Measuring the impact of community severance on local accessibility

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What is community severance?
Are we speaking the same language?

- consensus on concepts and language
- dissemination of research results
- application in transport planning
- international collaboration

Little..
What is severance about?

Based on 60 definitions found in the literature 1963-2015, 8 languages
Detailed formulas were rarely used and have been abandoned

Subjective classification of many variables into levels of severance

Severance costs = time losses for personal walking trips

Simple formulas, to be applied on a project-by-project basis

**Why this is not enough?**

- We need methods that are robust AND practical in order to understand the nature, incidence and intensity of the problem
- … and that can measure the specific effects on vulnerable groups such as the elderly and people with mobility restrictions
How could it be measured?

BARRIER

IMPACT

COST
How easy is it to cross the barrier?

Mapping
Traffic counts
Street audits

Characteristics of …
roads
traffic
pavements
crossing facilities

Video surveys
On-street interviews
Participatory mapping

Pedestrian…
flows
routes
delay
crossing behaviour
What does the barrier prevent people from doing?

**Walk around**
- Street connectivity
- Pedsheds (walkable catchment areas)

**Reach certain destinations**
- Gravity measures
- Walk opportunities index

**Have a good walking experience**
- Amenity (air pollution, noise)
- Safety (collision risk)
- Perceptions
What is the cost?

**STATED PREFERENCE**

Surveys to determine people’s choices among hypothetical alternatives for road and crossing conditions

<table>
<thead>
<tr>
<th>WTP for burying road</th>
<th>Value of road tunnel (per m²)</th>
<th>Value of suppressed walk per km</th>
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<tbody>
<tr>
<td>Soguel (1995)</td>
<td>Lee and Sohn (2014) 1165</td>
<td>Saelensminde (2002) 0.5-0.6</td>
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<tr>
<th>WTP for reducing speed 10mph</th>
<th>Value of speed humps</th>
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<tr>
<td>Garrod et al (2002) 0.1-0.8</td>
<td>Bretherton et al (2000) 0 !</td>
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<td>Kelly et al (2011) 9.2</td>
<td>!</td>
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</table>
Community severance can be measured as a barrier, impact, or cost. Growing research, slow integration into policy
#TRANSED2015 #pedestrians
Thank you for your attention!

The UCL Street Mobility project

http://www.ucl.ac.uk/street-mobility
https://streetmobility.wordpress.com
@StreetMobility

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