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**THE POTENTIAL FOR PUBLIC PARTICIPATION IN PLANNING HEALTHY URBAN MOBILITY:
THE CASE OF OXFORD, UNITED KINGDOM**

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ABSTRACT:

This chapter explores the potential for involving the public in planning healthy urban mobility using a case study of two neighbourhoods in Oxford, UK. We draw specifically on lessons learned from the UK case of a large-scale international study entitled Healthy Urban Mobility (HUM). The HUM project was based on the need to address health inequalities within urban areas by implementing new approaches to planning and health that use novel research methods to encourage active dialogue with a wide range of stakeholders. The two principal objectives of the research were firstly, to understand the impact of everyday (im)mobility on health and wellbeing within different social groups, and secondly, to explore the potential for participatory mobilities planning with local communities to support and develop solutions for healthy urban mobility.

The chapter is organised into five parts. In the first part, we highlight the theories behind the need for public participation in urban mobility planning and calls for active dialogue and mutual learning between practitioners and communities for effective action on improving urban health. Then in the second and third parts, we provide an overview of the approach to participatory mobilities planning with local communities in the UK as part of the HUM project. In the fourth part, we report the outcomes of the project and critically reflect on the overall approach and lessons learned that may be of use to practitioners and communities. Finally, we conclude on the significance of the study and implications for public participation in planning healthy urban mobility. The research demonstrates the significant potential of participatory methods in transport infrastructure projects, but also highlights the complexities of public engagement and points to the need for a continual, long-term process to build trust between partners.

KEYWORDS:

1. Health and wellbeing
2. Public Health
3. Active travel
4. Participation
5. Oxford, UK

1. Introduction

This chapter explores the potential for involving the public in planning healthy urban mobility using a case study of neighbourhoods in Oxford, UK. By 'healthy urban mobility' we mean mobility that allows people to move around in a safe and convenient manner, and that promotes personal health and wellbeing while having a limited impact on the environment. While walking and cycling typically spring to mind, healthy urban mobility can also include, for example, mobility devices such as mobility scooters and children's pushchairs that enable adults and children to move around their local environment.

We draw specifically on lessons learned from the UK case of a large-scale international study entitled *Healthy Urban Mobility (HUM)*.^[1] The HUM project was underpinned by the need to address health inequalities within urban areas by implementing new approaches to planning and health that use novel research methods to encourage active dialogue with a wide range of stakeholders (Rydin et al. 2012). There were two principal objectives of the research.

First, to understand the impact of everyday (im)mobility on health and wellbeing within different social groups, and second, to explore the potential for participatory mobilities planning with local communities to support and develop solutions for healthy urban mobility (Jones et al. 2019).^[2] To address the first objective, we tapped into how people moved around their neighbourhood, and their experience of mobility. We then used this information to help us to deliver our second objective. This is the focus of the current chapter where we reflect on the benefits and challenges of involving residents and stakeholders in the co-production of research and policy outcomes to support healthy mobility.

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2. Healthy Urban Mobility in Context

In 2010, a landmark UK study, Fair Society, Healthy Lives ('The Marmot Review') was published by Professor Sir Michael Marmot and his team (Marmot et al. 2010). This report highlighted the significant disparities in health across the UK and the growing health gap between wealthy and deprived areas. The Review pointed out the importance of communities and places in shaping physical and mental health and wellbeing and described how inequalities among communities are related to inequalities in health. A review of progress ten years on since the publication of the Marmot Review highlighted that these disparities have persisted or in some places have become worse. In the realm of transport, for example, although active travel among adults has increased, inequalities in participation in active travel have widened. Between 2010 and 2018, while there was a 5 percent increase in walking trips per year for those on the lowest incomes, there had been a 14 percent increase for those on the highest incomes (Institute of Health Equity 2020). The Marmot Review renewed impetus to support and encourage individuals to stay active for longer to enhance quality of later life and reduce end-of-life morbidity as part of a healthy ageing agenda (WHO 2015).

Experts in public health, planning and transport, are now focused on how healthy and sustainable transport systems can be achieved, and how health disparities between wealthy and more deprived areas can be closed. However, as Hansson et al. (202X) have pointed out in the introductory chapter of this volume, there has been limited use of public participation in transport policy, and furthermore, the various types of innovative processes and experiments in participation have mainly been outside the field of transport. This is despite calls for a greater focus on participatory planning in transport studies, if desired outcomes such as delivering more sustainable and equitable transport systems, are to be successful. For example, Banister (2008) has questioned the underlying principles of conventional transport planning that can lead to degradation and disparities in health and environmental sustainability. Banister maps out an alternative sustainable mobility paradigm within which to investigate the complexity of cities. This focuses on four key challenges in the field, namely reducing the need to travel through the use of Information Communication Technology (ICT); a modal shift away from private cars towards walking and cycling and public transport; implementation of land use policies that reduce distance to activities; and technological developments in vehicle design and efficiencies. However, the challenge of achieving this paradigm is gaining public confidence and acceptability (which in turn generates political acceptability) to support these measures through an active process of involvement that is truly participatory and inclusive. Banister's key message is that empowering and involving the public through interactive and participatory processes is likely to be more effective than passive means of persuasion.

Experts in the field of public health have already provided accounts of how researchers and communities can work together to reduce health disparities and improve sustainable health outcomes, for example, through the application of Community Based Participatory Research (CBPR) (Minkler and Wallerstein 2008). Meanwhile, in the field of planning, Rydin et al. (2012) have called for effective action on promoting healthier and more sustainable environments through local experimentation in a range of projects supported by assessment of their practices and decision-making processes by practitioners. They have highlighted that this will require mutual respect and co-learning between partners, individual and community capacity building, systems change, and balancing research and action as a means of exploring community based participatory planning approaches related to mobility and health.

From an academic perspective, part of the problem in developing more effective action to support healthier and more sustainable environments is, as geographer Tim Cresswell (2010) has pointed out, that the discipline of transport studies has traditionally been good at telling us about 'the fact

of movement’ but has been less concerned with ‘representations and meanings of mobility’ either at an individual or societal level or ‘how mobility is actually embodied or practiced’. Creswell has called for a ‘politics of mobility’ namely the ‘social relations that involve the production and distribution of power... and the ways in which mobilities are both productive of such relations and produced by them’ (p21). This requires an understanding of how mobility is accessed differentially; how meanings are associated with mobility practices and how they are represented; and, finally, how movement is experienced. In a similar vein, Manuel and Vigar (2021) have questioned a dominant tradition in UK planning that disenfranchises the public through a technical-rational approach that fails to understand people’s wider perspectives and what they want to address. They call for ways to engage the public in the processes of planning and governance that value their ‘lay’ or tacit knowledge.

The next section provides an overview of the HUM project that sought to take up this challenge through the application of a people-oriented participatory approach to mobilities planning that aimed to identify ways to support and encourage active travel among less well-off communities in Oxford, UK.

3. The Healthy Urban Mobility Project

The HUM project ran from 2016 to 2019. Oxford was selected as a geographical site for investigation in the UK as there are very significant health inequalities across the city and variation in engagement with healthy urban mobility. The study selected two low/middle income neighbourhoods, Barton and Rose Hill, located on the edge of Oxford adjacent to the city’s busy ring-road. Both areas have lower-than-average levels of walking and cycling compared to other parts of the city, partly due to being located on hills making this more challenging vis-a-vis flatter areas of Oxford (Box 1). Both are similar in terms of size and scale, but Barton lies outside of the ring-road which creates a severance effect in terms of accessibility. Both are also similar in terms of health inequalities and are classified as within the top 20 percent of most deprived wards in England (DCLG 2015). Life expectancy across these neighbourhoods, was on average, 9.^[3] years lower for men and 5.7 years lower for women than the least deprived neighbourhoods in Oxford (PHE Health profiles 2014-17)³.

Place-based public health initiatives are ongoing within the two communities. For example, at the time of research, Barton was in the process of being extended through the Barton Park development (Oxford City Council 2012). Barton Park was one of ten Healthy New Town demonstrator sites, a UK government initiative set up in 2016, ‘to explore how the development of new places could create healthier and connected communities with integrated and high-quality services’ (NHS England, 2019). The second area, Rose Hill, has benefitted from several linked regeneration schemes delivered through a partnership between the municipal council and the housing providers. Since around 2010, the focus of policy was on replacing substandard public housing with mixed tenure developments and opening a new Community Centre.

Box 1: The case sites in Oxford, UK.

Barton, with an estimated 6,902 residents (Oxford City Council 2021) is a suburban housing estate originally built in the 1940s as public housing and is located 5 km east of Oxford city centre. The neighbourhood lies on an incline just outside the Oxford ring-road on the city's eastern edge which creates a barrier to leaving the estate on foot or by cycle. Two underpasses provide pedestrian routes under the ring-road linking to a cycle track (see Figure 1). The neighbourhood is serviced by a row of small shops, a sports centre, a swimming pool, a school and a community centre. The neighbourhood is predominantly low density residential and consequently has low land use diversity. A frequent bus service (around every 10 minutes during the day) connects Barton to the city centre.

In 2013 planning permission was granted for a new residential development of around 900 homes, a new school and community hub, neighbourhood centre, sports hub and park to the west of Barton. Known as Barton Park the development has been in construction since 2015 and provides a new access across the ring-road for walkers, cyclists and buses, but not private cars.

Rose Hill has an estimated 6,319 residents (Oxford City Council 2021) and is also a suburban estate in Oxford. It was initially built in the 1920s as public housing and is located 4 km southeast of the city centre on a hill. On its boundary lies the River Thames to the west and the Oxford ring-road to the south. There are two local shops, a primary school and a new community centre (opened in 2016) located on the estate although it is predominantly low density residential and consequently has low land use diversity. A frequent bus service operates between Rose Hill and the city centre, around every 10 minutes, but routes to other parts of the city had been reduced. There is only one access point by vehicle to the estate but multiple links via footpaths to neighbouring areas and connections such as the separated cycle path along the ring-road and the path alongside the River Thames.



Figure 1: Barton Underpass beneath the busy Oxford Ring-Road (A40) (Source: author)

To achieve our two objectives, our investigation used a mixed method approach comprising six specific components (see Figure 2). In sequence these were: 1) stakeholder engagement; 2) spatial mapping to understand the physical and built environment context in which mobility takes place; 3) a social survey to capture mobility and health and wellbeing profiles of the communities; 4) in-depth biographic interviews to understand the role of past experiences of mobility and the rationale behind selected modes of mobility i.e. 'mobile trajectories' (Lanzendorf 2010; Chatterjee et al. 2013); 5) micro-ethnographies in the form of mobile interviews or 'go-alongs' (Kusenbach 2003); to capture contemporary everyday experiences of being (im)mobile and 6) a range of participatory approaches to involve the local community in identifying problems and solutions for healthy urban mobility and community wellbeing. These generated different types of knowledge which could be shared and reflected on by members of the community, stakeholders and the research team (Jones et al. 2019). The focus of this chapter is 4), 5) and 6) given they focus on immersive engagement with the community and participatory methods to understand the 'politics of mobility' (Cresswell 2010).

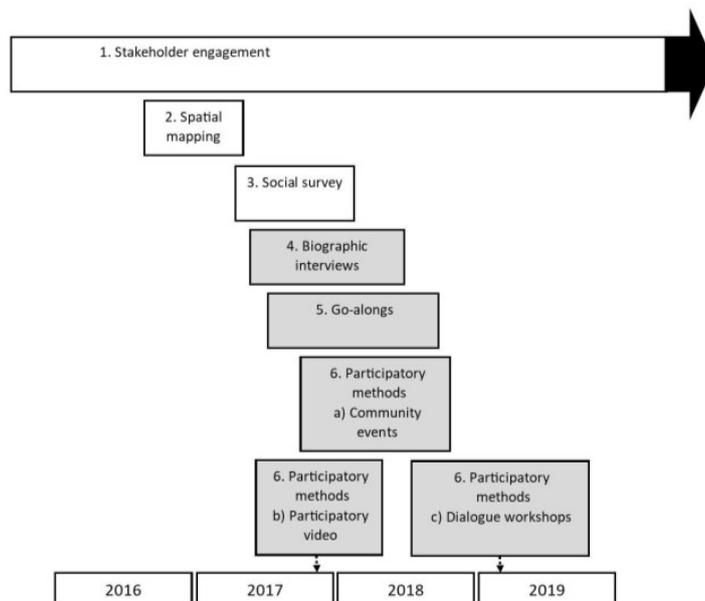


Figure 2: Sequence of methods used in the HUM research (Source: author)

Twelve participants in each case study area took part in the health and mobility biographies and go-along interviews. They were selected from a pool of participants who took part in the social survey and indicated that they would be willing to participate in further research. A sub-sample was selected that represented users of different transport modes including people with disabilities who used mobility aids. We also sought to recruit people living across the full geographic spread of the neighbourhood, recognising that there were variations in terms of social-economic status and access to different transport modes.

Participants were compensated for their time with shopping vouchers. They were asked to complete a life history grid where they annotated key events in different domains of their life (e.g. where they lived; household characteristics; where they went to work/education; how they usually travelled around; the state of their health etc) across the decades of their life (Jones et al. 2019 pp 12-13). The grid was then used in a semi-structured interview of around one hour as a stimulus to discuss past, present and possible future, active transport modes including on foot, by cycle or other means. The interviews were audio recorded, then transcribed. This approach enabled a broad understanding of how people engaged with different modes of travel and transport throughout their lives, including their current setting within the two case study areas, and the opportunities and challenges they faced in their day-to-day mobility. This included not only the mechanics of navigating a range of historical and contemporary environments but also the influence of family and wider social relations.

We invited participants who took part in the biographical interviews to participate in a go- along interview. This was comprised of a regular, self-selected journey either on foot, cycle, public transport and in one case, a mobility scooter, in their neighbourhood. They were accompanied by the same researcher who conducted the biography who observed and video recorded the journey, if participants consented, using a small portable camera attached to a chest harness. Afterwards the researcher conducted a semi-structured interview reflecting on the journey and the video. The journeys varied in length from half an hour to two hours and the interviews covered a similar time span.

Our observations focused on the detail of how people performed their journey. We played back video footage to the participant after their journey as part of a video elicitation interview where they were asked to reflect on any significant episodes during their journey. The interviewer then focused on the rationale behind mobility behaviours and interactions, and participants' embodied experience of their journey in terms of moment-by-moment feelings. It also enabled further exploration of issues raised in the biographical interviews, providing additional depth and context. These interviews were audio recorded and the audio and video data were transcribed and summarised.

We also organised community events in both case study neighbourhoods (see Figure 3).

Planning such events involved us engaging with local residents and stakeholders both through Oxford City Council 'walkabouts' with City Councillors, and also meetings with the Healthy New Town Committee, the local Community Association and Health and Wellbeing Partnership. We also organised a number of other events, taking an opportunistic approach to engaging with the community, at times and places that residents were available to interact with us. These included stalls at outdoor 'fun day' events and celebrations, lunch clubs, community meetings and information days. An approach we frequently used was participatory mapping (Haklay and Francis 2017) where residents were encouraged to identify the routes and purposes of their everyday journeys and to highlight the positives and negatives of their mobility experiences.



Figure 3: Participatory mapping at a community event (Source: author)

In Rose Hill, we were able to use a participatory video approach (Milne et al. 2012). Working with a local charity with experience of community video, Film Oxford, we arranged a free eight-week course in filmmaking. Eight residents of Rose Hill used these skills to create two short films on topics of their choice relating to 'healthy mobility'. The first film centred on Why do people cycle in Rose Hill - or not! (Roper et al. 2017a). The second film looked at the effect on the local community of cuts to a local bus service (Roper et al. 2017b). In Barton, despite offering the filmmaking course in two different formats and with varied timings in consultation with local community leaders, we were not able to recruit sufficient participants to run the programme.

Thematic analysis of data from the biographical interviews, go-along interviews, and community events, generated key themes relating to the enablement and restriction of healthy urban mobility in each neighbourhood. This comprised information on how the built environment and the wider technological 'system' shapes personal mobility at different scales, ranging from the macro (i.e. general morphology including land use patterns and systems of mobility) to the micro (i.e. design details of housing and local streets). The data were summarised into key themes, quotes and images to be used in the subsequent deliberative workshops.

We held a knowledge sharing, deliberative workshop separately in each community with groups of around a dozen people including participants from the three approaches described along with additional residents and local stakeholders. The workshops lasted around two hours and consisted of introducing the fieldwork data in the form of posters and slide presentations with key themes, quotes and images that were reviewed, challenged and discussed. The workshop enabled discussion of the results and debate about what encourages and restricts healthy urban mobility in the neighbourhood.

These workshops culminated in a community 'priority setting' exercise. This involved agreeing actions for promoting healthy urban mobility locally and ranking them. The Community Priority Actions for maximising opportunities for healthy urban mobility were then written up by us in summary documents (Spencer, Brownill and Jones 2019a & 2019b).

Before, during and following the funded period of the project, the researchers established and maintained relationships with key stakeholders. This enabled collaboration on shaping the details of the approaches used, recruitment, analysis, and use of the findings.

4. Project outcomes

Through the participant biographies, go-along interviews, community events, participatory video and deliberative workshops, which took place over a combined period of more than two years, the HUM project became well known by the community in both neighbourhoods. The strength of our relationships with local stakeholders was extended, as was the degree of understanding and trust. This gave us the credibility and leverage to engage more widely with stakeholders.

At the broader County level, we were invited to share the findings, recommendations, and Community Priority Actions with the newly established Oxfordshire County Council Active and Healthy Travel Forum in May 2019, which included mid-level officers from local government departments including transport, public health and community. Further engagement at this level came through a final project event launching the overall HUM findings and recommendations document (Jones et al. 2019) which we held in Oxford in June 2019. This enabled our research team to further engage with senior local government policy makers and stakeholders from wider Oxfordshire.^[4] This resulted in the Community Priority Actions documents being incorporated into the Oxfordshire Joint Strategic Needs Assessment 2020. This is a strategic review of evidence on the health and wellbeing of Oxfordshire residents, which underpins the County's Health and Wellbeing strategy (OCC 2019).

Following the completion of the Community Priority Actions documents in Rose Hill and Barton, the research team worked with local stakeholders to develop a strategy to promote further impact and longevity of the research. In each locality we agreed a means for the Community Priority Actions to be owned and taken forward by appropriate stakeholders thus capitalising on the rich intelligence we had been able to gather on the ground. In Barton it was agreed that the Health and Wellbeing Partnership would take responsibility and a 'task and finish' group was established with an agreed Action Plan composed of the Community Priorities. This group included an officer from Public Health Oxfordshire and the Oxford City Council Locality Officer with ongoing input from the HUM researcher. In Rose Hill, the neighbourhood Low Carbon community group and a local City Councillor took responsibility for making progress on the Community Priorities. In both cases, it was recognised that there was no specific budget available but that the document could be used to help identify and respond to any funding opportunities that became available.

In Rose Hill, this led to several actions. These included the neighbourhood Low Carbon community group and the Rose Hill Community Partnership identifying funding for local active travel signage and additional cycle racks; campaigning to change the algorithms determining the stopping points for the flexible 'Pick Me Up' bus service; lobbying police about traffic speeds and pavement parking and seeking quotes for infrastructure changes such as additional street lighting and junction enhancements. In addition, strong representations to transport planning consultation documents were made using HUM evidence and the two community videos. A campaign for safer cycling routes

has led to detailed plans and budgeting for a cycle lane between Rose Hill and the city centre (OCC 2021) but the restoration of a local bus service has not proved successful. However, while there was initial progress and momentum in taking forward the actions, the advent of the Covid-19 pandemic in early 2020 led to a diversion of focus, energy and funding.

Similarly, Barton saw initial progress through the Health and Wellbeing Partnership in terms of investigating the practicality of the suggested interventions with City and County officers, identifying potential funding sources and lobbying appropriate committees and fundholders. A potential for installation of active travel signage was identified through an existing Barton Healthy New Town initiative. However, many of the proposals, including area-wide speed reduction and the installation of pedestrian crossings were found to be too expensive or not feasible.

Nevertheless, the Health and Wellbeing Partnership's adoption of the Community Priorities led in part to the establishment of a further intervention, the Barton Underpass Mural Project (BUMP) which focussed on one of the highest ranked priorities, namely, "Better maintenance of the underpasses and a friendlier gateway to Barton, including a mural". This was developed by a partnership of local organisations (Barton Community Association, Oxfordshire County and Oxford City Councils, and other community groups including the city cycling campaign group) who sourced funding and organised community consultation on residents' design ideas for the mural (see Figure 4). This co-created approach (Horvath and Carpenter 2020) involved engaging with residents at community events and two graffiti workshops in local schools and was captured on film as a record of the process (HUM 2021).



Figure 4: The underpass mural being painted by community artists (Source: author)

5. Reflections on the adopted approaches

In this section we reflect on the benefits and challenges of the various approaches adopted to engage with participants from the community informed by the theoretical background introduced in section two. We then report on relationships with stakeholders and their views on the overall process before reflecting on the differences between the two cases.

Understanding mobility practices

The biographies and go-along interviews provided multiple perspectives on local mobility. This was based not only on the variety of participants who took part but also their previous experience of moving around in other locations nationally and internationally, for example, in one case, contrasting their experience of moving around in poorer parts of Dutch cities with Barton. They were also able to reflect on the wider experiences of their families and friends over time thereby enriching the data. The combination of the biographies and the go-along interviews resulted in generating understanding at a variety of scales from the micro to macro level. For example, discussions during the biographies about issues such as parking policies and public transport provision could be examined in situ on the street and expanded further in terms of, for example, detailed approaches to urban design and enforcement. The go-along interviews also enabled more detailed discussion of issues, such as the weight of on-street car parking, where long distance commuters avoid city centre car parking charges by parking for free on residential streets and then continuing their onward journey, for example, by bus or cycle.

The go-along interviews generated rich data on the embodied experiences of the participants as well as immersive experiences for the researchers. For example, this included the tacit knowledge needed to overcome challenges associated with crossing a busy multi-lane road with responsibility for several children, using buses to access work in the very early morning or strategies for safely navigating a little-used underpass. However, we also recognise that capturing and conveying the full richness and complexity of people's mobility in a relatively limited time will never be possible.

Attendance at 'fun-day' and community clubs along with holding deliberative workshops at the two neighbourhood community centres meant that there was a variety of different spaces of engagement (Bermingham and Porter 2007). These also included people's homes, where many of the biographical interviews were conducted (or third spaces such as cafés if preferred), along with their immediate streets and public spaces experienced during the go-along interview. This meant that participants were often in familiar territory and had a measure of control over the processes and how to engage with them.

Representing mobility

Given the large and varied material generated in the form of interview transcripts, the videos and route traces of go-along journeys, transcriptions of subsequent interviews and participatory mapping, there were challenges in how best to represent this data. The two deliberative workshops provided the opportunity and necessity to synthesise and analyse the data gathered through the preceding approaches and present it in a digestible and engaging format suitable for a two-hour workshop.

An initial piloting of the intended approach led to significant changes in the selection and presentation of data. This included using less technical information from the social survey and spatial mapping and foregrounding the qualitative material from the interviews and go-along interviews in the form of quotes, still images and maps. The poster format allowed participants to refer to relevant content during the workshop and use this as a means of checking, challenging, and supporting these findings.

This resulted in increased clarity regarding the key themes of barriers and enablers to active travel and allowed multiple perspectives from the participants, drawing on their wider knowledge. We

chose not to use excerpts from video footage generated during the go-along interviews due to the limited time available to contextualise, review and refer back to this material. However, with more time available, the videos could have been a complementary means of representing diverse mobility experiences.

The most important element of the workshops was generating and prioritising the Community Priority Actions. These provided a tangible and practical output in an easy-to-understand format that was then used to support further work promoting healthy urban mobility. Combining these with maps showing key quotes (Spencer, Brownill and Jones 2019a & 2019b) helped to provide a more rounded view of mobility issues in the neighbourhood.

The participatory video approach provided participants with the resources and autonomy to represent what they saw as challenges to healthy urban mobility. This also provided them with tangible materials to further their existing campaigns to reinstate a local bus service and to improve conditions for cycling from their neighbourhood to the city. But there were also debates around editorial control. For example, the research team debated with the Rose Hill group about the comparative merits of making a video focussing entirely on easing traffic movements at the sole entrance to the neighbourhood, where researchers encouraged the group to think about broader mobility and not just moving around by car.

Barriers to involvement

It is possible that people who were more sympathetic and predisposed to walking and cycling were more likely to participate in the research. Given the desire by policymakers to promote walking and cycling, this should not be seen as problematic. However, the project may not have reached people who are less predisposed to walking and cycling (or unable to walk and cycle).

However, the series of community events did enable us to reach out to a wider audience, involving greater numbers of local people in the research and simultaneously raising awareness of mobility issues. This provided us with additional information on people's mobility and the constraints on their active travel along with the opportunity to both test and confirm existing data and to recruit further participants for the biographies and go-along interviews. While we were able to organise these events through dialogue with local stakeholders, we were also able to extend our links with other local stakeholder organisations, including the police.

One of the challenges we faced was that direct engagement with participants at 'fun day' type community events was often fleeting and did not provide the opportunity for deeper engagement. Again, due to limited resources, we were constrained in the number and duration of events that we could engage in and it is possible that more marginalised groups were not reached, including those whose English language was more limited, as well as children and younger people – we are mindful that the research team was majority white academic and that may have influenced willingness to interact on the part of some members of the community.

Our main challenge for the video courses was the recruitment of participants from the local area, the community of place who had the time, flexibility and motivation to take part in the training programme. In Barton, we experimented with scheduling at different times of the day and evening but found it difficult to provide a programme that suited those from the locality with work or care responsibilities. Enquiries came from those outside the neighbourhood, who were part of communities of interest based on filmmaking or mobility issues. Unfortunately, filmmaking in Barton

did not go ahead due to low uptake. In Rose Hill, where the course ran successfully, there were also questions over whether the core group of participants provided a true representation of the community – they were exclusively white and middle-aged. This was despite considerable efforts to engage with other groups, such as women from ethnic communities, who were active in the area.

There was also a feeling amongst some of the community gatekeepers that both areas were ‘over-researched’ and suffering from consultation fatigue. One local organisation informed us that local people were ‘fed up’ with being talked to and just wanted to see investment in positive, tangible change. Co-incidentally, there was another research programme on urban mobility and public engagement running at the same time as HUM which we were not initially aware of. We worked with researchers on that programme to ensure clear communication about the nature and processes of each project and capitalised on the opportunities for collaborative action where appropriate, for example, working together at community fun days.

A further issue was the relatively small number of participants overall and the extent to which they were representative of the wider community. While the relatively small number of participants in the biographies and go-along interviews was augmented with participation at the community events, the deliberative workshops involved relatively few participants generating the community priorities. We are reminded that there is a danger of majoritarianism, where local people talk on behalf of the community but don’t necessarily represent them accurately in what we intended to be a democratic process (Horner 2016). Our aim was that the Community Actions were representative of and balanced the needs of the whole community. This can also be understood in terms of the need to recognise the complexity and layering of communities that do not necessarily ‘have a solidarity that can be expressed as a single voice’ and may also have different spatial ‘zones’ within a wider neighbourhood (Bermingham and Porter 2007 p109). While the selection of participants for the biographies and go-along interviews aimed for decent geographical spread across the neighbourhoods, it was not so easy to orchestrate for the deliberative workshops.

Stakeholder perspectives

We invited stakeholders to critically reflect on the success of our study and permission to record this to camera to enable us to make a short film about the project. The resultant five- minute film (HUM 2020) provided a useful document of the process and outcomes from the study that could be shared among stakeholders and decision makers at the local council.

Here we summarise the key points that were raised in the film.

Firstly, the HUM project was widely regarded as being effective in engaging with the public and this was continuing to have further impact. The main community leader in Barton stated “getting local people to identify areas that they felt could be improved... I’ve always found that once local people become involved in a project there’s always an easier route to success.”

The process was also perceived as raising the profile of health and mobility as a topic of interest and to reinforce the link between the two. A local campaigner said that it had helped to “bring the subject to the forefront of people’s minds” and a local councillor emphasised that it had become “much more of a topic for debate.”

The challenge of translating research into action was recognised. Another campaigner stated that it is “difficult to move from research to action”, but this was addressed by the HUM team returning to the area regularly. This highlights the importance of longevity and the approach to partnership

working adopted by the HUM team. This point was picked up by the main community leader in Barton who was clear that “what doesn’t work is if we have a group of professionals trying to ‘parachute’ in a project and impose it on the community”. She went on to say that it ‘makes us all open our eyes to what we’ve been doing wrong and what we can improve on and what we can do better’. This highlights the engagement with and ownership of issues and information about local health and mobility.

The action planning approach was seen as particularly successful in furthering the longevity and impact of the research. A local authority officer explained that “The very good thing about this research is that there is a practical action plan and I explored with Ben [Lead author] and the community groups how the project could be taken further forward”.

However, it was acknowledged that the feasibility of delivering the proposed Community Priority Actions was a challenge. An elected representative for the area stated that “some of the things on the list will be difficult to implement, but on the other end of the scale we have got much more immediate plans... better signage to make people aware of cycle routes and we’ve actually already identified some funding.”

Changing relationships over time

Bermingham and Porter (2007) note how processes of engagement have a tendency to change over the project lifespan. The HUM project started by building on existing links to stakeholders to understand the activities of the multiplicity of organisations working locally and to support recruitment of participants. As we have described, these relationships matured, deepened, and extended during the funded period of the project. It was also possible for the researchers to maintain involvement with community representatives for Barton beyond the formal project and continued contact with those taking forward actions in Rose Hill due to the support of the University which allocated ongoing working hours to one of the researchers to sustain their involvement.

The BUMP project can in part be seen as a direct outcome of the HUM project and would not have happened without the impetus and legitimacy of the Community Priorities document. Its creation in June 2021, bringing together stakeholders from the local authorities, as well as community groups and activists, is a high profile physical manifestation of the participatory processes embedded in the HUM project. It is instructive to reflect on how the BUMP project materialised, and what the key drivers were. Further interviews with stakeholders suggested that, while many agreed that the underpasses leading to Barton required renovation, there was little funding available or the political drive to make the improvements that were needed. Those interviewed about the BUMP project recognised the pivotal role of a local community activist in mobilising action. One activist, who had been involved with the HUM project as a participant, was successful in using a local arts charity and other actors to kick-start action by Oxford City and Oxfordshire County Council. Rather than the renovation being led by the Council, the driving force came from the community. Although this focused attention on one of the smaller underpasses, it promotes the possibility of future upgrading of all remaining underpasses linking Barton. However, it is worth noting as context, that during the early 2000s, ‘major upgrading’ of the roundabout by the UK Department of Transport could have acted as a catalyst for renovating the underpasses, doing away with the need for community activism of this nature (Rajé 2016).

The project highlights the challenges of working collaboratively across sectors in the city. The catalyst for the BUMP project was the motivation of an individual community activist, and without

their involvement, those interviewed suggested that the project wouldn't have taken place. It was also difficult to raise funds, which eventually came from several disparate sources, including the two local authorities, a residents' group and the city's cycling campaign group. Separate funding was also sought to support ongoing research on the process.

Differences between the two cases

As previously noted, the spatial location of the two different communities had an impact on their potential active travel options. Rose Hill was already better integrated into routes connecting the neighbourhood to the city centre and these were subsequently set to be enhanced further through a cycle lane on an arterial route. In contrast, Barton suffered from severance from the city due to its location outside the ring road. This barrier was ameliorated to an extent through the renovation of the underpass during the BUMP project, but more significant opportunities to knit Barton more fully into the city had been missed during the roundabout upgrade, funded by the UK Department for Transport, and the design and implementation of the adjacent Barton Park housing development. The design aspiration for the £2M roundabout upgrade had been merely that existing pedestrian and cycling facilities be maintained (Rajé 2016). This may well have added to the cynicism about the potential for significant change that we experienced in Barton where the upgrading of the strategic road network to accommodate traffic flow was prioritised over infrastructure to support local journeys on foot and by bike.

In addition to the spatial factors, there were differences in the social infrastructure and live issues in each community. While both benefited from active community centres, associated social programmes and dense social networks connected through Health and Wellbeing Partnerships, Barton was unique in having the benefit of the resources associated with the national Healthy New Town programme being rolled out in Barton Park. This provided additional staff time and networking opportunities, providing baseline research on health issues in Barton and an action plan to develop health and wellbeing programmes. At the same time the looming development of an urban extension that was proposed to be both 'New' and 'Healthy' raised questions about the identity and qualities of the existing Barton community and how the two neighbourhoods would relate to each other. This resulted in concerns being raised about negative impacts of additional 'rat running' cars taking shortcuts through Barton, changes to bus routes and potential disparities in investment in public spaces.

6. Conclusion

This chapter focused on our research objective of exploring the potential for participatory mobilities planning with local communities to support and develop solutions for healthy urban mobility. This was founded on our motivation to answer the call by Rydin et al. (2012) to use novel research methods to encourage active dialogue with a wide range of stakeholders, and to respond to the critiques of UK transport studies (Cresswell, 2010) and UK planning (Manuel and Vigar, 2021). We have outlined here the process of interaction between ourselves, as researchers, and the local community and highlighted how our grounded findings provided stimulus for local stakeholders, residents and decision makers to take action. A strength of such participatory research can be the 'integration of researchers' theoretical and methodological expertise with non-academic participants' real-world knowledge and experiences into a mutually reinforcing partnership' (Cargo and Mercer 2008 p327).

In summary, the benefits of involving residents and stakeholders in the HUM and BUMP projects can be seen as bringing new ideas, a variety of perspectives and additional forms of knowledge into understanding and addressing local healthy urban mobility issues. It also challenged us, as researchers, both to find innovative ways to gather information and to summarise and communicate ideas and concepts in a clear and accessible way. We were able to build trust with communities and stakeholders over time, which led onto further activities beyond the life of the project. Crucially, we were able to provide co-produced findings that could be used by local groups in their own work with stakeholders - in some cases building on existing agendas and campaigns to give them new life and additional evidence. This included making sure that recommendations and the proposed Community Priority Actions were strongly based on what communities wanted. In addition, the participatory video emerged as an approach with strong potential to represent more than the brute facts of mobility due to the increasing accessibility and affordability of associated video-making technologies, such as smartphones (Cresswell 2010, Manuel & Vigar 2021).

The Community Priority Actions were subsequently taken forward by appropriate local stakeholders. This was important in terms of community ownership, particularly in the light of the fact that the researcher was no longer able to spend time on the project. However, the impact of the project went beyond the local case areas to inform and support County level policy and guidance and also helped inform decisions on transport planning and public health.

Participants and stakeholders highlighted the credibility of the process and outputs gained through association with a University that were based on an ethical approach, the deployment of additional resources (people, skills, communications) and innovative methods. Our process also supported local councillors in engaging actively with their communities to develop shared understandings and priorities, as recommended by the National Association of Local Councils (NALC 2019).

The challenges we faced included the level of engagement of the residents. This was due to a number of factors including limited resources to engage with seldom-heard voices, a highly charged political context due to the United Kingdom's departure from the European Union, and potentially a lack of faith in participatory processes delivering real change that affected people's willingness to engage in policy-related research.

The project was set up to influence, rather than directly deliver, healthy urban mobility solutions, making it harder for participants to get a clear sense of the direct benefits that would result from their involvement. We were mindful throughout of managing expectations on both sides of what we could reasonably achieve with the community, and what the community could reasonably expect from their engagement. At best, we gave them voice and provided ways for them to articulate their concerns and needs in their own language. However, the potential effectiveness of our approach was weakened by a number of elements. These included identifying potential solutions to problems in the Community Priority Actions without always being clear in agreeing and recording what the problem was that needed to be addressed, who needed to be involved for delivery and where the budget might come from.

We acknowledge that participation is a continual, long-term process and that it requires building relationships of trust. We accept that engagement is also a continual process but there are limits to what we as researchers can achieve due to resource restrictions and funding arrangements. The long timescales and significant cost of mobility interventions, particularly infrastructure, mean that any impacts are often delayed.

Evaluation of the long-term impact of this project, given the diffuse nature of the outcomes within a complex system is certainly challenging. This was by no means an experimental design and we did not see the impact on individual health and wellbeing as a potential measure of success given the complexity of contributions. The interviews we conducted with stakeholders provided some evidence of impact.

Given these challenges, consideration should be given to the way that major transport infrastructure projects, such as the previous 'upgrading' of the Barton Roundabout, are designed and managed. Proper resourcing for participatory approaches from an early stage that provide greater community engagement and representivity, avoiding majoritarianism and showing clear positive outcomes in major infrastructure projects could be transformative in delivering healthy and sustainable mobility. There are lessons to be learned here from related fields, for example, the NHS Healthy New Town Putting Health into Place guidance (NHS England, 2019) emphasises planning ahead collectively, connecting, involving and empowering people and communities in order to design active travel to meet local needs.

The main challenge is supporting community and voluntary organisations who are very short of resources and must prioritise their efforts and spending. Possible solutions include grant funding for the public, such as the Barton Healthy New Town Activation Grants that were paid directly to local groups to develop initiatives, and similarly, community research projects funded by the NHS that train community researchers.

We see our research as community-informed and argue that the trajectory of involvement increased towards the end of the HUM project and through the BUMP mural. However, we would not consider it to be fully 'co-produced', as set out by Horner (2016). We hope that we have catalysed stakeholders and decision makers to affect change and support interventions to improve opportunities for healthy urban mobility. However, in the light of the research, we believe that there are a number of lessons that can contribute to developing effective participatory approaches to transport planning in the future.

While the participatory video and other methods we employed helped to demonstrate the impact of the road system on the health and wellbeing of local communities and potential ways forward, we certainly do not see our project as a template for use in other locations or with other health and mobility related issues. For example, tactical urbanism can provide the opportunity for communities to experiment with, and demonstrate, the possibility of larger-scale, long-term solutions supportive of walking and cycling where urban planning for health needs can 'focus on experimentation through projects' (Rydin et al. 2012). What is important is to use a variety of tools in a variety of different spaces of engagement, connecting with a variety of members of the public in a clearly articulated but flexible process suited to the physical, social and historical context of place.

We have concentrated here on one of our project's research questions on the co-production of research and policy outcomes but have also been able to touch on other important related avenues of research relating to our other research questions. These include how to understand and represent people's experiences of mobility and also how the built environment and associated ways of moving impact on individual and community health and wellbeing.

A key objective of the project was to explore the potential for participatory mobilities planning with local communities to develop solutions for healthy urban mobility. Our work suggests that, while there is great potential to build participatory methods into research projects of this nature and more importantly, into transport infrastructure projects, achieving that potential requires acknowledging

the complexity of engagement, and being realistic about the influence that participants are likely to have. We recognise that, while there were positive outcomes both for individuals involved and the wider community through the BUMP project, our research on healthy urban mobility through the HUM project has only touched the surface of underlying determinants of health inequality in a highly complex system (Barton and Grant 2006).

Questions for discussion:

What are the main challenges for engaging the public in planning for healthy urban mobility? Which tools and spaces of engagement would you choose to use to co-produce local healthy mobility? Why these?

How can the effectiveness of public involvement in healthy mobility planning best be assessed?

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Notes:

[1] The main body of research was funded by the joint Economic and Social Research Council (ESRC)/Newton programme (grant number ES/N01314X/1) from January 2016 to June 2019. Project website www.hum-mus.org Funding from an EU Horizon 2020 Marie Skłodowska-Curie fellowship (grant number 749154) enabled a spin-off (the Barton Underpass Mural Project – ‘BUMP’) through 2021.

[2] The broader HUM project focused on an international comparison between Brazil and the UK. Here we focus solely on the UK case. See <https://www.brookes.ac.uk/research/units/tde/projects/ppg/the-healthy-urban-mobility-hum> and <https://doi.org/10.24384/ez53-fp36> for further details.

[3] This gap was widening during the research period and prior to the Covid-19 pandemic due to increasing life expectancy in less deprived areas and stagnating life expectancy in those areas which are more deprived.

[4] For the purposes of local government England is divided into municipal authorities, including county councils responsible for most aspects of transport (but which have no control of buses or the strategic road network e.g. the A40). The county of Oxfordshire extends to 2,605 km² and has a population of c 690,000 with Oxford the largest settlement of c 150,000 people. It includes five district councils, one of which is Oxford City Council.

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