Third Stakeholder Advisory Group Meeting

20 May 2015

Objectives

Third Stakeholder Advisory Group Meeting | 20 May 2015
Oxford Brookes University | Gipsy Lane, Headington
John Henry Brookes Building | Snow Room JHB408

AGENDA

Objectives

1) Report Preliminary Findings
2) Provide Update on Approach for Wave II Data Collection
3) Explain Approach to Analysis / Integrating Data
4) Review Activity Targeted at Making an Impact
Agenda

<table>
<thead>
<tr>
<th>Item</th>
<th>Time</th>
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<tbody>
<tr>
<td>09.45</td>
<td>Arrival</td>
</tr>
<tr>
<td>1.</td>
<td>10.00</td>
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<tr>
<td>2.</td>
<td>cycle BOOM Update</td>
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<td>3.</td>
<td>Project Results / Findings So Far:</td>
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<tr>
<td></td>
<td>• Secondary Data Analysis</td>
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<td>• EU Case Study Film [WP2]</td>
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<td>• Urban Design Audit [WP2]</td>
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<td>BREAK</td>
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<td>• Cycling Life History Interviews [WP4]</td>
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<td>• Cycling Mobility Observation Interviews [WP5]</td>
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<td>• Cycling and Wellbeing Trials [WP6]</td>
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<td>• A Participant’s Experience of Taking Part in the Study</td>
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<td>4.</td>
<td>12.00</td>
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<td>13.00</td>
<td>LUNCH</td>
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<td>5.</td>
<td>14.00</td>
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<td>6.</td>
<td>14.20</td>
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<td>7.</td>
<td>15.40</td>
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<td>8.</td>
<td>15.00</td>
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<td>16.00</td>
<td>Date of the Next Meeting</td>
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Work Package Structure

- Scoping 1 [WP2]: Investigate EU cities promoting more inclusive cycling amongst the older population/compare with activity in the UK.
- Scoping 2 [WP3]: Analysis of UK data to identify trends in older participation in cycling and effects of programmes.
- Biographic (‘cycling life-history’) interviews [WP4] to understand the role of past experiences of cycling and the influence of life events.
- Mobile interviews and observation [WP6] with participants as they make a regular journey by cycle to capture everyday experience of cycling | measure how interaction with the built environment affects mental physical and mental wellbeing.
- 8-week experimental bike trial [WP6] with new and returning cycle users to measure how reengagement with both conventional and electric cycling in the built environment affects physical and mental wellbeing (@oxfordbrookes and @reading).

Geography of sample

People aged 50-59 and 60+

WHO?

CARDIFF

OXFORD

BRISTOL

READING
### Sampling Approach & Participant Journey

**cycle BOOM**

*Sampling approach and participant journey*

**Target Sample Population**
- 240 older people (120 Waves 1 & 2 in 2015)
- Male | female
- Age 50-59 | 60-69 | 70+
- English indices of deprivation

**Sample Recruitment**
- www.cycleboom.org | events | media | groups | snowballing | hanging out

**Sample Screening Survey**
- current cycle | do not currently cycle

**Stage I – Oct 2014 – Mar 2015**
- Two-wave/stage data collection allowed:
  - Familiarisation with geographical area & approach
  - Honing of research technique/instruments
  - Experimentation with ‘novel’ approaches
  - Outreach and engagement

**Stage II – From Apr 2015 – project end (Sept ‘16)**
- Challenges on the road ahead:
  - Ensuring diversity of sample
  - Consolidating research approach
  - Engaging in a focused period of data analysis and constant comparative analysis
  - Truly integrating data
  - Linking academic findings to practical outcomes

### Reflections

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Emerging Results and Findings

Work Package 3: Examining Existing Data

Kiron Chatterjee:
University of the West of England (UWE)
Role of WP3

- Set the scene and inform the rest of project.
- Generate complementary findings to those of other work packages.
- Establish authoritative, up-to-date evidence on older people and cycling in UK.
  - Statistical evidence at national and local level.
  - Qualitative insights from locations across UK.
- Not attempting to benchmark UK against other countries (but see WP2).

Output of first stage

Infographic ‘Cycling in Later Life in the UK - The Potential’
The potential for the return of an endangered species – the older cyclist

LOW LEVEL OF CYCLING AMONG OLDER PEOPLE IN THE UK

The share of journeys made by bicycle is low for all age groups, but particularly low in older age.
DIFFERENT STORY ELSEWHERE

Cycling is an important method of transport in older age in other parts of Northern Europe.

Share of journeys by people aged 65+

UK 1%
DENMARK 15%
NETHERLANDS 23%
GERMANY 9%

OLDER PEOPLE MAKE SHORTER, MORE LOCALISED CYCLE JOURNEYS

Older people’s cycle journeys are **shorter** than younger adults’ and are **usually for personal business or social purposes** (as opposed to commuting)

70+ YRS 1.8 miles

40-49 YRS 4.8 miles
OLDER MEN CYCLE MORE THAN OLDER WOMEN

Older men are twice as likely to cycle as older women, raising concerns over equity.

LACK OF CONFIDENCE TO CYCLE ON ROADS

Nearly half of older people feel it is physically difficult for them to cycle and only one in five are confident cycling on roads.
BUT THERE IS POTENTIAL FOR MANY MORE OLDER PEOPLE TO CYCLE

60-69 YRS

27% of 60-69 year olds own a bicycle but only 1 in 9 regularly use their bike

CYCLE PATHS

42% would cycle (more) if more dedicated cycle paths

E-BIKES

e-bikes support older people’s cycling. In the Netherlands one third of all distance cycled is by e-bike!

MORE CYCLING WILL BENEFIT HEALTH IN LATER LIFE

Cycling could make a valuable contribution in promoting active ageing and prolonged independence and good health.

Physical activity declines with age to the extent that by 75 years only 1 in 10 men and 1 in 20 women are sufficiently active for good health.
ABSENCE OF OLDER PEOPLE CYCLING IS GETTING NOTICED

Public figures are starting to draw attention to the unequal distribution of cycling amongst the population.

“At the moment cycling is disproportionately young and male and that’s because of the conditions. I suppose those are the people who feel able to cycle...What I want to see from these changes, and I think we will see, is far more women doing it, far more older people doing it”.

London’s Cycling Commissioner Andrew Gilligan discussing the Mayor of London’s plans for cycling in the capital.

Objectives

1. Create a rich description of older people’s participation in cycling.
2. Provide informative profiles of older cyclists.
3. Reveal the motivations and barriers for older people cycling.
4. Assess the success of cycling initiatives in engaging older people.
5. Map out the potential expanded market for older people cycling.
6. Identify limitations of existing data on older people cycling and remedies to this.
Planned next steps

• More comprehensive appreciation of the amount of cycling in later life in context of engagement in other physical activity (Active People Survey)
  – Contribution of cycling to physical activity
  – Variation by local authority
• Local variations in cycling attitudes and behaviour (NHTS, Census)
• Participation of older people in cycling initiatives
  – Sky Rides
  – Bike hire schemes
  – ...

20 May 2015
European case study visits

- 2 x 3 day study visits to Munich in Germany and Seville in Spain, May and June 2014 to explore good practice in inclusive cycling

- Interviews with key stakeholders, cycle tours/visits (e.g. testing infrastructure), filming and audio recording

- Decision to focus on ‘atypical’ cycling cities and also to invite a northern/southern European comparison

The Documentary Film
Selection of 4 key locations in Reading

Urban design quality assessment

Community engagement
• Focus groups
• Q-Methodology

Analysis and design guidance
Consensus (cycling sort)

Contention (cycling sort)
Between Design and Cycling

- **Imageability**
  Distinct / recognisable / memorable / patterns / landmarks

- **Enclosure**
  Visually defined / proportions / outdoor room

- **Human scale**
  Size and texture / speed / details / quality

- **Transparency**
  See and perceive beyond edges / human activity / viewing

- **Complexity**
  Visual richness / diversity / landscape / activity / perceivable ratios

- **Coherence**
  Sense of visual order / scale, character and consistency of elements

- **Legibility**
  Navigation / ease of movement / network / orientation / reference points

- **Tidiness**
  Cleanliness / clutter / visual distractions / noise

- **Comfort**
  Surface materials / widths / sense of safety / familiarity / facilities
Design Guidance

Identifying the attributes, features and principles that influence or contribute to quality urban environments for cyclists

A reimagining and rearticulating of urban design principles from a cyclists perspective

20 May 2015

Cycling Life History Interviews (WP4) & Naturalistic Cycling Mobility Observation Interviews (WP5)

Heather Jones (UWE) & Ben Spencer (OBU)
Life course approach

“dynamically as the consequence of past experience and future expectation as well as the integration of internal motive and external constraint”

(Giele and Elder, 1998)

Life history interviews

- Participant narrative describing and explaining changes and continuities
  - mid- and later-life transitions
  - contemporary practice, outlook for future
  - Experience of cycling and ageing

- Techniques: grid, maps, panoramic street view, ‘cycling graph’

- View bike, cycle storage, immediate context

- Narrative and visual data
Mobile observation & interview

- Participant’s choice of route | time
- Handlebar cameras | sound | GPS
- Priming for interview

- Video elicitation interview
  - Participant commentates
  - Playback
  - Strategies and tactics: route choice, road position, manoeuvres, interactions, infrastructure, cycle-scape
  - Experiences: sensory, affective, social

Geographical areas of focus

Geographical areas of focus: Oxford and Bristol
Collection of rides

James

**Type:** Continuous / expanded
Small town
Frequent for exercise / leisure / transport
Ongoing / increasing through adulthood
High / stable level anticipated

**Past experiences:** continued despite bad accident, not able to afford car - but no need

**Internal motive:** Enjoyment of cycling: fresh air/exploring, need for exercise

External opportunities/constraints: More time since retirement. Topography.

Physical: Good cycle path network in town and access to countryside but dangerous roads. Easy / secure storage and access to street.

Social: Tends to cycle solo, other social activities
Edith

Internal motive: feeling that she ought to for wellbeing / environment

External opportunities/ constraints:

Physical: activity space and schedule more variable, faff of getting bike out, particularly for short journeys, deterred by hills

Social: support from local bike shop, lacks others to cycle for with

Type: Diminished
Inner urban
Irregularly for transport
Ongoing through adulthood

Past experiences: cycling constrained but not displaced altogether when children young, shared car

Flexibility & discretion

when and where to cycle
Storage, access and setting off

Connection to people and place
Competent- expert manoeuvres

awareness of risks and capabilities
in-depth knowledge of routes

Improvisation/resilience
Transgressions - justified & confessional

Adaptations: route

Knitting together arteries, designated routes, public spaces, interstitial spaces
Routes & manoeuvres

Monotony, impedance
Summary

Ageing...

...bodies and identity - cycling contraction/curtailment or solution

...bike - replace/upgrade dilemma

...infrastructure - management / maintenance
Wellbeing and cognition trial

- 8 week period
  - 3 times a week for 30 minutes each time
  - Pedal bike or an e-bike
- Complete diary
- GPS device
- Cognition and wellbeing are measured before the trial (pre-trial) and after (post-trial)
  - Cognitive function: mental ability including memory, attention, decision making, goal planning, spatial reasoning etc.

Domains measured

- Wellbeing/affect
- Physical and mental health
- Physical activity
- Cognitive function
  - “Executive function”
    - management (regulation, control) of cognitive processes, including working memory, reasoning, task flexibility, and problem solving as well as planning and execution

Compare pre-trial to post-trial score
Preliminary results

- 20 participants analysed so far for computerised cognitive tests
  - 9 E-bike
  - 8 Pedal
  - 3 Control
- Both groups of participants - enjoyed the trial, feel physically fitter and better more generally
- Improvement on accuracy in the cognitive tests measuring executive function
  - 92% E-bike; 72% Pedal
- Reaction times reduced for most (responding quicker)
  - 67% E-bike; 57% Pedal
- When reaction times increased, higher accuracy
- Practice effects?
  - Very little change (positive or negative) in control group

The next year....

- Collect 50 more experimental participants (on pedal and e-bike)
- Collect 15 more control participants
- Still need to investigate well-being
- Input and analyse data from the 3 wellbeing questionnaires, a health survey, a physical activity questionnaire, 7 cognitive pen-and-paper tasks
- Analyse data from the 5 computerised cognitive tasks
- Make sense of it all!
- Write up results
Diary of Cycling Experience

5/27/2015

20 May 2015

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Wellbeing trials: Focus Groups

Overall positive experience of E-bikes:

- Mobility
  - Geographies – rediscovered | extended | deepened
  - Additional journeys and replacing car
  - “same amount of exercise but more pleasure because going further than my usual boundaries”

- Health and wellbeing
  - Greater confidence
  - Spatial awareness and control
  - Social
  - Motivation | engagement

- Negative experience of E-bikes:
  - E-bike weight | cost | security | stranding
  - Unsupportive infrastructure “Oxford is a dangerous city to cycle round”

Brian (& Gill’s) Experience

20 May 2015
Roundtable Discussion

LUNCHTIME!
AT THE TERRACE
Approach to Wave II Data Collection

Tim Jones

Life history interviews [WP4]

- Orient towards middle to later adulthood
- Use visual mapping tools (i.e. google street view or paper map) throughout interview to understand interaction with space and place over time
- Explore more how cycling (perceptions and behaviour) has been affected by ageing
- Explore more future outlook for cycling
- Reprise of their cycling history for confirmation
WAVE II

Mobile observation & video elicitation interview [WP5]

Effort into sampling returning/less experienced cycle users

Mobile Observation

- Reducing tech
- Repositioning cameras
- Priming participant before the ride to think about how they feel at points along their route/activity/ride

VEI

- Tactility - encouraging engagement with controls
- Screen-capture & video interview interaction
- Eliciting affect in the post-ride VEI
- Focusing in on design elements of the ride that are supportive and unsupportive for their style of cycling

20 May 2015

WP5 Way-marked Route Update

Carl Mann: Cardiff University
Research Questions

1. What factors shape experience of cycling as positive or negative for older people?
2. To what extent can we measure and map these experiences?
3. What functional and aesthetic principles do older cyclists perceive to be most important and base their route choice upon? To what extent do these perceptions differ according to experience and gender?
4. What strategies and tactics do older cyclists use to manipulate the emotional content of the journey, for example route choice and ‘road’ position?
5. Do returning cyclists differ from more experienced cyclists in their affective capacity?

Way-marked Rationale and Changes

Cardiff Waymarked Route
Using GSR

GSR data from Rosie in Cardiff

Captiv capture of Rosie in Bute Park
Using GSR

GSR data from Rosie in Cardiff

20 May 2015
Representing and analysing GSR data

Analysis Methods | Challenge of Integration
Processing

Life History
- Recordings, grid, graph, photos
- Case summary
- Up to 240 cases

Ride
- Recordings, GPS
- ‘Ride gist’
- Up to 100 cases

Post-ride interview
- Recordings
- Clips, memo

Life history case summary example

20 May 2015

Life history case summary example

[Image of a man cycling]

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Mobile Observation _VEI Analysis

Preliminary Review
Compiling ‘ride gists’ (RAs)
Cataloguing data corpus (NB)

Substantive Review
Identifying events/phenomena
Developing coding themes/framework

Analytic Review
Apply coding framework
Gather candidate/exemplar instances into collections
Query between different attributes
In depth analysis of single instances

(Based on Heath, Hindmarsh & Luff, 2010)

Transana - demo
Questions to drive analysis

• What are the characteristics of older cycling trajectories and how does this shape future prospects?
• What are the key turning points/transition that support or undermine cycling?
• What strategies & tactics do older individuals employ to continue cycling in older age?
• What is the relationship between design, cycling and wellbeing?

Linking it all together

Compendium of cases, rides, clips and commentaries

Typology of cycling in mid and later life
• Continued
• Restored
• Expanded
• Newly initiated
• Diminished
• Curtailed
• Absent

Profiles of ageing velo-mobilities
• Purpose / meaning of cycling
• Geography and temporality of cycling
• Reflections on ageing and cycling
• Challenges of built / social environment
Broader Integration & Outcome

Devised by Emma Street

20 May 2015
Impact

Developing more inclusive neighbourhoods, towns and cities

Designing products suited to the growing market of older people

Domains: Active ageing

The Fitness Gap

“The difference between the best possible rate of decline and a person’s actual rate of decline...determined by social factors, decisions we make about life and the pressures that influence us.” Sir Muir Gray, Sod 70! [pp4-5]
Domains: Active Ageing

Active ageing

“Process of optimizing opportunities for health participation and security in order to enhance quality of life as people age.”

WHO 2002

Domains: Spatial Justice ‘Right to the City’

‘right to the city’ - n.pl.
1. literally, meaning the right to shape urban life. EFFECT: mobilizing (potentially).
2. phrase originally coined by sociologist Henri Lefebvre in Le Travail a sa Fille (published in 1989). Defined through a politico-social notion of accessibility as a ‘demand...[for] a transformed and renewed access to urban life’. Concept more recently popularised by geographer David Harvey (see David Harvey, ‘The Right to the City’ New Left Review 53 (2009) pp. 23-49) - note OPTIMISTIC as in “to reflect on the freedom to make and remake our cities and ourselves in [...] one of the most precious yet most neglected of our human rights”. OPERATIONAL MODEL: collective. Aligns with Age-friendly principles that foreground older people’s active participation in urban life. BENEFITS: a healthy alternative to health-focused public policy discourse on ageing.

https://departmentfortransport.wordpress.com/tag/altered-images/
Domains: Planning & urban design

Preface
This monograph deals with the aesthetics of highways, the way they look to the driver and the passengers, and what this implies for their design. We emphasize the potential beauty of these great engineering achievements, as contrasted with their current ugliness. Since the realization of this visual potential lies in the hands of the men who design them, this monograph is addressed to the highway engineer. We hope that he will find our ideas of use.

The view from the saddle
Urban design vocabulary for cycling

Domains: Industry – Design Technology

Lecr: Ce n' est pas un vélo.

Visit https://youtu.be/r5ldADWZ_Pk
Potential outputs for policy and practice

- Illustrate various aspects of cycling in later life using individual cases
  - Influence of retirement, becoming a carer, moving house
  - Relational aspects: partner, children, social groups
  - Cycling and health episodes | Restorative changes and curtailment
  - Adaptations associated with ageing
  - Contribution to wellbeing
  - Cycling promotion in the individual cycling life history
  - Cycling as part of transport modes

- Highlighting the churn behind the 3%|17% figures
- Older cyclists in different spatial contexts
  - mapping problem areas and possibilities

Tailoring by spatial scale & location

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<th>Inner urban</th>
<th>Fringe</th>
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<tr>
<td><strong>Home</strong></td>
<td>Storing and manoeuvring bike to and from the street can be difficult at dwellings in high density areas. Manoeuvring it out to street could prove cumbersome</td>
<td>More space for storing bike in ancillary spaces/buildings, often level access to street.</td>
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<tr>
<td><strong>Street</strong></td>
<td>Set off areas could be crowded by refuse collection and parking Topography</td>
<td>More space for set off Topography</td>
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<tr>
<td><strong>Neighbourhood</strong></td>
<td>Squeezed-in cycling provision, lack of segregation</td>
<td>Proximity to hinterland Segregated pathways Intersections with distributor roads</td>
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<td><strong>City and fringes</strong></td>
<td>Corridors and gyratories with high traffic volumes Alleyways, pedestrian routes, informal spaces afford direct routes/permeability links sometimes undesirable underpasses Topography</td>
<td>Greater distances to destinations Corridors and gyratories with high traffic volumes Topography</td>
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Outputs | Impact: Activity since last SAG

See handout

20 May 2015

Outputs | Impact: Future Events

- Royal Geographical Society with IBG 2015, August 2015
- BSG Annual Conference 2015, Sept. 2015
- 8th European Public Health Conference, October 2015
- Association of American Geographers Annual Meeting, April 2016
- 14th World Conference on Transport Research, June 2016
- 6th International Conference on Traffic and Transport Psychology, August 2016
- Special session on ‘Design for Wellbeing: Ageing and Velo-mobility in the Built Environment’. RGS with IBG, August 2016
- Special session on ‘Researching with older people’. 7th ESRC Research Methods Festival, July 2016

20 May 2015
Roundtable Discussion

THANK YOU!

NEXT SAG MEETING: AUTUMN 2015

PLEASE SEND FEEDBACK OR FORWARD SUGGESTIONS FOR CONTENT OF NEXT SAG MEETING TO:
NICK BEALE
nbeale@brookes.ac.uk