Adaptable Suburbs: a study of the relationship between networks of human activity and the changing form of urban and suburban centres through time

The nature of suburbia - change and continuity

The UK's suburbs are overlooked and poorly understood. The word 'suburb' betrays their perceived status as places that are subordinate to the centre.

Background

Urban policy has tended to treat them simply as extensions of towns and cities and as places where nothing changes, rather than as separate entities we can learn from, with their own particular characteristics.

Key research questions

• How does the urban design of suburbs contribute to their success?
• Is the adaptability of these places contributing to their sustaining over time?
• What is the influence of social interactions and spatial movement on the economic vitality and adaptability of places?

1. DEFINING SUBURBS

Defining suburbs

• The suburbs are not a recent innovation.
• The stone carving of the ancient Persian city of Madaktu shows suburban domiciles situated among the palm trees outside the city walls.
• Peter Ackroyd has also commented of London's suburbs that they are "as old as the city itself" (London: The Biography, 2000, 727).
The suburban environment: sprawl? Or town centres with residential hinterlands?

Photograph of High Road, Wealdstone c.1900

The suburban environment as sprawl? Or as a place generator of activity that has been sustained over time.

2. KEY FINDINGS FROM PREVIOUS RESEARCH

Borehamwood is functioning simultaneously as local centre, commuter route and dormitory suburban town centre.

This is an outcome of its multi-scale properties.

Multi-scale movement and activity
2. KEY FINDINGS FROM PREVIOUS PROJECT

Approx. top 15 centres account for 50% of commercial floorspace; approx. 100 account for the other 50%.

Smaller centres contribute to sustainable urban life by supporting socio-economic and cultural diversity across a wide range of activities, and nurturing them at the local scale. Essential links in the chain.

Cities are very complex systems, but they grow from a simple idea: they are large dense aggregates of buildings linked by space. The space takes the form of a linear network, which we call a town plan or street network. It’s what we see when we look down from above.

It is over 20 years since space syntax suggested this network might be of interest in itself for understanding cities, by showing that the network had certain potentials which could shape how cities worked. Here we see a network model that calculates all potential movement to central London.

Our research shows if people moved from everywhere to everywhere else by simplest routes, then some streets would get more movement through them than others. With high speed computers, this through movement potential of streets can be calculated mathematically.

Some streets are also much easier to get to than others. It’s a question of the complexity of routes from each street to all others. These different degrees of accessibility for to-movement can also be measured mathematically.
Land-use and choice
Small-scale spatial model reveals long-tail of activity, longevity of non-residential presence in the area.

Land-use and choice
Distribution of uses varies across location and scale of potential journey.

Land-use and choice
A given street or area may be central at a local scale but relatively segregated at a larger scale.

Adaptable suburbs 2010-14
3. RESEARCH PROGRAMME:

Residents 74% (n=69); Median route length: 982m
Non Residents 26% (n=24); Median route length: 389m

Segment Log
Choice 800m
Segment Log
Choice 2000m

Research programme: Space Syntax
Research programme: Business ethnography
4. RESEARCH IMPACT (KNOWLEDGE TRANSFER)

4. Research Impact (Knowledge Transfer)

- Inform social-economic policy
- Advance analytic and modelling capabilities
- Benefit government agencies, civic society and the third sector
- Raise the profile of suburbs as having a role to play in the future of urban sustainability

Further information: http://www.sstc.ucl.ac.uk
Blog: http://ucsstc.wordpress.com/
Twitter: @AdaptableSuburb

5. QUESTIONS