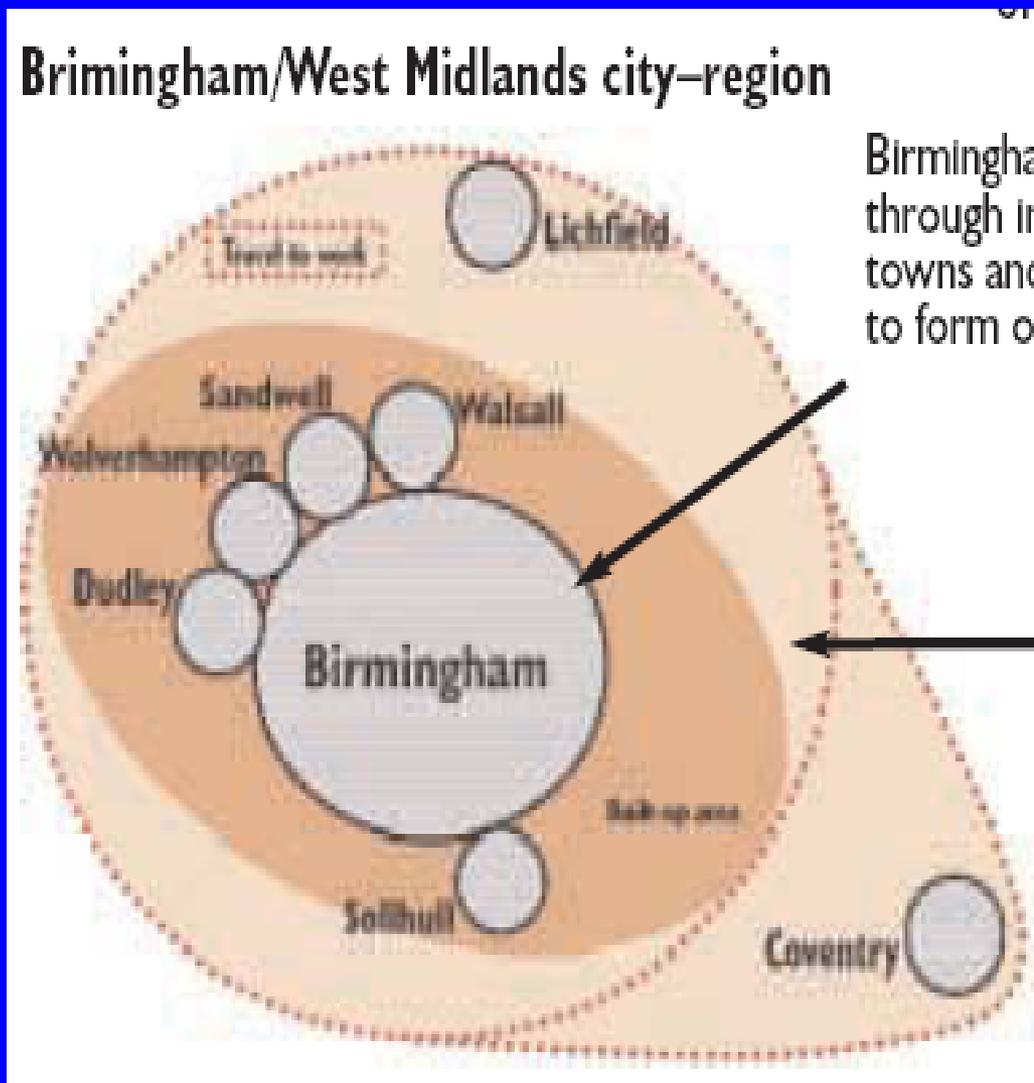


# FUA and pan-European analyses



# What is a City?

- **The municipal city:**
  - A political / administrative definition
- **The metropolitan city**
  - A physical / morphological definition
- **The city-region or FUA:**
  - An economic / functional definition



# Mapping the FUA

- **Top-down approach:**

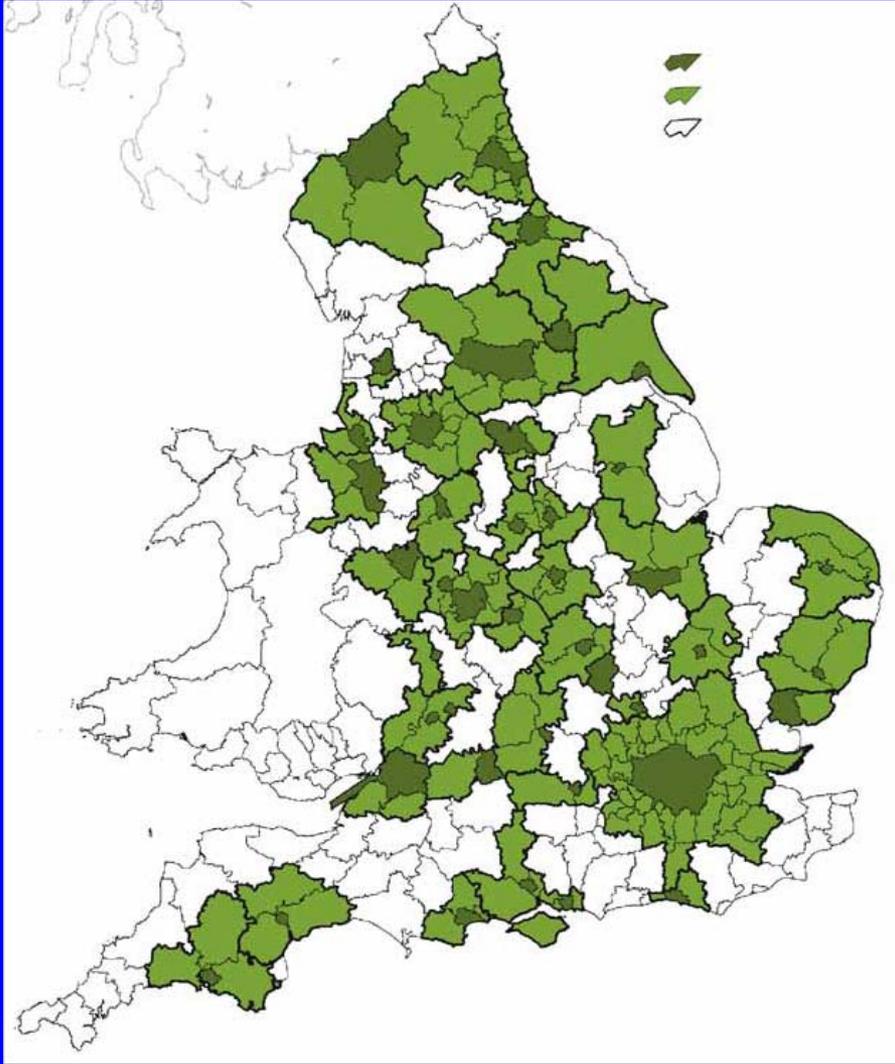
- Deductive
- Starts from a pre-determined set of 'cities' or 'nodes'
- Then moves out to assign areas to these on the basis of commuting data
- Nodal and non-exhaustive
- Used in SMSA, SMLA, ESPON

- **Bottom-up approach:**

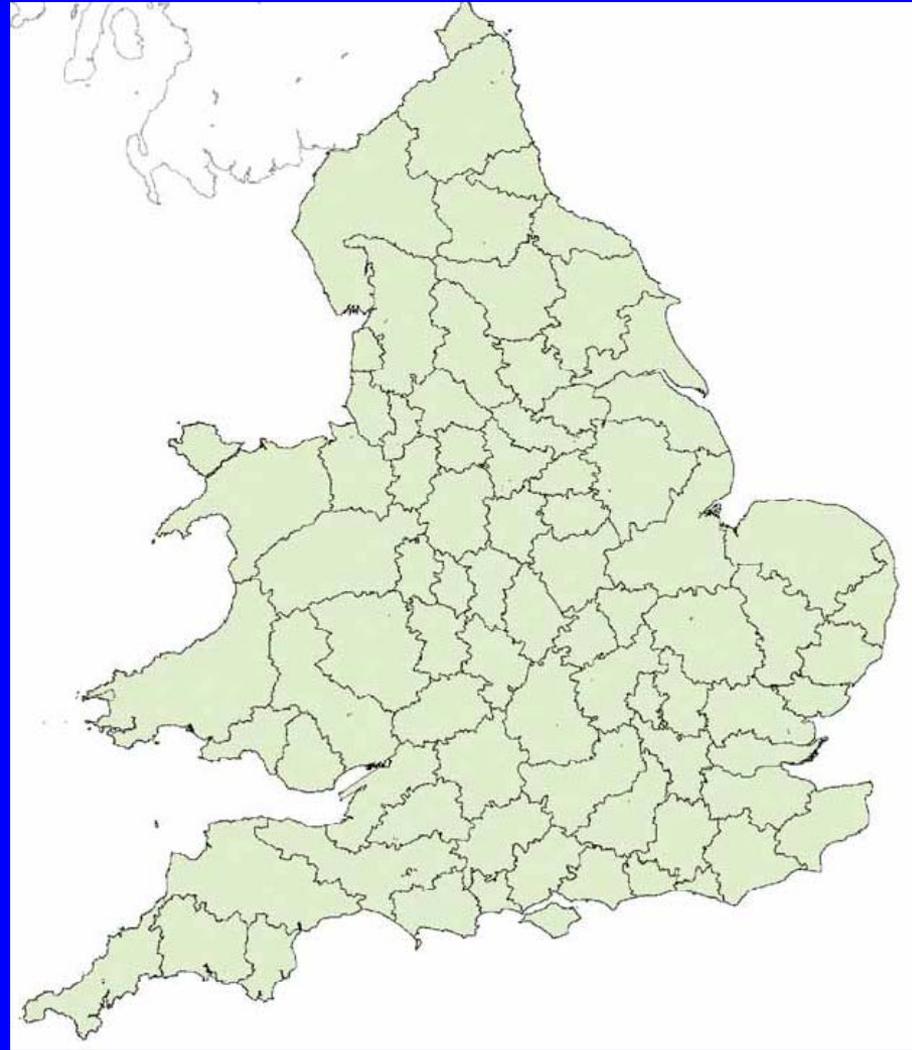
- Inductive
- Uses full set of commuting data & min. threshold of self-containment
- Requires advanced computation
- Non-nodal and exhaustive
- Developed by Coombes et al

# Mapping the FUA

## Top-down approach



## Bottom-up approach

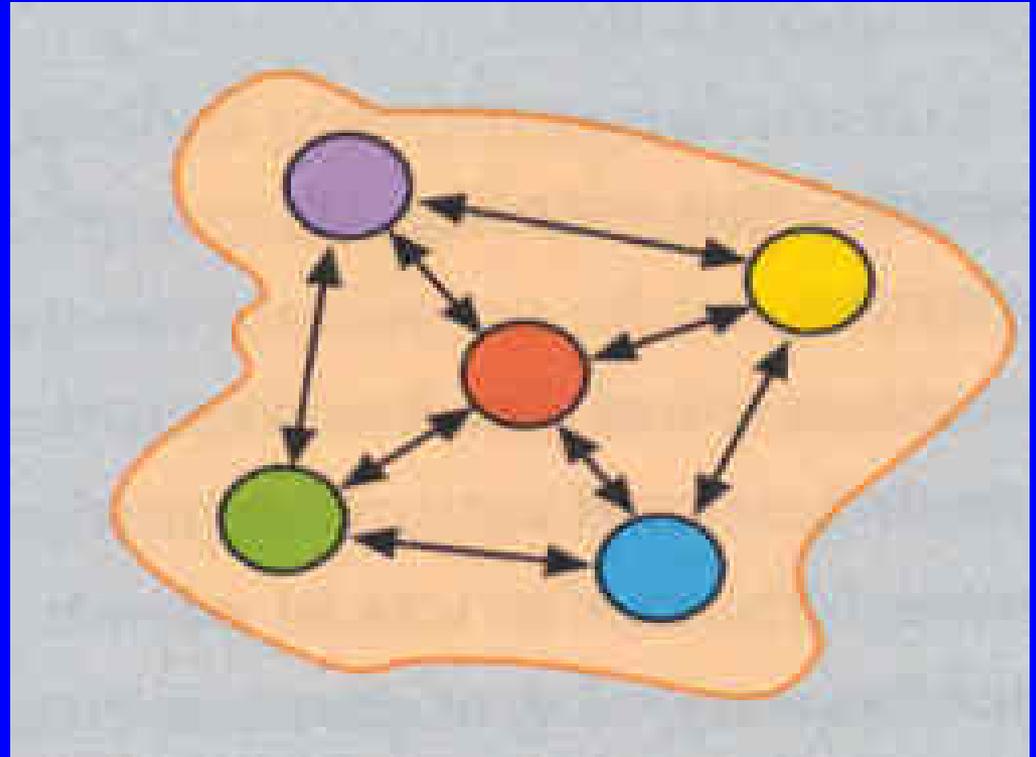


# Top-down v. Bottom-up

- **Top-down** approach is underpinned by the *urban-centric* conception of FUA
- **Bottom-up** approach is a departure from urban-centric conception of FUA, but retains its *economically-driven* dimension

# The bottom-up approach

- Reveals potential polycentric patterns in the wider region



It is an exceptional feature of a landscape dominated by the traditional top-down definition of the FUA

# Components of the FUA in the top-down approach

## 1. Inner core area:

- Core
- Centre
- Node
- City
- Urban tract
- The 'C Zone'

## 2. Outer surrounding area:

- Hinterland (Gras, 1922)
- Umland (Schöller, 1957)
- Metropolitan community (Bogue, 1949)
- Region (McKenzie, 1933; Dickinson, 1947)
- Field of association / Catchment area (Mumford, 1961)
- The 'S Zone' (Parr, 2005)

# Defining the 'city' in the FUA

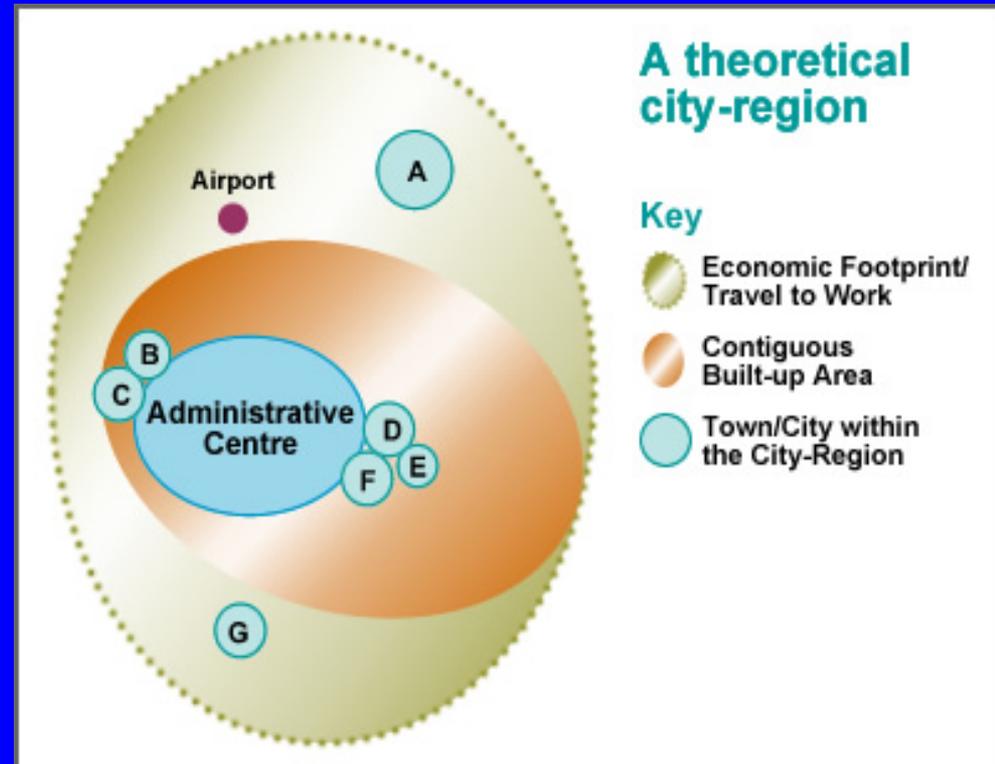
- 'City' (or the 'inner core') as bounded space, defined by its morphological attributes of compactness and contiguous built-up area
- Cities are pre-selected on the basis of:
  - Functions, economic performance (GDP), accessibility, etc...
- Weight given to the selection criteria reduces or increases the number of cities and the frequency of the FUA

# Delineating the FUA's 'hinterland' in the top-down approach

- Two ways of defining the extent of the FUR:
  - A) Statistical analysis of actual flows
  - B) Approximation of time-distance from the core

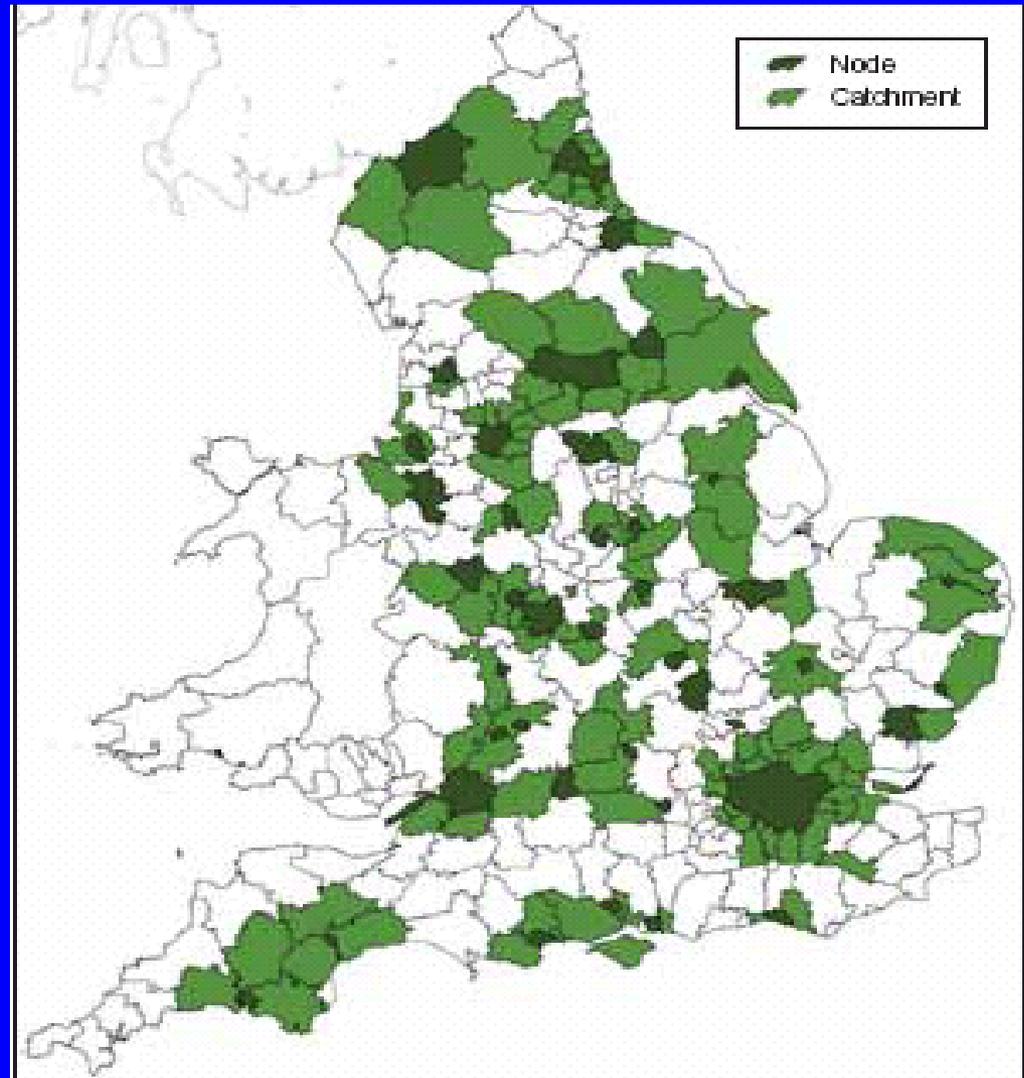
# A) Measuring flows

- The **extent of FUA** is determined by:
  - inclusion of each locality having  $>$  than a given % of its employed labour force in the core city
- The lower the %, the larger the extent of the FUA and vice versa



# A high threshold leads to under-bounding

- Many areas are excluded from the FUA despite their environmental, cultural or administrative ties
- 35% cut-off

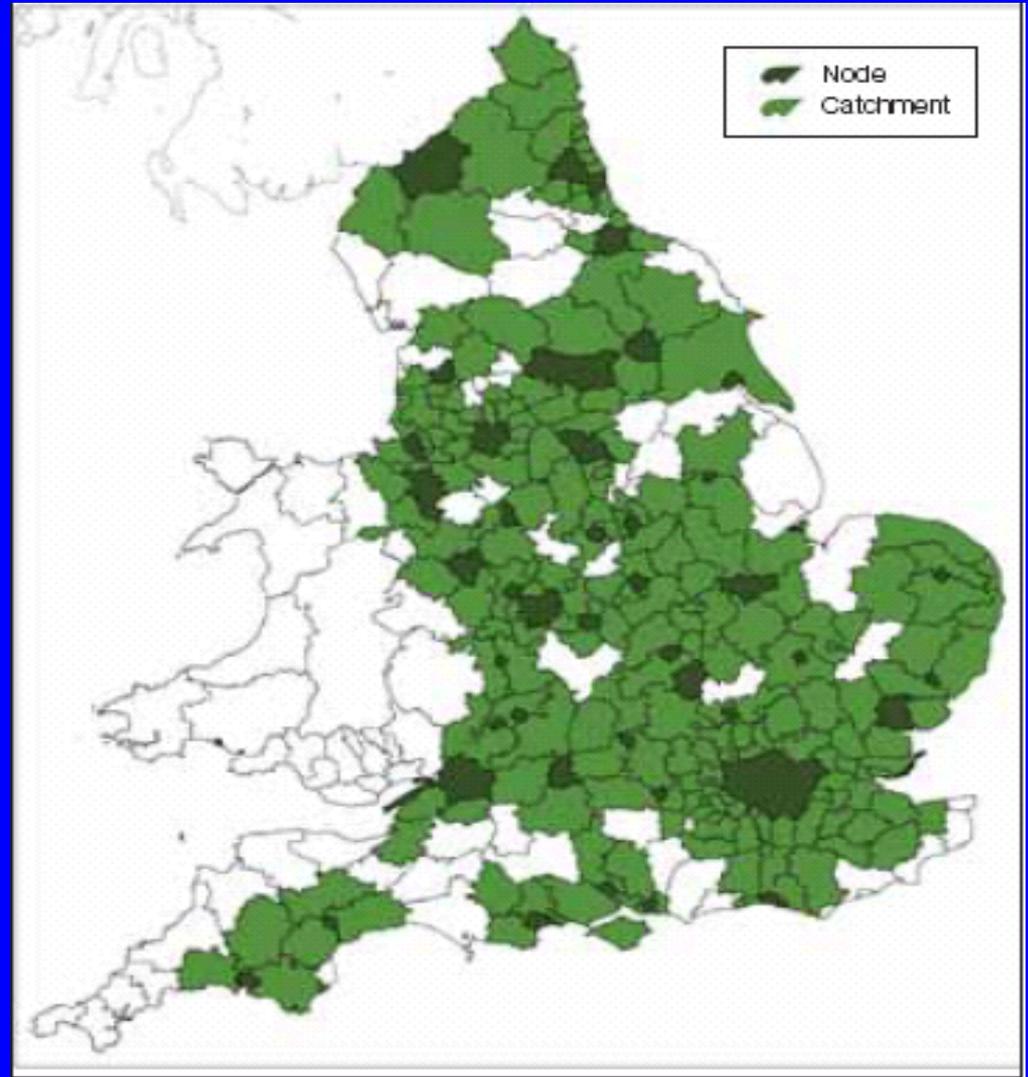


(ODPM, 2006)

# A low threshold leads to over-bounding

- Many areas are included in the FUA despite their historical, cultural and political independence
- 15% cut-off

(ODPM, 2006)



# Conceptualising the city as FUA

- Is heavily reliant on:
  - Not only **one type of interaction** (economic)
  - But also, **one economic criterion** (travel-to-work) for measuring that interaction
- A highly reductionist approach riddled with shortcomings!

# 1. LMA are not the same for all social groups

## Catchment for professional jobs

## Catchment for routine jobs

Figure 2.10: Catchments for professional and managerial workers

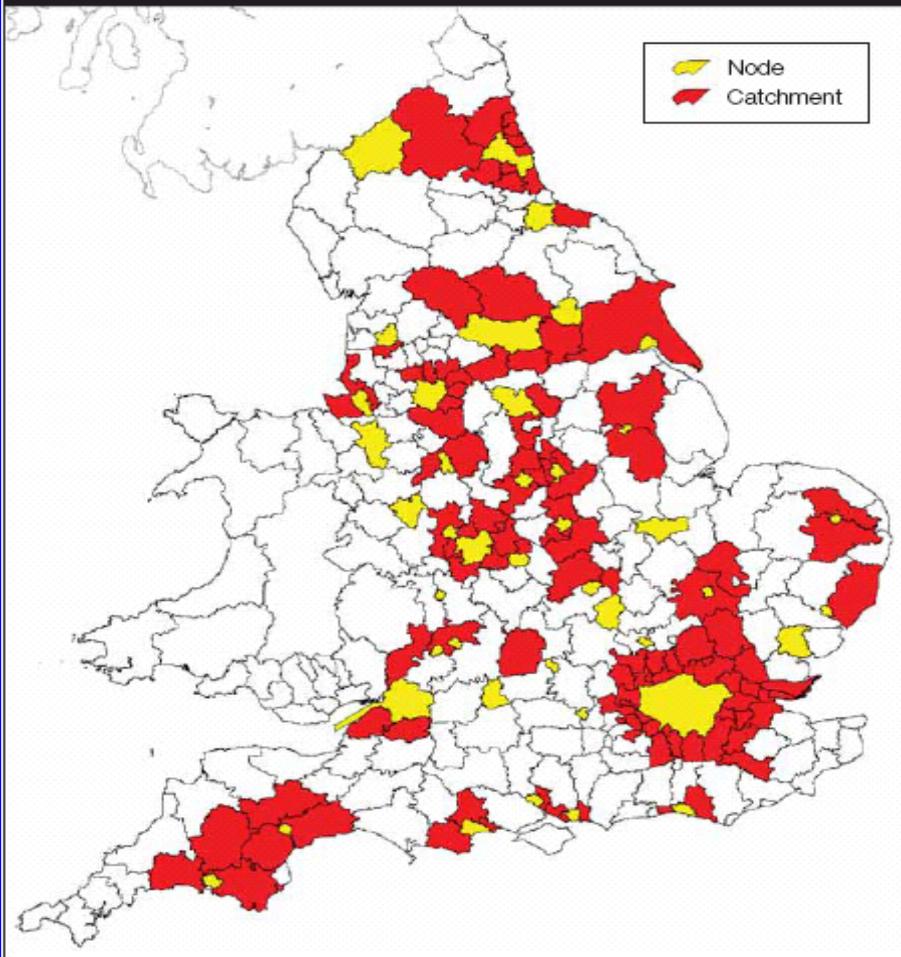
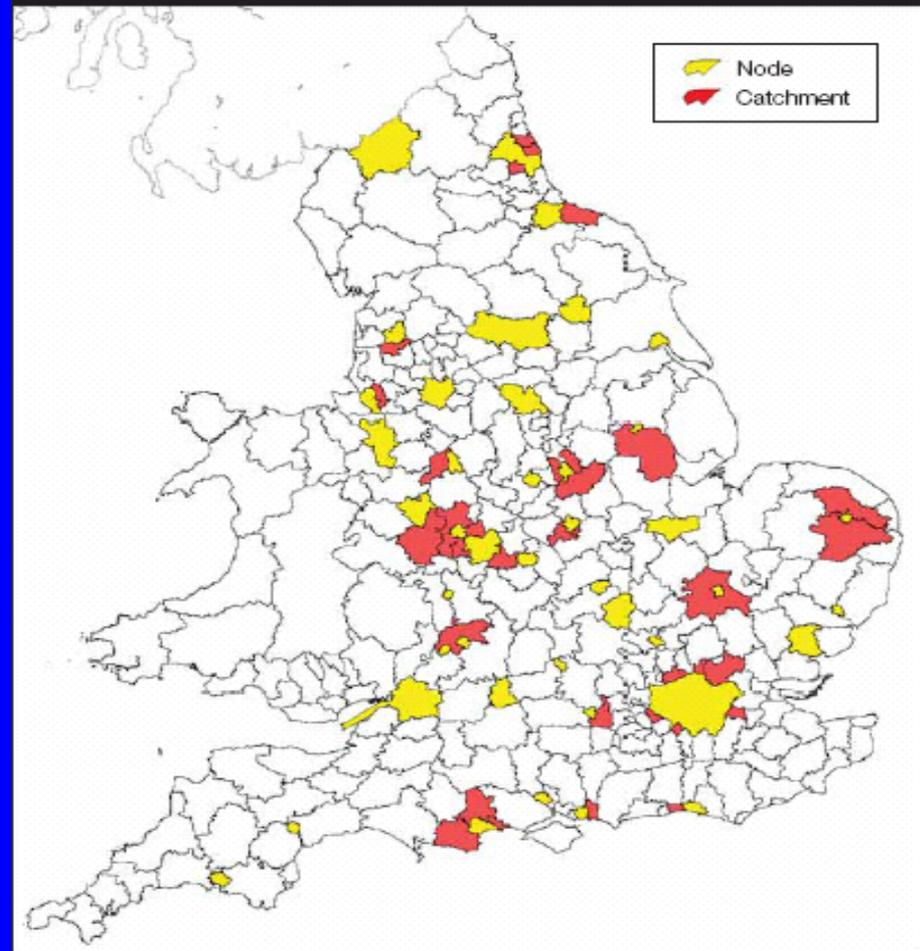
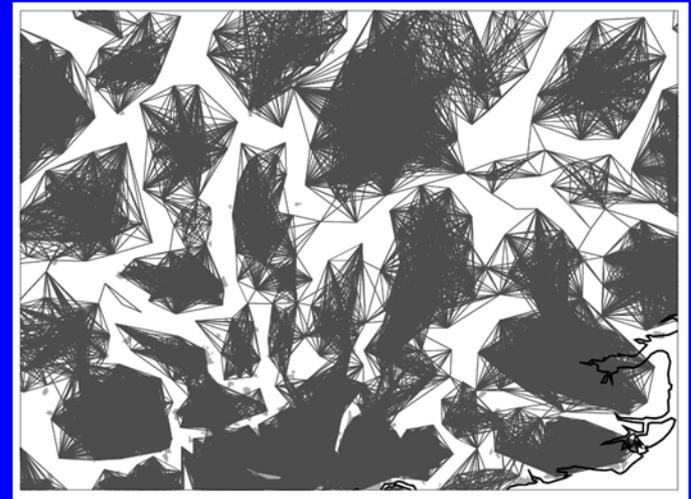
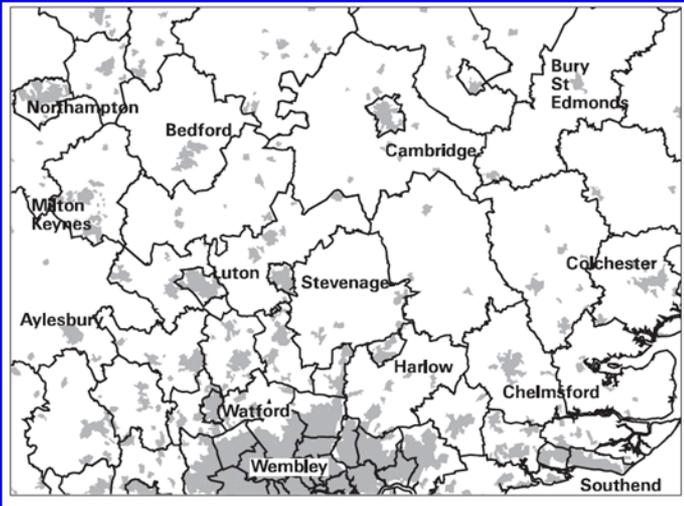


Figure 2.11: Catchments for semi-skilled and routine workers



## 2. LMA do not capture all economic relationships



Built-up areas [grey] and local authority boundaries [black] in the sample area north of London

High 'synthetic data' values, showing which neighbourhoods are strongly linked in many different ways

Coomes M, 2000, "Defining locality boundaries with synthetic data"  
*Environment and Planning A* **32**(8) 1499 – 1518

# Other shortcomings

3. LMA do not necessarily match the **housing market** areas
4. LMA do not capture the **flows between firms** and businesses, some of which take place in the cyberspace

## B) Approximating time-distance

- **What is a reasonable proximity?**
  - Three mile radius by ‘foot and hoof’ (19<sup>th</sup> C.)
  - 40 minutes (Blumenfeld, 1971)
  - One hour (Geddes, 1915)
  - 30 minutes (Batten, 1995)
  - 45 minutes (ESPON, 2004-6)
- Privileging the **physical** geography of proximity to the **relational** geography of connectivity

# key message

- FUA's geometry is best characterized by:
  - multiplicity, fuzziness and overlaps
  - manifesting only an approximation of self-containment that,
  - varies for different kinds of activities, flows and functions.

# The FUA as a social construct

- “The concept of the city-region [FUA], like all concepts, is a mental [or indeed social] construct. It is not, as some planners and scholars seem to think, an area which can be presented on a platter to suit their general needs”.

(Dickinson, 1964:227)

# Conclusion

- Conceptualising the city as a functional economic space has been dominant in the last 50 years
- This is embedded in a belief that, *“competitive cities create prosperous regions through a potential chain reaction”*.  
(ODPM, 2003:6)
- Little evidence of such ‘ripple out’ effects

## But,..

- Imagining the city as a functional urban region continues to **frame** the debate:
- **Analytically**, it fuels the dominance of *urban-centric* and *economically-driven* approaches to the definition
- **Politically**, it justifies the concentration of policy attention, investment and power in large cities

# Taking the debate forward!

- Current FUA region agenda separates the concept of:
  - The City as an *economic* space from
  - The City as an *ecological* and *social* space
- Integrating these will deepen our understanding of the **relational dynamics** of the cities

# Further information

- Davoudi, S., 2008, Conceptions of the City Region: A Critical Review; *Journal of Urban Design and Planning*, Issue DP2: pp51-60
- Davoudi, S., 2009, The City-Region, in R. Kitchin and N. Thrift (eds) *The International Encyclopaedia of Human Geography*, Elsevier