Urban mobilities in the smart city: what about the ‘user’?

Panoptic or co-created?
Alternative models for Smart City mobility

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The Panoptic Smart City

• Smart city, big data, approaches are ‘panoptic’ – they are about being able to see everything (or at least a lot) and act accordingly

• How this is viewed can vary - depending on who has the power to observe and the rights of those observed
Drift towards ‘Big Brother’

- ‘Smart’ tends to be a vision of corporations and city authorities seeking efficient, sustainable and productive cities
- Big data seen as their domain and as benign and neutral
- Users need educating to be smart consumers – otherwise seen as passive and complaint
- In practice there is deep distrust, resistance and (on occasions) rebellion
The co-creation alternative

OSM

Web culture: Participative, empowering data-use to allow non-experts to participate and benefit.
Initial work on MK:Smart envisaged a spectrum between Smart City approaches, with a range from Passive/Centralised to Participatory/Decentralised. Some Smart City Models, Intrusion, Value, and who gains.....
Rob Kitchin (2014) identifies three approaches:

1. **Instrumentation and regulation**
   - Cities composed of ICT ‘everyware’ sensors, devices and management software

2. **Policy, development and governance**
   - Cities as competitive, entrepreneurial, knowledge-driven systems

3. **Social innovation, civic engagement and hactivism**
   - ICT provides means for transparent and accountable governance with new forms of civic participation, better informed citizens
Mapping the models

Instrumentation and control

Efficient City

Data democratisation
Milton Keynes

- Very successful new town with UK’s highest rate of job creation and largest number of start-ups outside London
Milton Keynes’ smart city transport challenge

• Population set to grow by 40,000 to about 300,000 in 2026 and jobs grow by 42,000
• Urban design is very car-oriented
  – Low density/dispersed structure is hostile to good conventional public transport and has low level of walking and cycling
  – 60% traffic growth to 2026 expected to overwhelm road network
• Other places are increasingly like this - the peri-urban problem (Hall, 2013)
‘Test-bed’ Milton Keynes

- Milton Keynes has developed a culture of innovation
  - In first phase of Plugged in Places (2010)
  - The first commercial electric bus (2013)
  - Driverless Pods (2015)
  - Ultra low cities (2016)
  - City bikes (2016)
  - DRT and PRT may emerge soon

- Seeking systems appropriate for 21st century travel patterns, not trying to make people and economies conform to 19th century service designs

Source: OneMK
• Open University-led £16m Smart Cities project to develop big data projects in Milton Keynes
• Funded by HEFCE around ‘efficient city’ model
• But MK:Smart ethos is a ‘living laboratory’ approach for citizens, businesses, social organisations etc. to co-create big data-based services, products and societal infrastructures.
• Seeking a data democratisation approach
• MK Data Hub to serve range of applications
• Transport package is to develop a platform for co-created transport solutions
Motion Map

For details and introductory video go to:
http://www.mksmart.org/transport/
Motion Map

• Presently in development
• Looks like a highly integrated localised GPS app
• Has distinctive real time features around concept of ‘busyness’ - providing a real-time Personalised Travel Planner
• But is also to facilitate co-created transport solutions from users, community groups, SMEs and other actors
• MK:Smart Workshops with users, run by Community Action MK, inviting challenge project bids and gamification of MM development all seek to develop this approach
Sense and Sensorbility*

- MM served by large network of sensors (parking, roads, cycleways and on buses)
- Can seem an instrumentation and control/efficient city approach
- But is part of open database and programme to empower users
- Need instrumented platform to get user involvement

* With sincere apologies to Jane Austen
Observations

• Users accept intrusions on privacy if the benefits surpass the perceived loss of control over personal information (cf smart phones)

• Active involvement in generating data and having a say in the system are valued

• Benefits are not financial but on issues of quality and influence such as
  – Real time congestion information
  – Reporting incidents and need for repairs
  – Bus reliability and seat availability
  – Using smart big data systems to hold authorities and corporations to account
Developing user participation

• User sensor monitoring combined with developing user participation features could be an optimal blend

• But sensor-based system is needed first to have something with which the user can engage
  – So maybe start at instrumentation model but design to shift to a balance with user inputs

• This is tricky – and can easily divert to a practice of top down control
User participation model

- Users need educating, not in accepting corporatist smart data systems, but in how to engage in a co-creation approach
- Existing lobbyist user groups may not be able to adapt to a co-creation approach
- Providers need educating as well in user participation
  - This is not recognised
Implications

• Effective user participation develops a new form of democratisation, bypassing existing hierarchical structures
• For example, it could lead to user-led initiatives that challenge status quo (e.g. uber-style alternatives to bus services)
• This challenges the present nature and role of transport planning
• Future funding is still heavily focussed on smart city infrastructure development
• Research and development crucially needed on user enablement and transition processes
Questions/Discussion

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Big data without Big Brother: emerging issues in smart transport in Milton Keynes http://oro.open.ac.uk/41925/
Exploring participatory visions of smart transport in Milton Keynes http://oro.open.ac.uk/44907/