

Approaches to FUA

**ESPON Workshop,
5 Nov 2009, Luxembourg**

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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

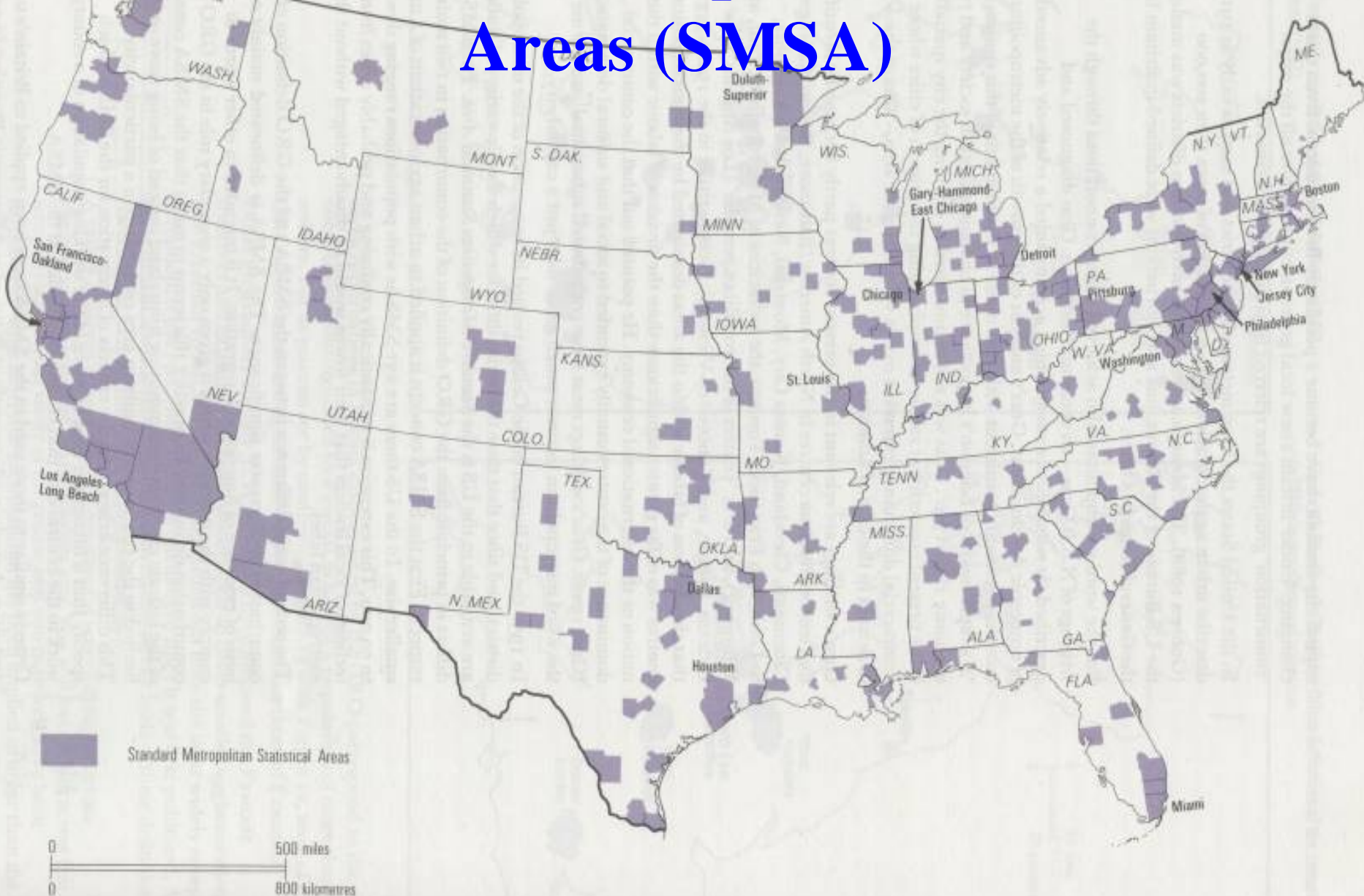
The FUA as a functional economic space

- 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: ...

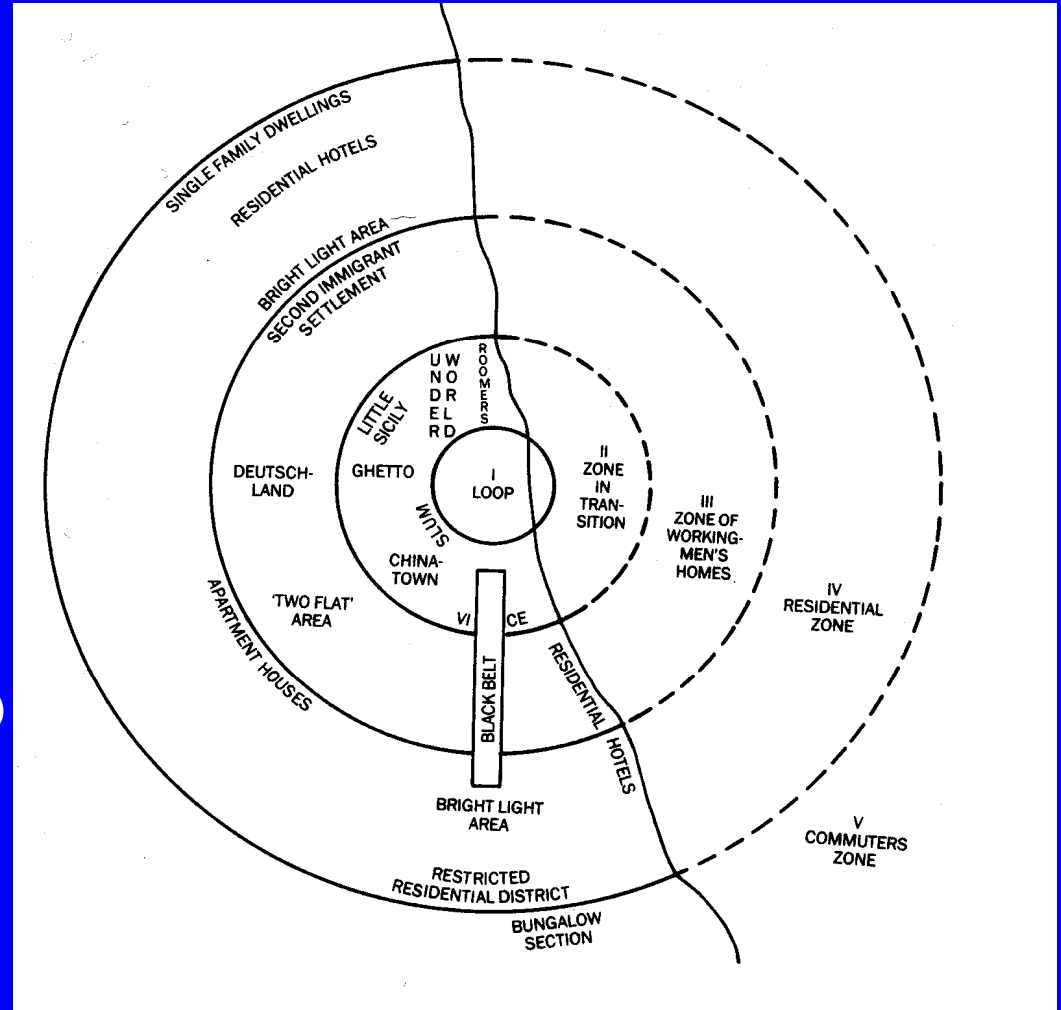
US Standard Metropolitan Statistical Areas (SMSA)



FUA in the USA: 'the metropolis'

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

(Ernest Burgess, 1925)

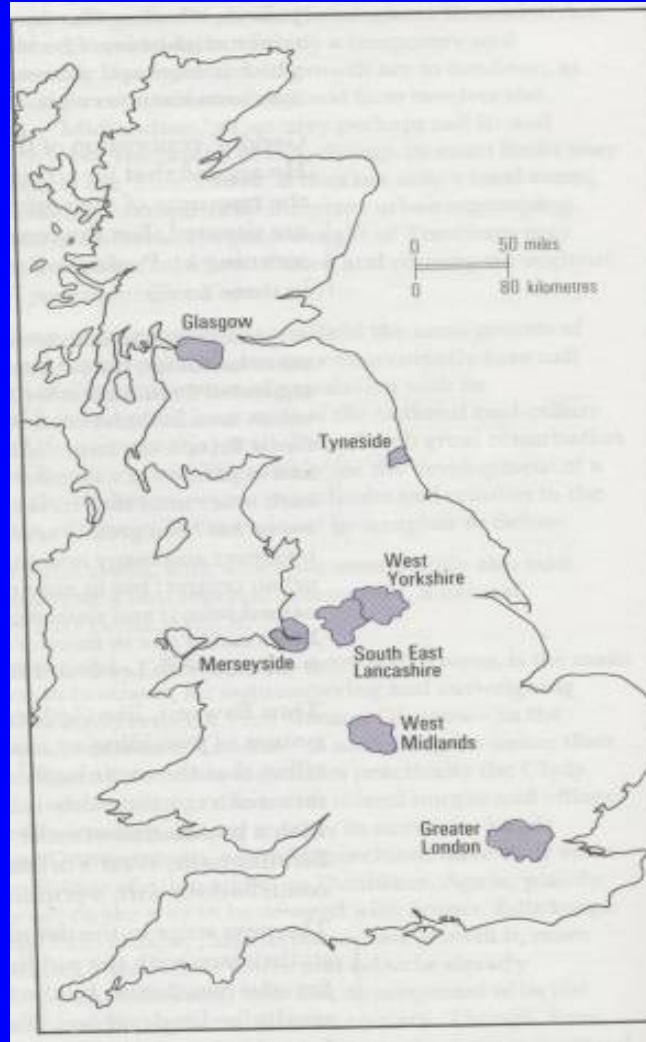


FUA in Britain: Conurbation

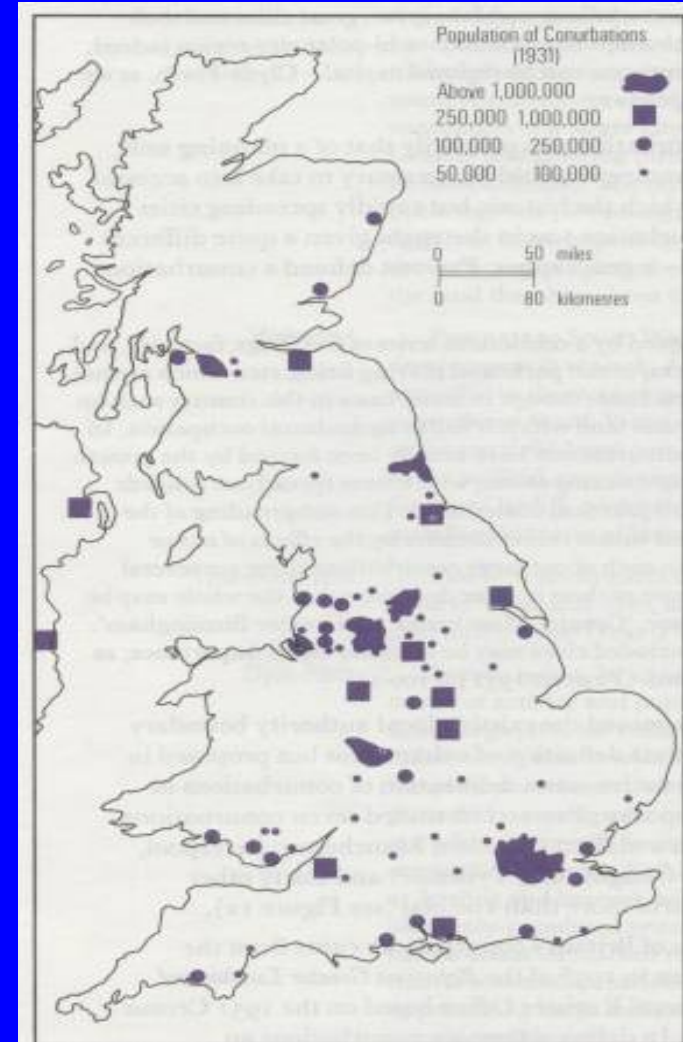
- **Conurbation**, coined by Geddes in 1915, was further developed by Fawcett in 1932:
 - *“a conurbation is an area occupied by a continuous series of dwelling which are not separated from each other by rural land”*
(Fawcett, 1932:100)
- A *morphologically*- rather than *functionally*-defined concept

FUA in Britain : Conurbations

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



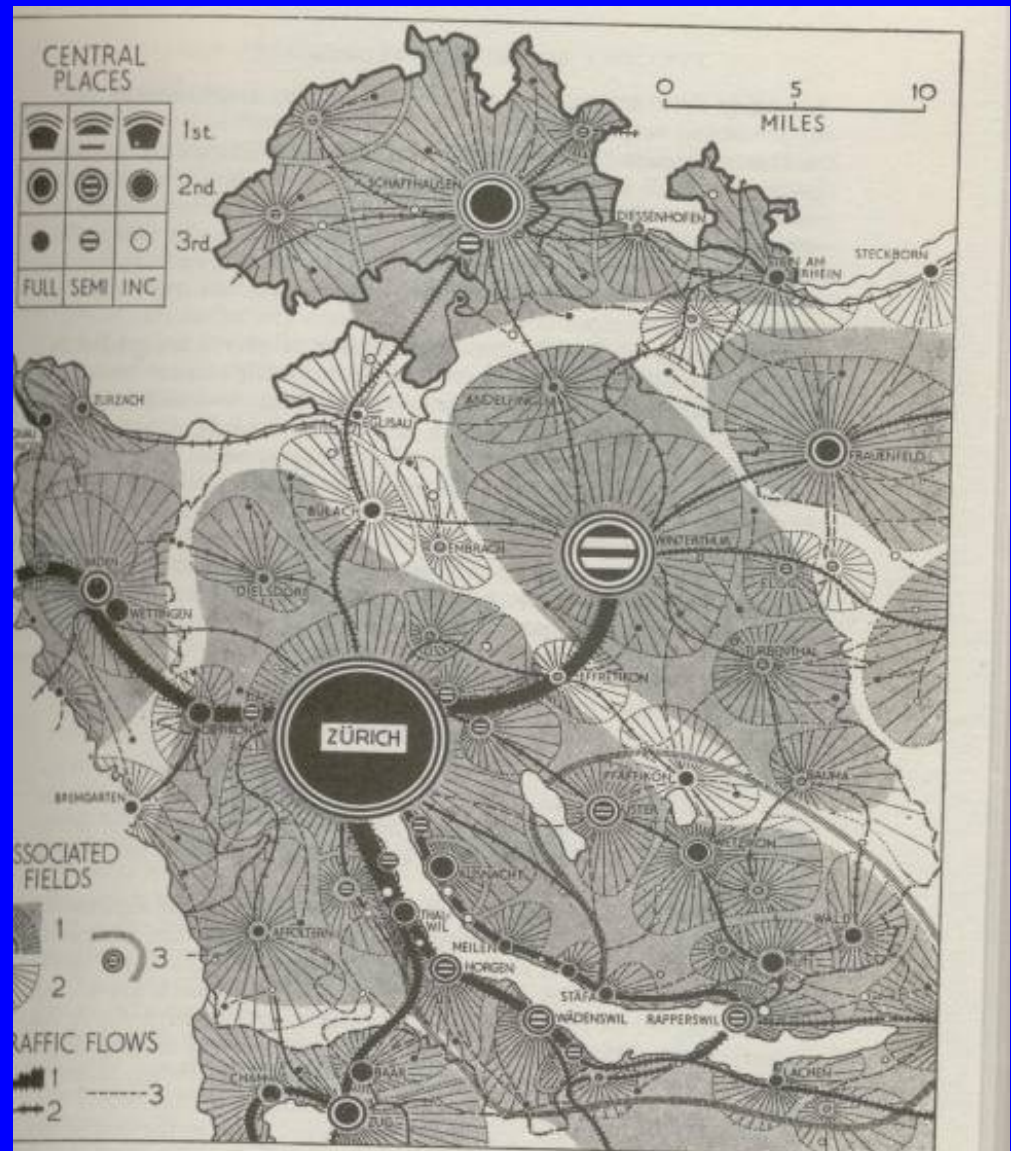
GRO, 1956



Fawcett, 1932¹¹

FUA in Europe: Stadtregion

- Hans Carol's definition of Zurich CR, 1956 combined:
 - functional criteria &
 - Central Place theory of hierarchy of services

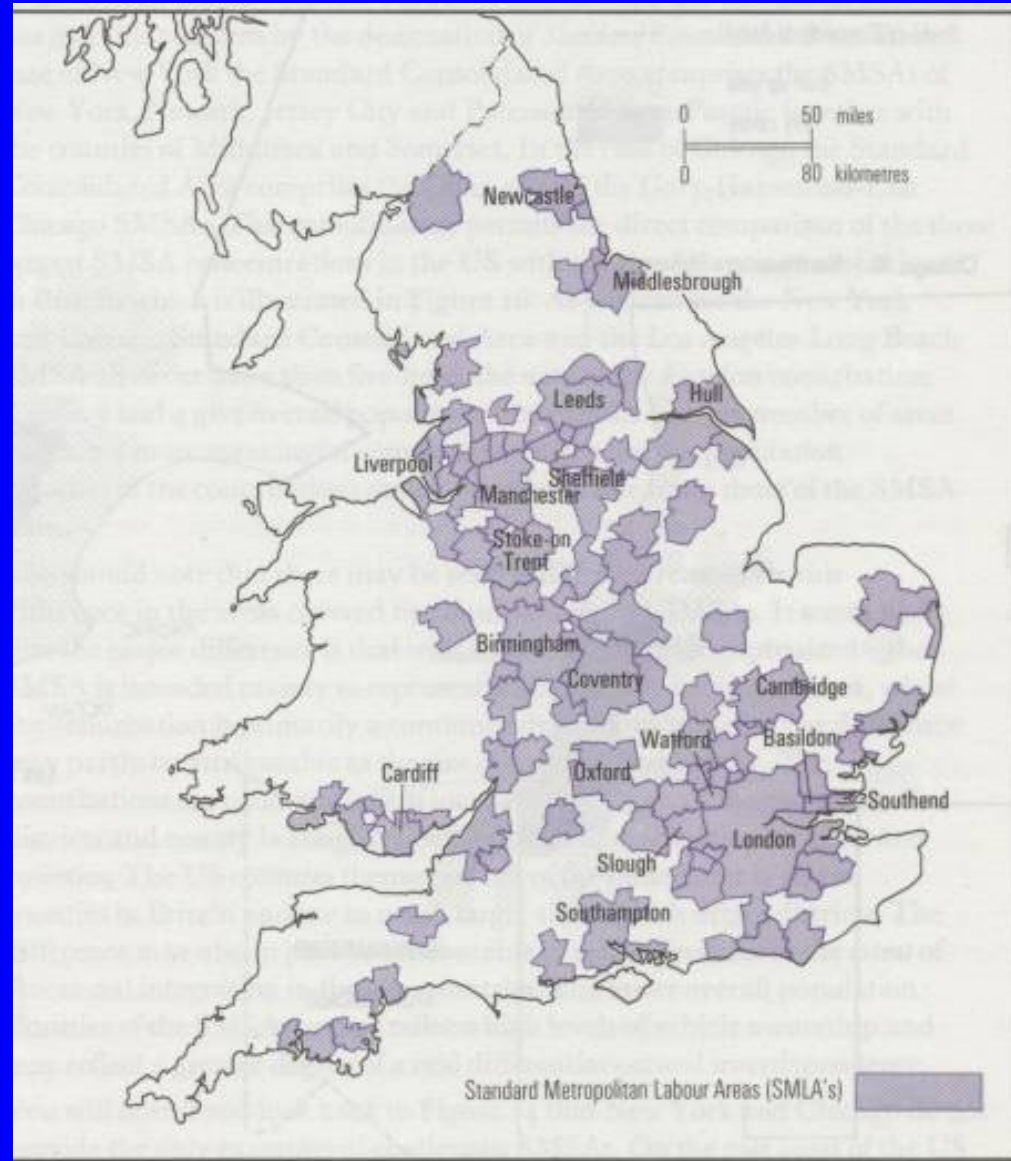


FUA revisited in Britain: SMLA

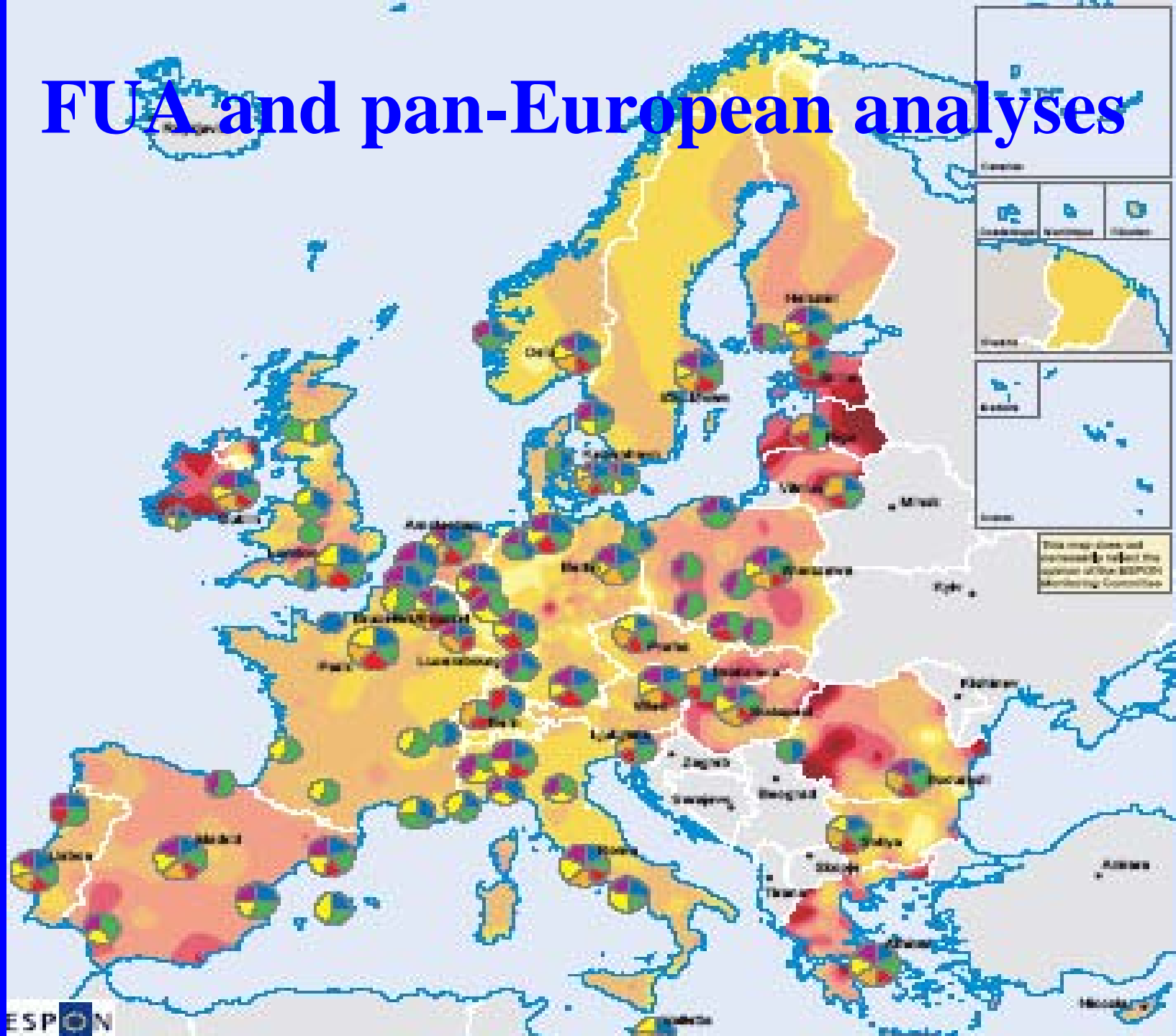
- **Standard Metropolitan Labour Areas**

(Hall et al, 1973)

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

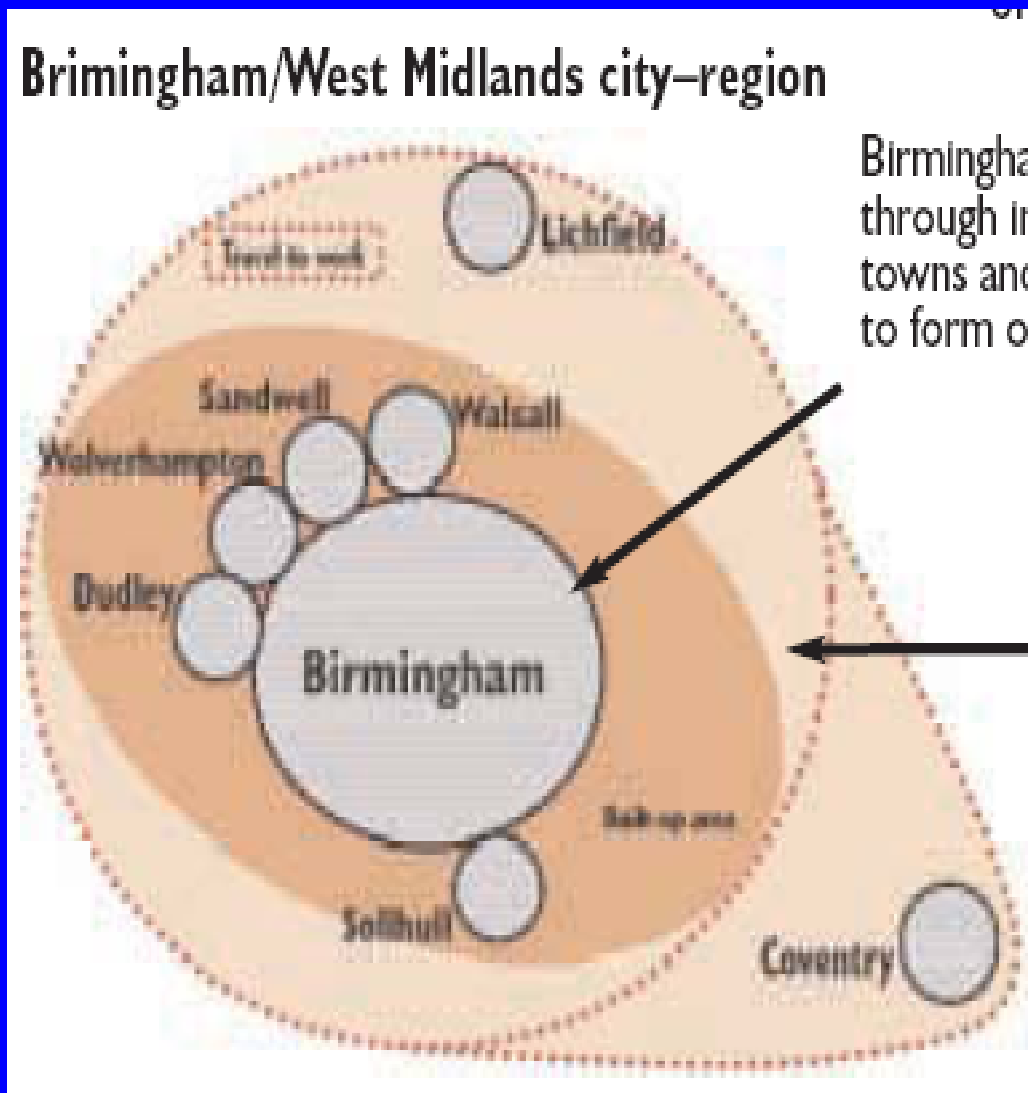


FUA and pan-European analyses



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:**

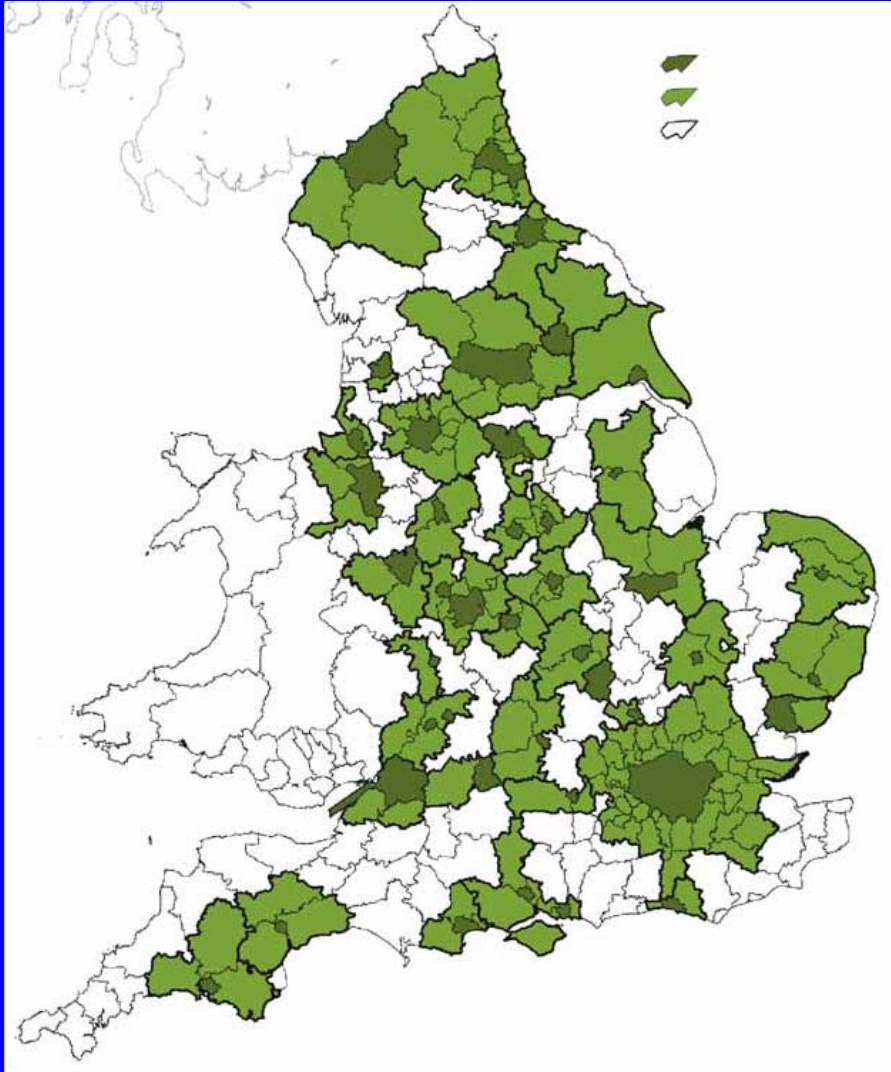
- Deductive
- Starts from a pre-determined set of 'cities' or 'nodes'
- Then moves out to assign areas to these on the basis of commuting data
- Nodal and non-exhaustive
- Used in SMSA, SMLA, ESPON

- **Bottom-up approach:**

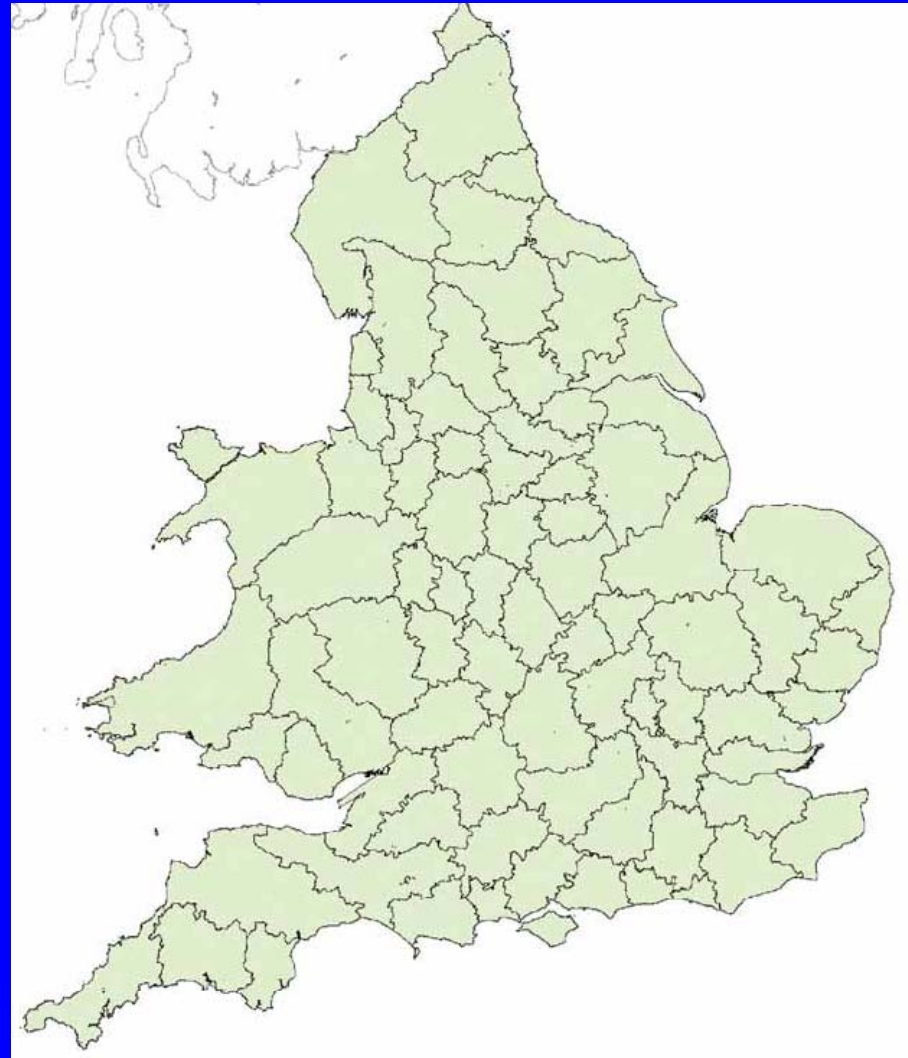
- Inductive
- Uses full set of commuting data & min. threshold of self-containment
- Requires advanced computation
- Non-nodal and exhaustive
- Developed by Coombes et al

Mapping the FUA

Top-down approach



Bottom-up approach

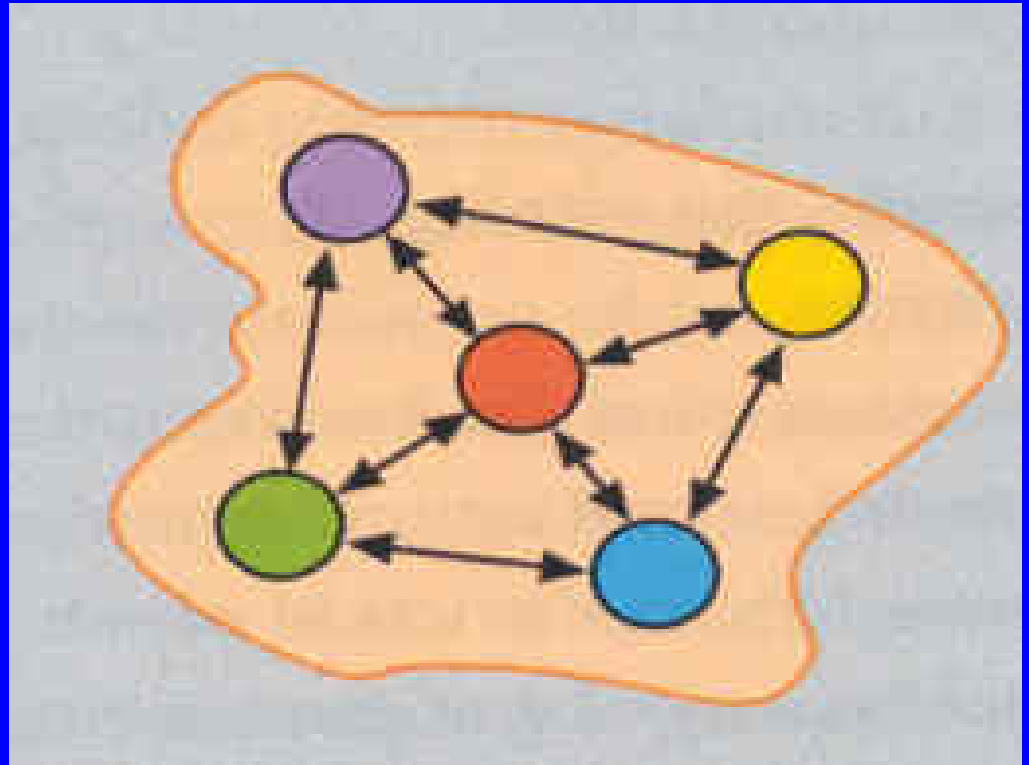


Top-down v. Bottom-up

- **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

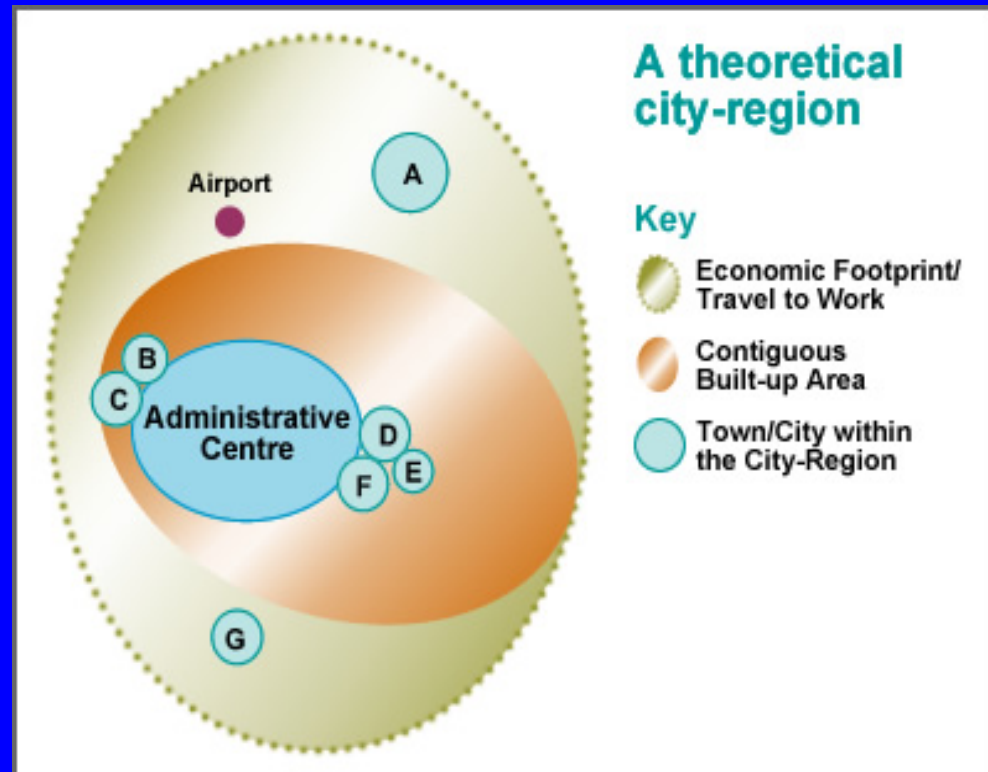
- 'City' (or the 'inner core') as bounded space, defined by its morphological attributes of compactness and contiguous built-up area
- Cities are pre-selected on the basis of:
 - Functions, economic performance (GDP), accessibility, etc...
- Weight given to the selection criteria reduces or increases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

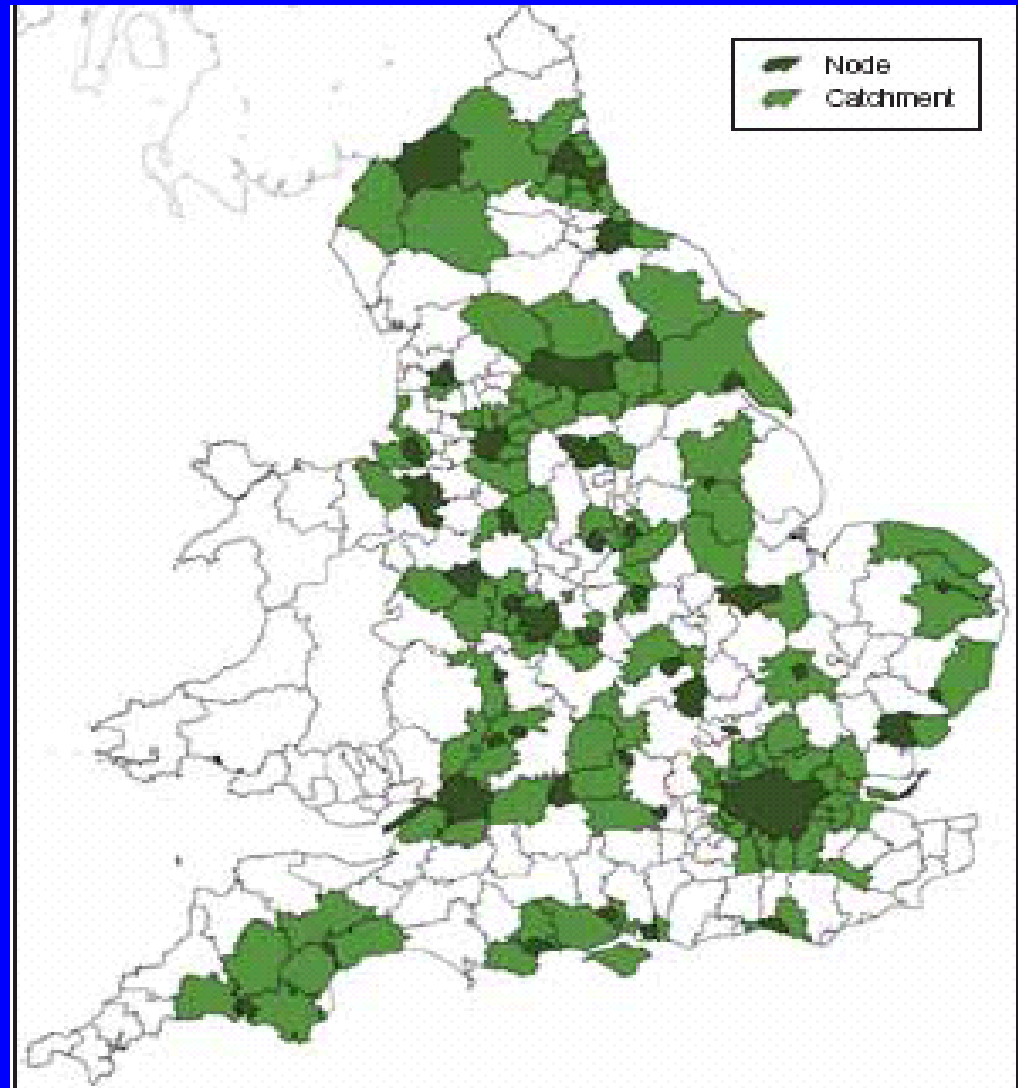
A) Measuring flows

- 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

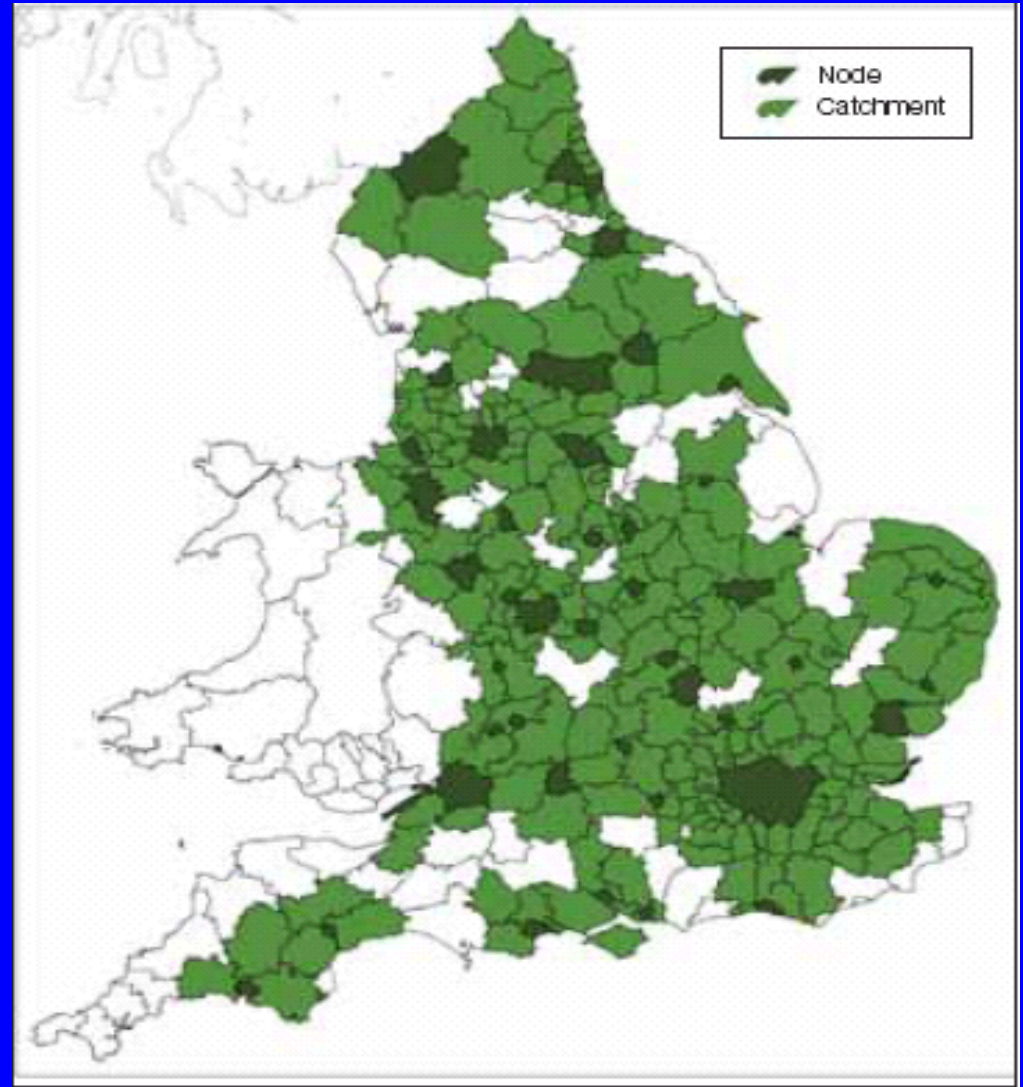


(ODPM, 2006)

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

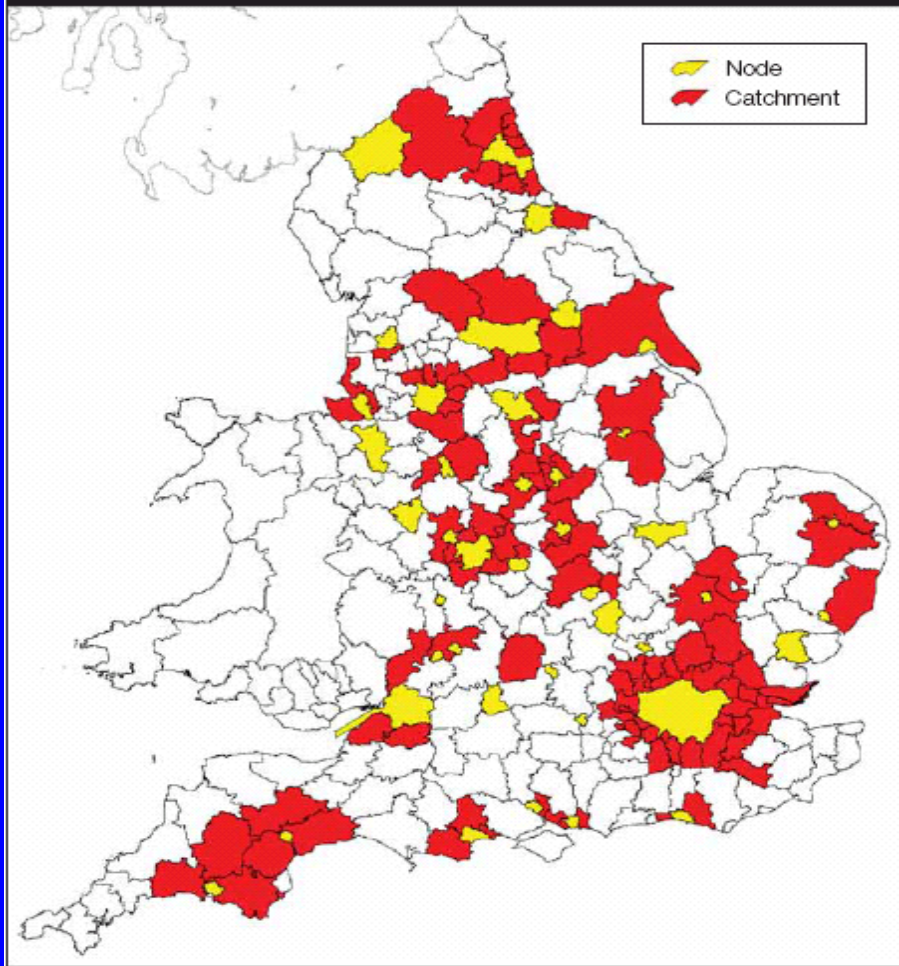
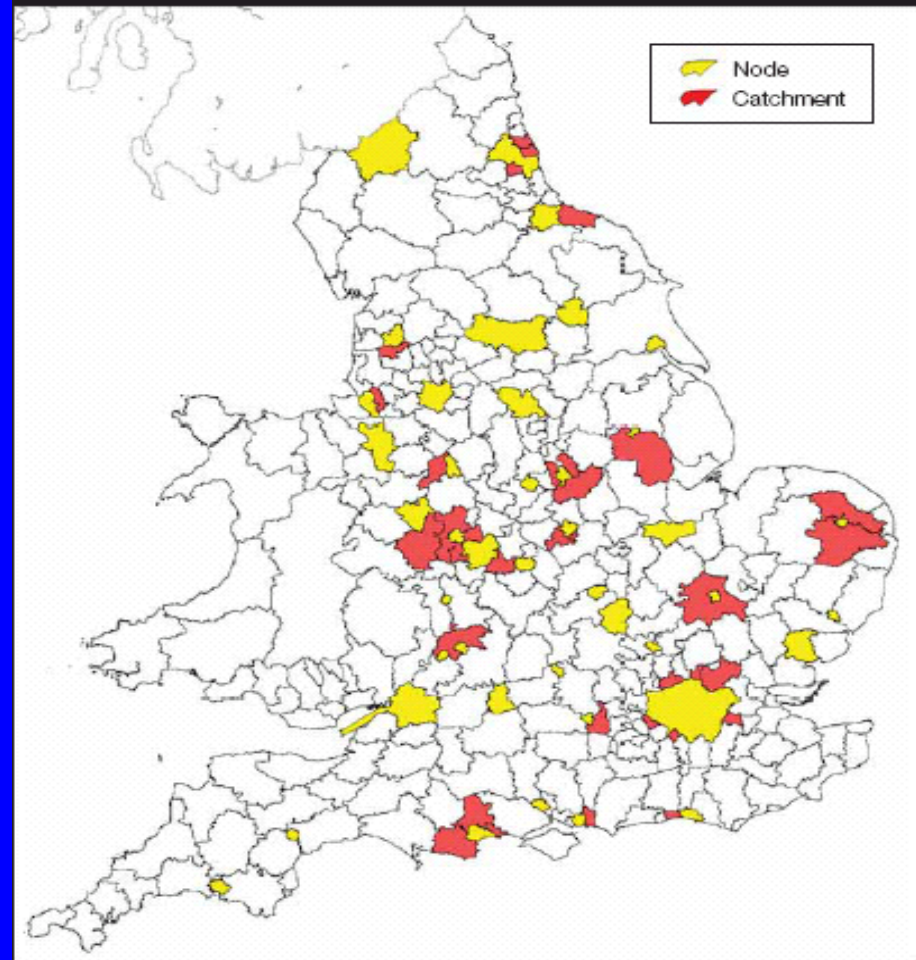
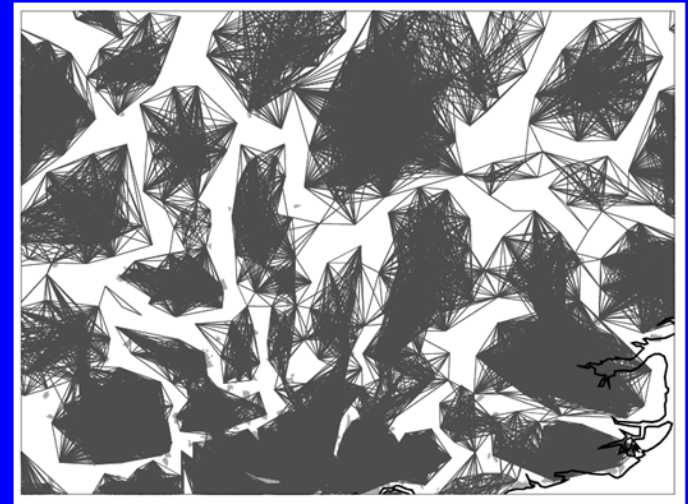
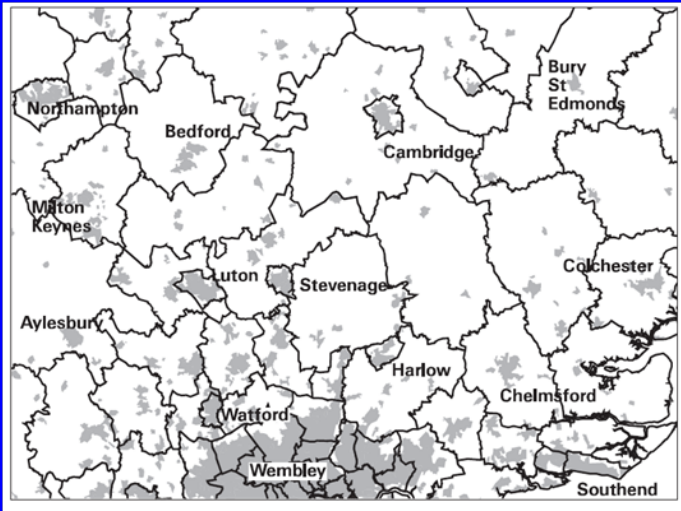


Figure 2.11: Catchments for semi-skilled and routine workers



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’ (19th 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