

# What Is Urban Sprawl? Concepts and Perceptions



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<http://www.casa.ucl.ac.uk/scatter/>



*Final Seminar of the SCATTER Project  
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# Outline of the Talk

1. Urban Sprawl and Urban Growth: An Age-Old Phenomenon
2. The Forces at Work: Concentration, Population Growth and Decentralisation
3. Types of Sprawl: The Impact of the Car
4. Impacts and Costs of Sprawl
5. The SCATTER Project: Sprawl in Europe
6. Policies: Sustainability and Smart Growth

# 1. Urban Sprawl and Urban Growth: An Age-Old Phenomenon

- Sprawl is directly identified with urban growth - as cities get bigger, they expand around their peripheries
- But sprawl is more specific, it is defined as *'uncoordinated growth'*: the expansion of a community without concern for consequences or environmental impact.
- Sprawl goes back to Roman times, first formally defined as a term in the 1820s in England

Critics of suburbia date from *William Cobbett* (1762-1835), author of Rural Rides. As early as the 1820s he declared, riding west from London, that “all Middlesex is ugly”, a sprawl of “showy, tea-garden-like houses”.

“Need I speak to you of the wretched suburbs that sprawl all round our fairest and most ancient cities?” *William Morris*, Art Under Plutocracy, date unknown, between 1870 and 1896

*William Holly Whyte*: 1959: The Exploding Metropolis, is an early post-war statement



## 2. The Forces at Work

- Big Cities are still attracting population, megacities and capital cities like Brussels, London, .... But population is being added to the edge at lower densities and the dominant transport is the car, for ease of access
- Population and other activity is also decentralising very fast to lower density suburbs
- The costs of growth are hard to assess because this growth is at a very individual level

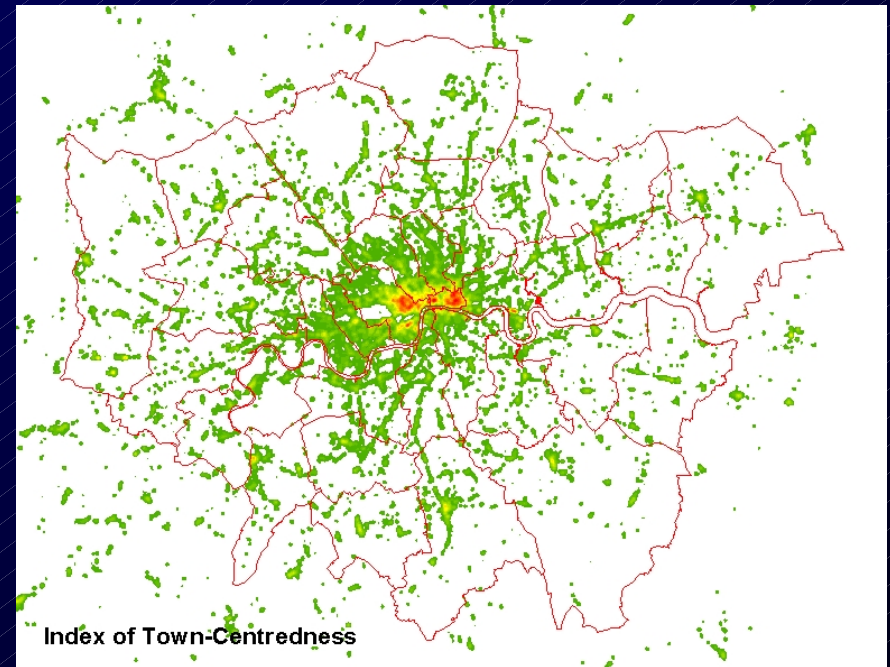
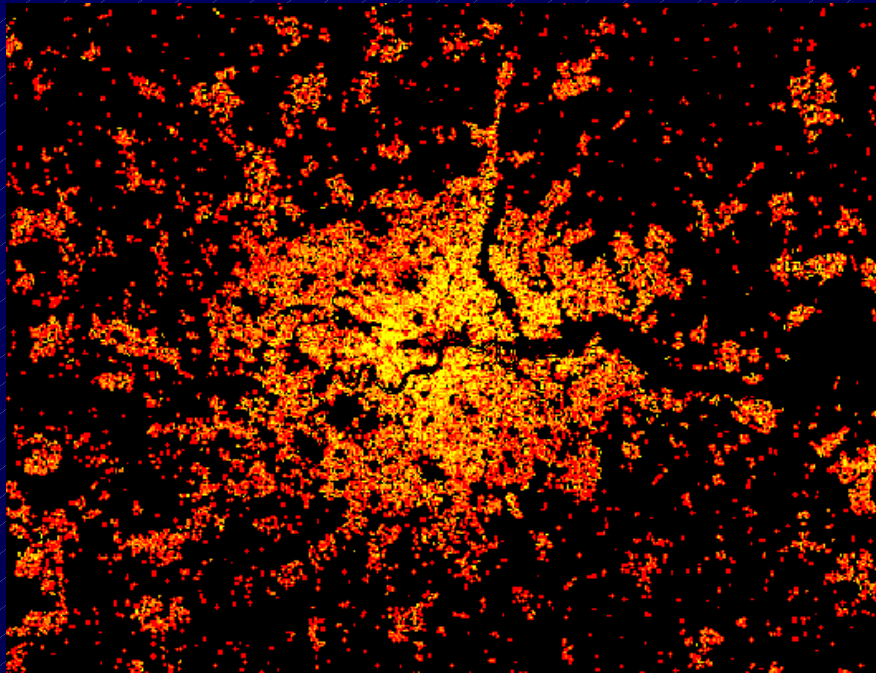


- In terms of urban growth, these forces divide into those that are centralising and those that are decentralising, sometimes called forces of concentration or deconcentration. This is complex in that there is subtle mixes of these.
- The rise of the industrial city in the 18<sup>th</sup> & 19<sup>th</sup> centuries was marked by strong centralisation and concentration as people flocked from the rural hinterland to work in the city
- For the last 100 years, decentralisation has become more powerful due to the falling transport costs, the switch from public transport to car, and the desire for more space

- In the last 30 years, perhaps less, there has been a drift back to the countryside by city dwellers. This is primarily modern-day sprawl, although it is really based on richer people seeking country-like living
- Sometimes this is called “*counter urbanisation*”
- Even more recently there is a trend towards moving back into the inner city or central city but all these migration streams are occurring because people have more flexibility and are able to indulge their preferences much more than they were able to in the past.



You can see both these forces at work spatially and historically in the growth of large cities such as Greater London (below)



various types of sprawl are revealed as follows →

### 3. Types of Urban Sprawl?

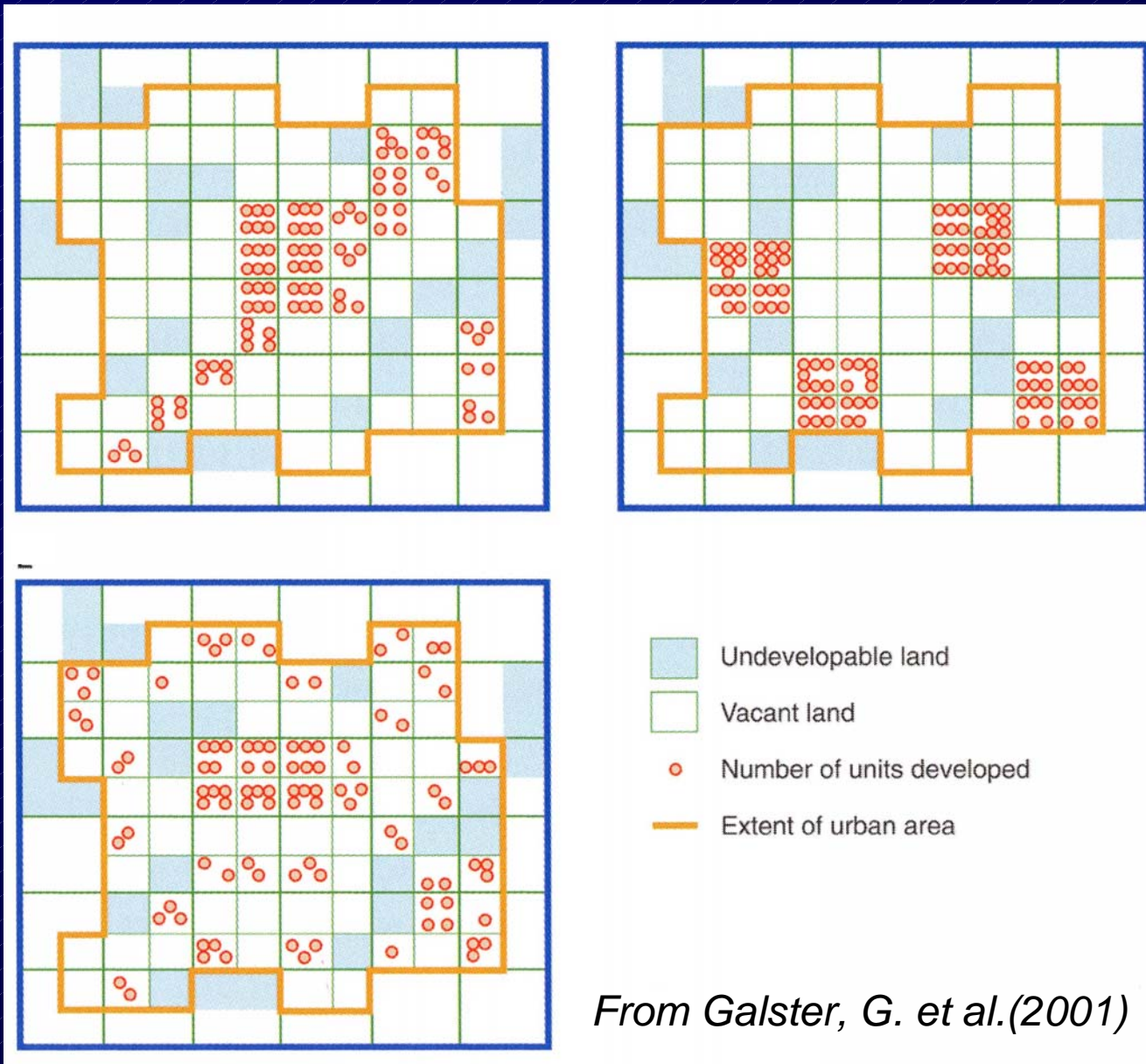
- Strip development, corridors of high accessibility along roads
- Scattered development - uncoordinated
- Development that leapfrogs existing barriers

#### *But in contrast*

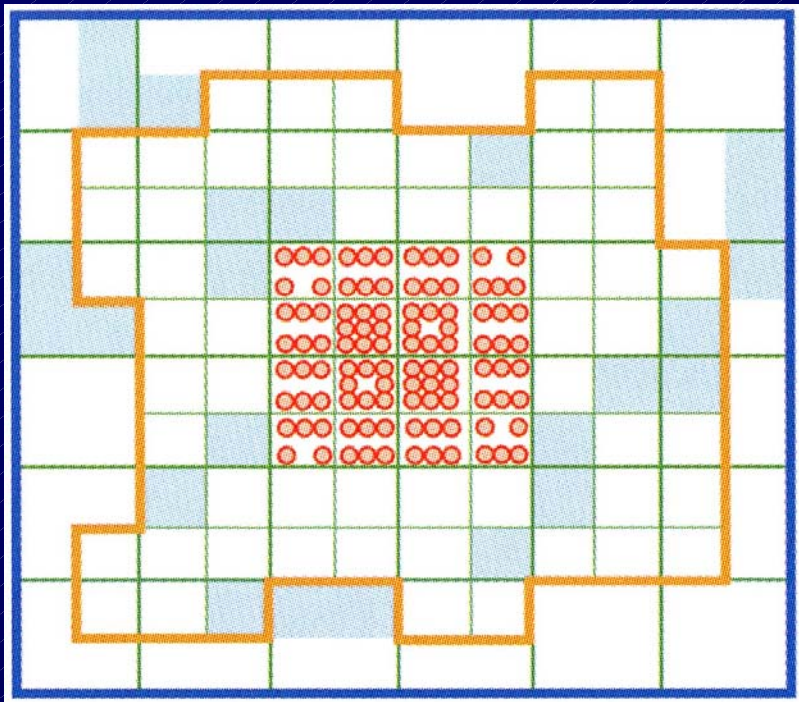
- Compact development
- Polynucleated development

First look at development in terms of patterns  
but then in terms of actual pictures of form







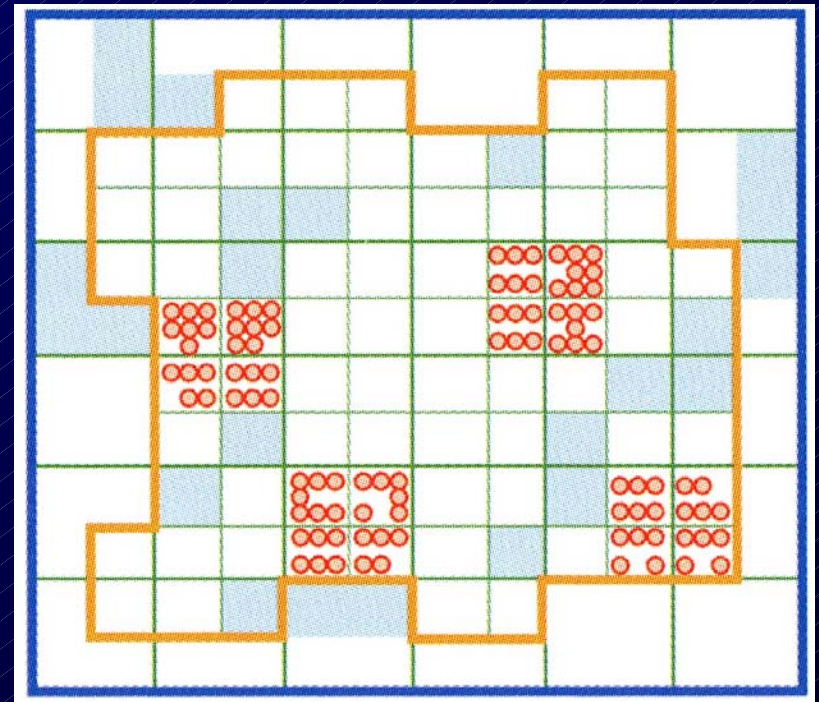


### Compact Development

Main centre of economic activity  
surrounding by population

Concentric zone, sector models

Sprawl is contrasted to this ideal form

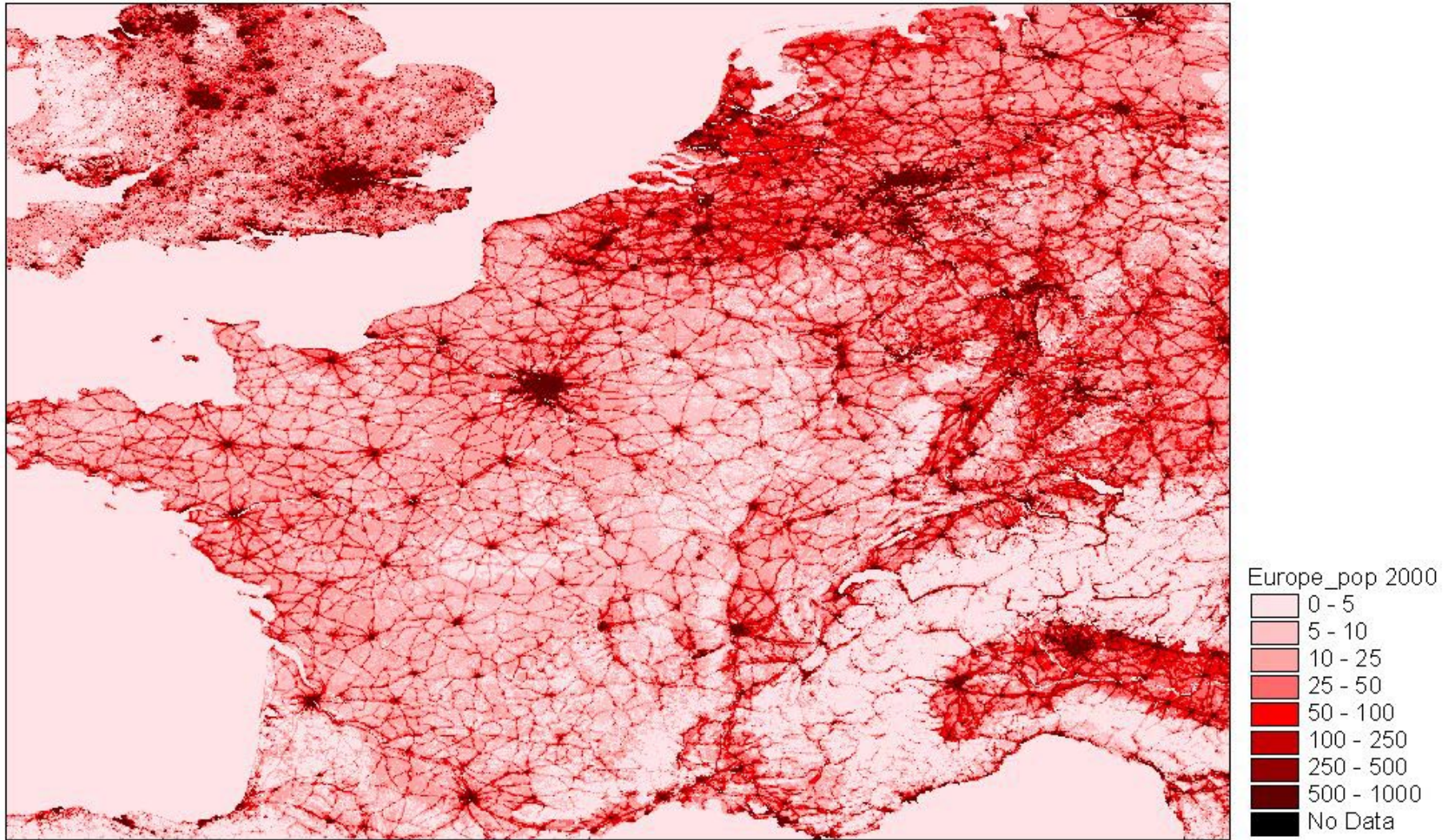


### Polynucleated Development

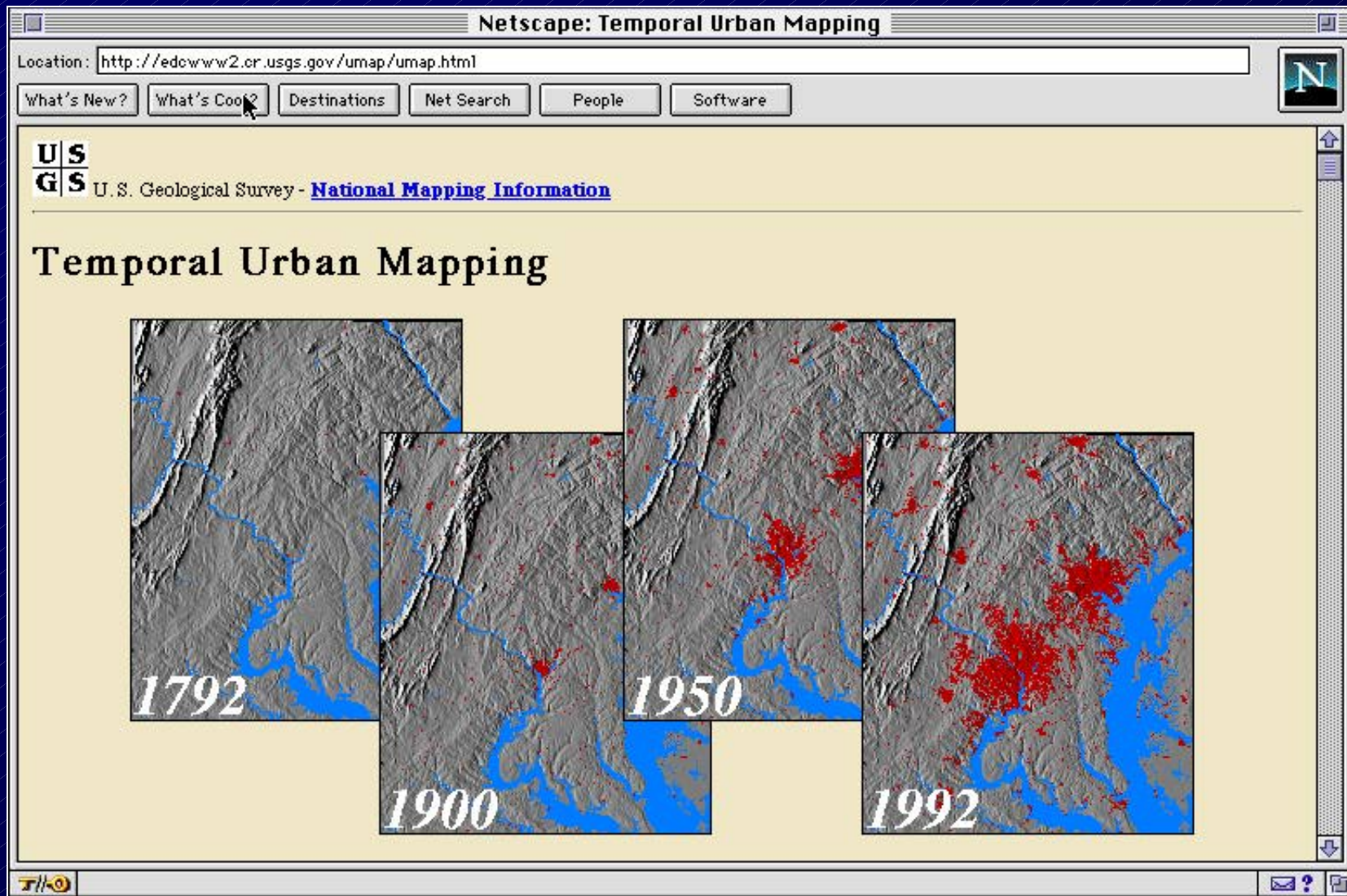
Clustering of population and economic  
activities around several centres

*Some pictures .....*









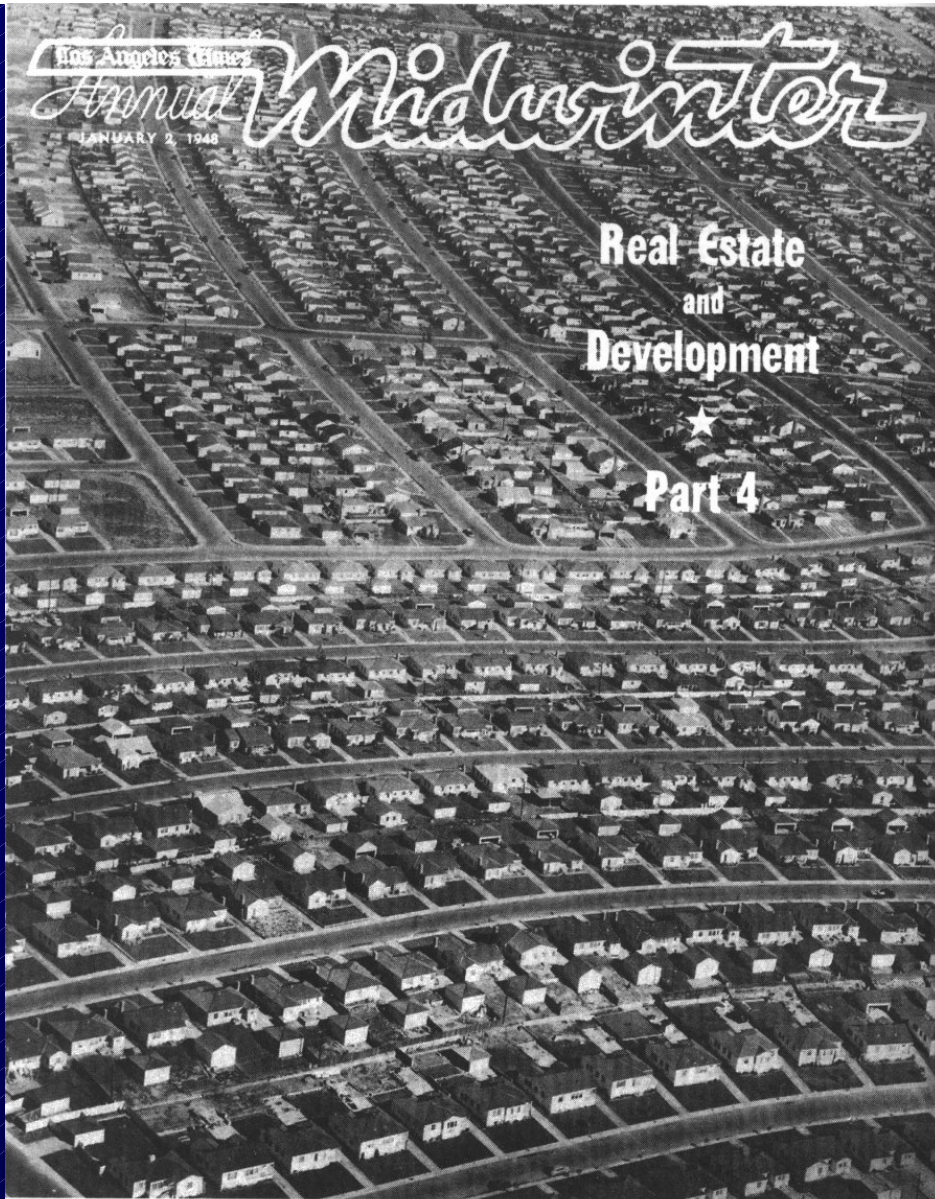
*Rates of Growth have been very rapid during the last 50 years*



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Sprawl devours the garden

1940s sprawl: it is an advert from the LA Times in 1948 showing the typical sprawl of the 1930s and 1940s in Southern California

This is taken from Mike Davies's book Ecology of Fear

Below is more modern sprawl – larger lots







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# The Why and How of Examining Sprawl ?

- Sprawl is seen as a negative urban form thus
- Majority of work is on the impacts of sprawl and most of it in the USA
- Major focus is on anti – sprawl reform to achieve the compact city
- Four major viewpoints of impacts of sprawl:
  1. **Aesthetic**: sprawl seen as despoiling the countryside, part of anti – suburban bias
  2. **Efficiency**: costly for the society as a whole.  
Major perceived costs are infrastructure and operating costs; commuting time, congestion and household spending on transport; lack of public transport; loss of agricultural land; loss of environmentally fragile lands.

*Two main viewpoints, economic and planning, on whether sprawl is efficient or not*

**Economic:**

- Sprawl is efficient and reflects a properly functioning land market
- Costs can be solved by enforcing charges for externalities and pricing for public good not regulation

**Planning:**

- Assumes compact form is feasible and desirable
- Costs of sprawl are due to lack of planning
- Solution is regulation and planning which encourages greater centralization, contiguity and higher densities

**3. Equity** : sprawl creates a concentration of non-white residents in the inner cities and removes tax funding from the inner cities to the suburbs

**4. Environmental**: low density cities use more energy



- Sustainability is the key concept in the European debate on urban sprawl.
- Sustainability is a complex and inclusive concept. It does not allow for a straightforward assessment of the different impacts of urban sprawl.
- Uncertainty on definitions and explanations of urban sprawl hamper the design of policy measures.



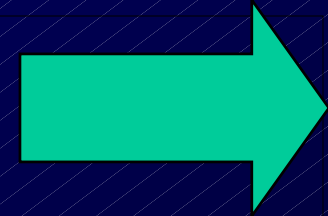
# The Key Elements of Urban Sprawl

- Different disciplinary perspectives overlap each of them providing unique insights, possible explanations, descriptive and analytical approaches to urban sprawl
- Research topics:
  - Spatial patterns of demographic growth
  - The geography of jobs location
  - The role of changing lifestyles on urban patterns
  - The new forms of mobility and commuting
  - The role of planning

## Issues that need further exploration

- The impact of national and local policies – often conflicting
- In Europe, continent wide policies, particularly regional and national transport policies and how these might help or make urban sprawl worse
- Long range migration and sprawl
- Types of sprawl: e.g. developing countries
- Cities and regions working at different speeds

## 4. Impacts and Costs of of Sprawl



- Ecological Impacts(1)
  - *Land consumption* The amount of open space used by each inhabitant has increased in the last 20 years by two or three times.
  - *Energy consumption.* The level of gas consumption can be used as a parameter of the level of car use. The United Nations and the European Union have moved in favour of the compact city embracing the position, supported by research (that more dense cities consume the least amount of energy for transport).

- Ecological Impacts(2)
  - *Atmospheric pollution* The level of pollution due to motorcar dependency can more easily be connected to population densities.
  - Despite these studies it cannot be inferred that density alone is sufficient to explain the level of pollution. This relationship between density level and pollution is arguable and should be further investigated to understand which activities should be more concentrated.

- Economic sustainability(1)  
The economic sustainability of the dispersed city model must be addressed at two different scales:
  - At the *micro-level* urban sprawl tends to impose several and often hidden costs (notably transport costs) on individuals and households
  - At the *macro-economic level*, issues of economic efficiency and economic performance of cities emerge. Urban sprawl is often associated with high costs of urbanisation and infrastructure development.

- Economic sustainability(2)
  - Issues of economic efficiency and city size or form can also be raised, even though the debate remains still largely theoretical. Recent studies (Rousseau, 1998; Prud'homme, 2000; Cervero, 2001) indicate that places with sprawling, auto-centric landscape are poor economic performers.
  - Other studies support the assumption that a greater mobility in towns and higher transport costs may reflect a better functioning of urban economic markets.



- Spatial segregation and social cohesion
  - In metropolitan cities mostly affected by dynamics of sub-urbanisation and sprawl, space has developed according to clear patterns of social ecology. However it is still uncertain if this social geographies will turn into patter of social segregation.
  - Differences must be made with regard to the size of cities. Large cities display different population distribution patterns from medium size cities.
  - Community and Identity

- Decline of town centres
  - Most often described as a reduced demographic and economic weight of centres and as a loss in the capacity of centres to act as agglomeration poles.
  - Raises issues of intra-urban and inter-urban polycentric systems.
  - No clear direct or indirect relationship with urban sprawl.
  - Literature from this area can be a source of useful indicators.

# Summary of Impacts of Sprawl

- Reasons for the confusion over impacts are:
- No agreement on characteristics, causes and effects
- Benefits of sprawl not adequately taken into account
- Sprawl is seen as one form not part of a continuum from compact to dispersed development
- Sprawl is seen as static not as a process: changes in form occur over time through infill and compaction with resulting changes to characteristics and impacts
- Costs are attributed to sprawl with little causal relation established

- Effects due to densities, types of land use and contiguity need to be isolated
- From development standards, governance, infrastructure, level of services and socioeconomic characteristics of households
- Sprawl is seen as creating new costs, however, there is no comparison of costs of sprawl with costs of the ideal of compact development
- Comparison of studies on costs is difficult because key aspects/terms are not adequately measured e.g. density, rapid growth

Much of the material presented is from our review in work package 1 and from

Transportation Research Board, National Research Council (1998), *The Costs of Sprawl – Revisited*, National Academy Press, Washington, D.C.



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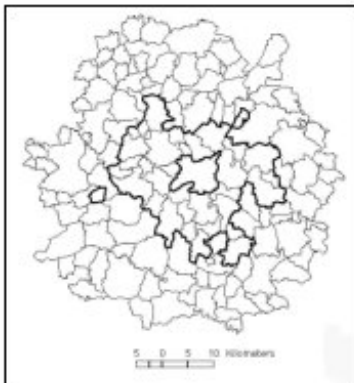
## 5. The SCATTER Project: Sprawl in Europe

- Sylvie Gayda has outlined the project, and the rest of the day will be about this and SELMA, the related project, and various city case studies. But all we need to say here is that the candidate cities represents many different types of sprawl and are at many different scales
- Also our approach is to look at the socio-economic, not merely the physical aspects of development, so we can get some handle on the way typical European cities have developed during the last 40 Or 50 years.
- Here are a couple of pictures of scale and then physical development, and we will see a lot more of this wrt to policy testing this afternoon.



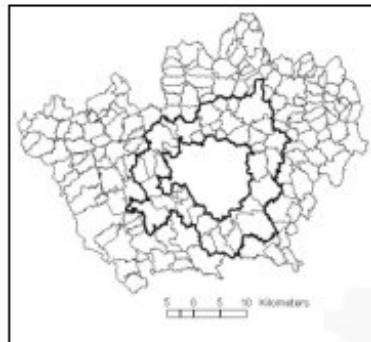
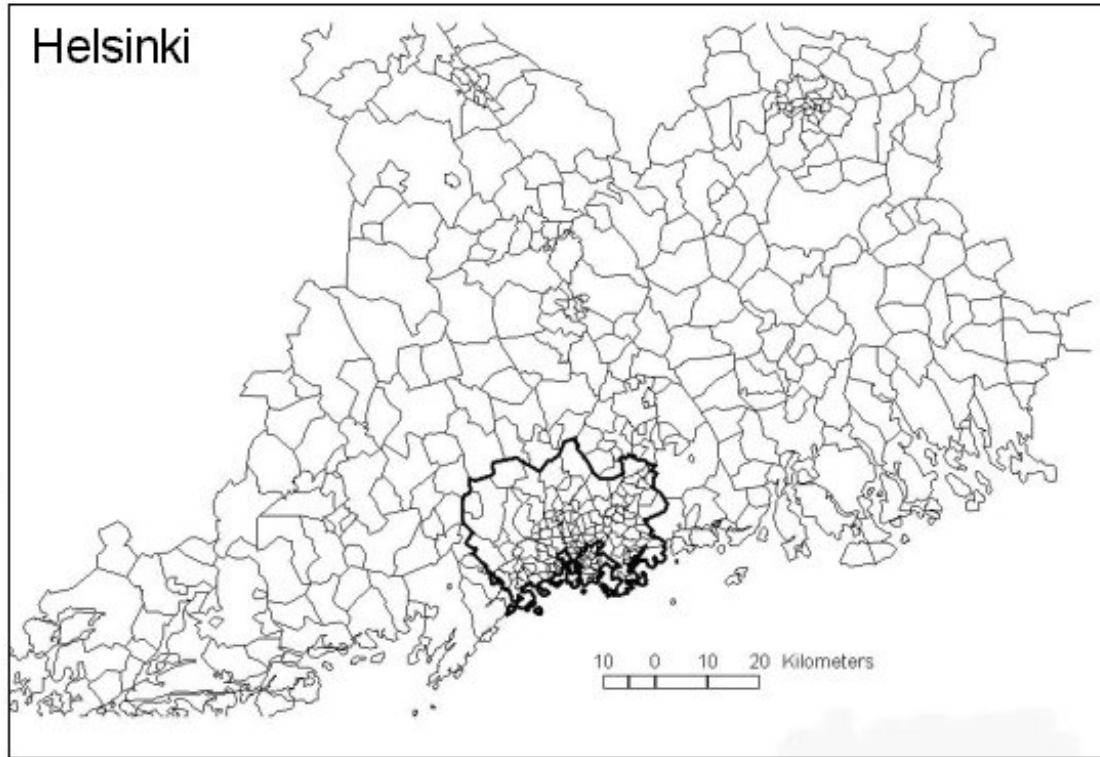


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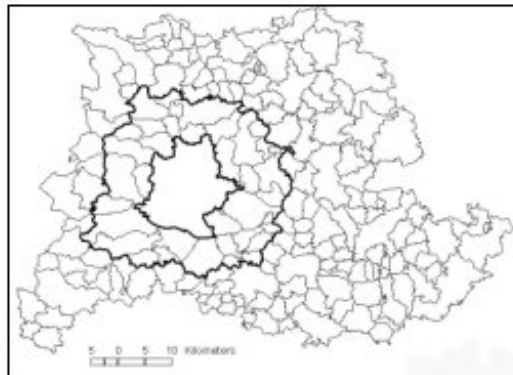


Rennes

Helsinki



Milan



Bristol  
Stuttgart



- The Review of sprawl world wide
- Interviews with local representatives
- Understanding sprawl in the six cities from spatial trends in demographic and economic data over the last 30 years
- Developing land use/transportation models in three cities – Brussels, Stuttgart and Helsinki picking up on the PROPOLIS project
- Development of scenarios based on changes to transport and land taxation
- Policies at the local level

## 6. Policies: Sustainability and Smart Growth

- A brief word by way of conclusion on policies – these range from the notions about piling everything into some sort of compact city to ideas about developing clusters in polycentric fashion to letting cities rip in terms of peripheral growth, regardless. We will show various tests of these later this afternoon
- Let me finish by illustrating the debate is continuing and there is no clear resolution. The hot topic in the USA is the idea that we cannot stop growth but we can be smart about it.

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**What Is Smart Growth?**

Smart growth is development that serves the economy, the community, and the environment. It changes the terms of the development debate away from the traditional growth/no growth question to "how and where should new development be accommodated."

Smart Growth answers these questions by simultaneously achieving:

- Healthy communities -- that provide families with a clean environment. Smart growth balances development and environmental protection -- accommodating growth while preserving open space and critical habitat, reusing land, and protecting water supplies and air quality.
- Economic development and jobs -- that create business opportunities and improve local tax base; that provide neighborhood services and amenities; and that create economically competitive

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# Conclusions are Questions ?



The screenshot shows the SCATTER project website. At the top right, there is a vertical menu with the following items: News, About, Partners, Work Packages, Download, and Cities. Below the menu are three logos: the European Union flag, a circular logo with a yellow 'S' and a blue 'C' intertwined, and a circular logo with a blue 'S' and a yellow 'C' intertwined. The main content area features the SCATTER logo, which consists of a blue starburst shape with the word 'scatter' in a lowercase, sans-serif font. Below the logo is the text 'Sprawling Cities and Transport: from Evaluation to Recommendations'. At the bottom of the page is a wide, panoramic photograph of a sprawling urban landscape with many small buildings and roads.

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