Link and Place: streets as public space for cities on the move

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Overview

• Changing urban transport policy perspectives
  – From ‘car-based’ to ‘place-based’ cities
  – Implications for levels of car use

• Link and Place
  – What does it mean?
  – How has it been applied?

• The London experience

• Future challenges
Different Dominant Policy Perspectives

C: CAR-ORIENTED CITY

M: SUSTAINABLE MOBILITY CITY

P: CITY OF PLACES
Associated with Different Policy Measures

- **CAR-ORIENTED CITY**: Road building, car parking, decentralisation
- **SUSTAINABLE MOBILITY CITY**: Public transport, priority lanes, cycle networks
- **CITY OF PLACES**: Public realm, street activities, traffic restraint

Source: EU ‘CREATE’ project
Emphasis on meeting the needs of motor vehicles

Time – Development Cycle

Typical Sequence of Policy Perspectives

- CAR-ORIENTED CITY
- SUSTAINABLE MOBILITY CITY
- CITY OF PLACES
...but comprising a varying mix of all perspectives
And varying emphasis, spatially too
Resulting in a U-shaped trajectory of car use intensity

- **Stage 1**: Growing car use
- **Stage 2**: Levelling off in car use
- **Stage 3**: Declining car use

Emphasis on meeting the needs of motor vehicles

Number of motor vehicles (esp. cars)

Time – Development Cycle
Alternative city trajectories

Source: analysis by Roger Teoh, MSc Dissertation
Imperial/UCL 2016

UITP data 1995
A comprehensive, ‘place-based’ city vision

- To CREATE cities where people can move freely around the area without undue delay, mainly using sustainable modes of transport.
- To CREATE cities that are liveable and provide safe and attractive modes of transport and places (streets, interchanges, etc.) where people can take part in economic, social and community activities.
- To CREATE transport policies which actively contribute to wider urban policy objectives: regeneration, health and well-being, community cohesion, etc.
Motorway Removal: S1 -> S3
Portland
Seoul

Stage 1

Stage 3
Central Vienna Street: from Car Space to Pedestrian Space
Stage 1 -> 3: Local Street Redesign
Link/Movement and Place
Dual functions of streets

LINK
street as a movement conduit

Design objective: save time

PLACE
street as a destination in its own right

Design objective: spend time
A ‘5 x 5’ Link/Place matrix

Medium-large city
(e.g. Bristol, Newcastle)

A 5 x 5 Link/Place matrix

This provides 25 matrix cells to characterise all types of streets comprising the city’s urban street network.
Hounslow: Application of street classification
### Potential ‘20mph Zone’ cells

<table>
<thead>
<tr>
<th>Link status levels</th>
<th>National</th>
<th>City</th>
<th>District</th>
<th>Neighbourhood</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>I-A</td>
<td>I-B</td>
<td>I-C</td>
<td>I-D</td>
<td>I-E</td>
</tr>
<tr>
<td></td>
<td>II-A</td>
<td>II-B</td>
<td>II-C</td>
<td>II-D</td>
<td>II-E</td>
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<tr>
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<tr>
<td></td>
<td>V-A</td>
<td>V-B</td>
<td>V-C</td>
<td>V-D</td>
<td>V-E</td>
</tr>
</tbody>
</table>

### Place status levels

- I-A
- I-B
- I-C
- I-D
- I-E
- II-A
- II-B
- II-C
- II-D
- II-E
- III-A
- III-B
- III-C
- III-D
- III-E
- IV-A
- IV-B
- IV-C
- IV-D
- IV-E
- V-A
- V-B
- V-C
- V-D
- V-E
Application to Birmingham
**CASE STUDY A - District Centre (highway dominated)**

**Current Link/Place Status – 2B(Primary Multimodal Link and Sub-Regional Place); Example – Selly Oak Local Centre**

Highway dominated environment, wide carriageway with 4-traffic lanes. Barriers to pedestrian movement.  
Poor urban realm for place classification Under-utilised footway potential for greater place emphasis.  
Character building at the heart of the centre – a natural place focus, adjacent to a key desire

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**Step 1 - Street Classification**

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**Step 2 - Local Conditions/Context**

<table>
<thead>
<tr>
<th>Place Requirements</th>
<th>Link Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedestrian/Cyclist Crossing Facilities</td>
<td>Sprint Route</td>
</tr>
<tr>
<td>Private Access - residential, commercial</td>
<td>CityLink Route</td>
</tr>
<tr>
<td>On-street Parking - Residents</td>
<td>Other Bus Route</td>
</tr>
<tr>
<td>On-street Parking - Retail</td>
<td>Strategic Freight Route</td>
</tr>
<tr>
<td>On-street Parking - Services</td>
<td>Weight restrictions</td>
</tr>
<tr>
<td>Disabled Bay</td>
<td>Height restrictions</td>
</tr>
<tr>
<td>EVCP Bay</td>
<td>HGV restrictions</td>
</tr>
<tr>
<td>On-street delivery/servcing</td>
<td>Green Travel District</td>
</tr>
<tr>
<td>PT Interchange site</td>
<td></td>
</tr>
<tr>
<td>Mature Trees, Valuable Green Spaces</td>
<td></td>
</tr>
<tr>
<td>Critical Street Furniture - signals boxes etc</td>
<td></td>
</tr>
<tr>
<td>Schools/Colleges/Universities</td>
<td></td>
</tr>
<tr>
<td>Hospitals/Surgeries/GP's</td>
<td></td>
</tr>
<tr>
<td>Street Markets / Event Spaces</td>
<td></td>
</tr>
</tbody>
</table>
CASE STUDY A - District Centre (highway dominated)

Current Link/Place Status – 2B (Primary Multimodal Link and Sub-Regional Place);
Example – Selly Oak Local Centre

Cross Section A – Bus-only Section with SPRINT super-stop

Cross Section B – Traffic lanes replaced with short-stay parking, cycle parking or urban realm improvements

Step 3 – Meeting the User Requirements
Case study - Freiburg

- Population = 210,000
- Disruption to trams from congestion
- Poor accessibility at tram stops
- Poor pedestrian environment
- High traffic volumes
- High traffic speed

Two design sections:
- Same Link status
- Place status higher in the second design section
Different Balance of priority along a Corridor
Stage 3: Streets for Movement AND Place making

- P1: M3/P1, e.g. Core Road
- P2: M3/P2, e.g. High Road
- P3: M3/P3, e.g. City Hub

- M2: M2/P1, e.g. Connector
  - M2/P2, e.g. High Street
  - M2/P3, e.g. City Street

- M1: M1/P1, e.g. Local Street
  - M1/P2, e.g. Town Square
  - M1/P3, e.g. City Place
Application to London
A typical London street re-design
Kings Cross: Transport Interchange as a Place
Much more focus on streets as places: Aldgate Gyratory

Before

After
Healthy Streets Approach

- The Healthy Streets Approach will ensure that transport decisions prioritise human health and quality of life.

- This is the first transport strategy anywhere in the world to apply the Healthy Streets Approach to the entire transport system of a city like London.

- Using the approach to create a city that is not dominated by traffic will improve the city in a whole range of ways.
Healthy Streets and healthy people

- 20 minutes of active travel by 2041
- Vision zero for road danger by 2041
- Making more efficient use of the street network
- Zero emission by 2050
- 3 million less daily car trips by 2041
Future Challenges
1. Technical:

- How to ensure that our planning techniques match our city aspirations: forecasting:
  - ‘Vision and validate’ not ‘predict and provide’
  - Valuing what is important
New indicator: severance caused by different types of roads

Traffic density: Low
Central reservation with no guard railing
ACTUAL SPEED 10MPH

Traffic density: Low
Central reservation with no guard railing
ACTUAL SPEED 10MPH

Traffic density: Medium
Central reservation with no guard railing
ACTUAL SPEED 10MPH

Traffic density: High
Central reservation with no guard railing
ACTUAL SPEED 10MPH

Traffic density: Medium
No central reservation
ACTUAL SPEED 20MPH

FOOTBRIDGE
UNDERPASS
STAGGERED PELICAN

0 9 19 26 31 40 54 82 97 100
Severance index vs. Willingness to pay (London)

\[ y = 0.0535x - 0.0679 \]
\[ R^2 = 0.988 \]
2. Professional

- Facing future urban challenges:
  
  ➢ What sort of cities do we want to create and live in?
**MTS**: By 2041 the aim is for 80% of Londoners’ trips to be on foot, by cycle or using public transport.
The Future City

• Four factors are moving cities beyond Policy P:
  - Continued congestion and over-crowding
  - Cross-sector responsibilities of elected mayors
  - Dealing with AVs and other technological developments
  - Pressures from ‘Big data’ and ‘Smart city’ initiatives

• Towards an emerging urban policy landscape that includes:
  - Recognition of interactions between transport and all sectors – and of travel as a ‘derived demand’
  - Administrative structures enabling some cross-sector planning
  - Supported by new policy perspectives and ways of thinking
The Future City?

- C = Car-based city
- M = Sustainable-mobility city
- P = City as places
- I = Integrated city ???

Some early signs:
- MaaS
- Accessibility planning

New analytical methods:
- Socio-technical systems
- Activity-based modelling

I: INTEGRATED CITY
The Future City: ‘Distopia’?

• But, some of these pressures may encourage the re-emerge of C-based policy thinking:
  ➢ MaaS may encourage vehicle-based door-to-door mobility, coupled with widespread take-up of AVs
  ➢ Electric AVs will be safe, non-polluting, etc.
  ➢ Leading to increased demands for car carriageway space – less need for bus, cycle lanes, etc.
  ➢ Renewed pressures to segregate road-space (e.g. pedestrian guard-railing), to keep AVs moving

• Suggesting that cities need to be pro-active, in shaping their future: technology-fed, not technology-led
Thank you!

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http://www.create-mobility.eu