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Session 1: Cycling and Everyday Life in the City

Liv Jorun Andenes (Agency for Bicycling in the City of Oslo, Norway): 'Making Oslo a bicycle friendly city – Ambitions, efforts and results'

After 40 years of broken promises, the City of Oslo is finally speeding up their efforts to increase the levels of cycling. The new city government has high ambitions; a bicycle modal share of 25 percent in 2025. Last measured, in 2013, it was 8 percent.

In 2015 a new bicycle strategy for Oslo was enacted by a unanimous city council. An important foundation for developing the strategy was to map out the current situation for cycling in the city. Thorough investigations and analysis were made. These investigations showed that most people in Oslo want to cycle more, but many regard cycling in the city as unsafe. The current group of cyclists are the so-called “strong and fierce” – men in their 40’s, basically. Surveys also showed that people weren’t satisfied with a lot of the bicycle infrastructure already in place – narrow bike lanes that disappear whenever a bus stop or intersection appears, or shared walk/bike paths.

Today, the city has about 200 kilometers of bike lanes and cycle tracks. The main measure in Oslo’s bicycle strategy (2015-2025) is therefore to make a denser network of cycle paths. On average, the city has built 1.5 kilometers of new bicycle infrastructure each year. In 2016 this number will increase to 10 kilometers, and in addition, 11 kilometers of existing bike lanes are being upgraded – wider lanes to increase safety and passability, red surface to increase visibility, new asphalt to increase comfort.

Another measure is designing better bicycle infrastructure. A local design guide manual, with safer and more attractive solutions than the national standards, is currently being made. The manual contains best practice design from Copenhagen; wide cycle tracks separated from car traffic and pedestrians with curbs. Bicycle streets and contraflow cycle paths inspired by Dutch design are also included.

Within the next 3.5 years more than 60 kilometers of new bicycle infrastructure will be put in place. About 1300 on-street car parking spots are being removed to make space for contraflow bike lanes, increasing the accessibility and competitiveness of cycling. In addition, new bike passages are being made between streets that are closed off for cars, and each year dozens of so-called bicycle boxes in intersections are being put in to increase flow, visibility and safety in intersections.

High-standard road maintenance all year – sweeping and fixing pot holes during summer, clearing snow and ice in winter – was extremely underfunded until last year, when the politicians earmarked about 2 million Euros for this purpose.

Other important steps being made is the decision to make the inner city center car-free within 2020, increasing the toll fee and implementing congestion charges for cars. The city’s impressive public transport system is also being further developed.

A dense network of bicycle paths is a precondition increasing levels of cycling. But it’s not enough. To nudge people into changing their habits the city is also putting much effort into communication and campaigns.

Statistics show that the city’s combined efforts are working: Bicycle traffic so far in 2016 is up by 16 percent compared to the year before. And after implementing a higher standard of winter maintenance, bicycle traffic last winter rose by an astonishing 38 percent compared to the previous one. We therefore believe that other cities struggling to increase levels of cycling have much to learn from the steps being

taken in Oslo.

Esther Anaya (Imperial College London, UK): 'A framework to study the impact of the built environment in cycling behaviour'

INTRODUCTION

In order to increase the levels of physical activity in urban population, it is essential to know how a behavioural change towards cycling as active mobility can be produced and what factors influence people in their choice to cycle. There is evidence to support that changing the built environment has the potential to influence cycling behaviour, but few studies have done longitudinal and multiple interventions assessments.

METHODS / RESULTS

As part of the PASTA European project (Physical Activity through Sustainable Travel Approaches), a framework to understand the determinants of cycling behaviour change and assess the impact of policy interventions has been designed and will be tested with preliminary results in a case-study area.

A longitudinal survey with the goal of 2,000 participants in 7 European cities will provide the core data for the preliminary analysis (the survey will still be open until the end of 2016). The conceptual framework used for the behavioural change assessment is based on the Transtheoretical Model of Behaviour Change, which describes five stages of change. The questionnaires feature specific questions to determine the attitudinal and behavioural profile of the participants.

The framework includes spatial analysis, which will be presented for the case-study of the post-Olympic regeneration plans in East London. Different levels of intensity of exposure to built environment interventions will be defined in a unique dose-response model in regards to the distance, number and quality of interventions that the participants will be exposed to.

CONCLUSIONS

The PASTA project is an on-going study that puts together a singular mix of theories and methods in order to explore the bridges between science and policy making. Understanding the relative importance of the factors influencing cycling behaviour will help to determine the most promising policy avenues.

Jamie O'Hare, Wilbert den Hoed and Rorie Parsons (Newcastle University, UK): 'Shaping inclusive cycling practices using Anglo-Dutch perspectives: we are (not) so different from each other'

Cycling is becoming increasingly important in the everyday mobility of more and more British cities. Connecting to the agendas of public health, congestion reduction and active travel, cycling is said to lay the foundations for sustainable urban travel futures (APPCG, 2013). However issues remain on the inclusion of wider social groups (Aldred et al., 2015), the integration of cycling in daily life practices and the construction of safe cycling environments (Spotswood et al., 2015). Other Northwest European countries with high everyday cycling mobility are often used as imperatives to tackle these issues, both in research and policymaking (Pucher and Buehler, 2008). Yet it remains unsure how cycling practices in both contexts are understood given their local situatedness: cycling practices are complex and strongly influenced by the local culture that surrounds them. As the reality is often highly nuanced this can produce a lack of understanding that can lead to formation of stereotypes. This paper combines perspectives from the UK and the Netherlands to discuss the promotion of cycling in the UK. By observing cycling practices in both countries, the researchers have established a number of themes that are vital to understand a sustainable and inclusive transition in lower-cycling contexts such as the UK. Not only do current cycling practices in the UK hinder cycling from developing into an overall mature transport mode; so does the 'copy and paste' implementation of practices from contexts like the Netherlands. For instance, observations revealed that in the Netherlands tolerance between road users could make up for gaps in cycling infrastructure, and that homogeneous behaviour and appearance of cyclists reduces issues of comfort and safety. These observations can demystify the cycling utopia the Netherlands is often portrayed as, by revealing its imperfections and developments over time. Further cross-contextual observations are needed to establish ground rules for successful cycling policies and inclusive promotion elsewhere.

Maximilian Hoor (Humboldt University Berlin, Germany): 'The Bicycle as a Symbol of Lifestyle and Status? Towards the Cultural Meaning of Urban Cycling'

Bicycling is gaining more and more attention in media, politics and planning. But instead of functioning only as a mode of transportation, leisure or sports, bicycling is becoming more relevant for urban lifestyle practices and social distinction: hipsters with messenger bags on fixed-gear bikes, bicycles on shopping displays and advertising, or wall holders presenting bikes like artwork in the living room, are some examples among many.

To understand how bicycling functions as an object of distinction and lifestyle, my research - conducted as a combination of ethnographic participation mainly in Berlin and media analysis - focusses on three main questions: (1) How did the fixed-gear and messenger style become a subject of popular culture? (2) Which aesthetic and representative manifestations of urban cycling cultures can be seen in cities today? (3) What are the political consequences for urban cycling?

My research shows that one-gear bikes left a subcultural and professional context in the 21st century and soon became a key object of urban popular cultures, implementing aspects of commercialisation, specialisation and standardisation as key aspects of postmodern consumer cultures.

A high increase in media publications (blogs, magazines, film) focussing on urban cycling and lifestyle issues, and many bike-centered events (parties, races, political actions or shops) represent an active and diverse cycling scene. Current connections between fashion and cycling (such as fashion brand bicycles, lifestyle advertising, and bike apparel) show the symbolic meaning of bicycles in postmodern consumer cultures, in which product innovations focus not only on practicability, but on aesthetic and representative functions.

This leads to an overall cultural shift in the meaning of bicycling and will (in one way or another) have an impact on urban cycling rates, mobility practices and urban space.

Jonathan Shapiro Anjaria (Brandeis University, USA): 'Cycle Love: Rethinking persons and objects in India's new cycling cultures'

The bicycle, once widely derided as "the poor man's vehicle," is undergoing a dramatic transformation in contemporary India. In Mumbai and Bangalore, as well as in smaller cities such as Nashik and Bhubaneswar, in the past four years the popularity of cycling has increased exponentially. How should this new popularity of cycling be understood? What surprising communities are being formed through the technology of the bicycle? And finally, what is the significance of the cycling renaissance in India for the future of cycling in cities around the world?

This paper draws from long-term fieldwork with Mumbai's diverse cycling communities —including casual leisure cyclists, serious randonneurs, cycling advocates, gender rights activists and deliverymen. I offer an alternative to much scholarly writing on mobilities that, whether shaped by technical, policy or disciplinary priorities, often overlooks what the bicycle means to people. I show how, for instance, the bicycle is an object of obsession, desire and even love. It is also sometimes seen as a force that transforms gender roles and bodily experience. People talk about communicating with their bicycle, treating it like a baby, loving it, and accepting "vibes" that transforms their bodies, senses of self and even their family. These rich meanings of the bicycle demonstrate that discussions of the future of cycling should not treat it as a transportation technology like any other, but as a technology with its own unique, culturally embedded processes.

Nicholas A. Scott (Simon Fraser University, Vancouver, Canada): 'Wilderness Futures: Cycling, Nature and the City'

This paper examines the social dynamics of cycling to nature in the city. I start with a preliminary finding from an ongoing two year study of city cycling in Vancouver: while the environment does not necessarily move many people to bike, many cyclists often move to nature. Drawing on mobile video ethnographic data collected in five major Canadian cities (2014–2016) and Oulu, Finland (2015), this paper analyzes how city cyclists perform nature in their everyday lives. I argue these performances constitute 'wilderness mobilities.' I base this concept on open-ended, adventurous notions of wilderness (Vannini and Vannini 2016) and performative, affective and sensuous notions of vélomobility (Jungnickel and Aldred 2014; Larsen 2014). What's more, these wilderness mobilities unfold on extensive urban infrastructures that facilitate intentional, prudent choice making, of the sort overemphasized by neoliberal transport policy (Aldred 2012; Cupples

and Ridley 2008), and playful, idiosyncratic cycling practices that fall outside the realm of choice and intention (Shove and Spurling 2013; Thévenot 2012). I show how an adventurous tug of war between prudent and more playful practices of cycling in these nature performances enacts urban wilderness. Lastly, I attempt to show how biking nature animates an ecologically good city. By relating cycling to the good city (Freudental-Pedersen 2015) through ecology, I enter fragile moral terrain usually dominated by more anthropocentric philosophies of the good city (Latour 1998). I conclude the paper in two ways. First, I suggest sustainable cycling futures depend on ecologically good cities and wilderness mobilities. Second, I offer a road map to advance the preceding analysis with quantitative methods using multilevel modelling that maps out urban inequalities related to cycling and access to nature in Canada.

Lance Barrie (University of Wollongong, Australia): “It was freezing cold, it was dark and I’m like, great I really enjoy this!”: understanding endurance cycling mobility practices’

The growing literature on cycling in geography provides important insights to the material, embodied and cultural barriers to cycling as a mode of everyday transport (Jones, 2005; Jungnickel & Aldred, 2014). However less attention is given to the embodied experiences of endurance leisure cyclists. Drawing on assemblage thinking (Deleuze and Guattari, 1988) and feminist, post-structuralist concepts of embodiment, this paper focuses on what gendered endurance cycling bodies do. Used in this way, assemblages are not simply personal bodily interactions with their surrounds, but are concerned also with spatial production, infrastructure and the urban form (Adey 2014). An assemblage approach also permits discussions of the impact and intersection of cycling technology – ranging from bicycle design and cycling apparel to the increasingly pervasive influence of spatial media – upon embodied experience and socio-spatial relations.

Based on ongoing fieldwork in Wollongong, Australia, a regional city located 70 km south of Sydney, this research utilises mixed-methods including qualitative GIS, video ethnography and participatory auto-ethnographic techniques with a small cohort of endurance cyclists. Melding methods in this way aids in triangulating between spatial data, contextual elements evident in rider narratives and the embodied and often fleeting moments experienced during the ride. Adapting this methodological approach to endurance leisure cycling should yield greater understanding of their mobility practices, including the frictions that both speed up and slow down the journey, how cyclists understand and negotiate spaces alongside other transport modes, how mobile cycling bodies become gendered and the communities within which they share their riding experiences.

Session 2: Emerging Innovations for Cycling Futures

Oskar Funk (Copenhagen Municipality, Denmark): ‘The potential for e-bikes in everyday life cycling practices’

In this article, we examine the use of e-bikes in relation to established everyday life cycling practices in greater Copenhagen. While cycling is a well-established practice in Copenhagen, cycling is primarily used on short distances of less than 5 km. The article explores the potential of e-bikes as a way of increase cycling’s share of the modal split on longer commuting distances (5-20 km). We examine the practice of commuting by e-bike in relation to the established practice of everyday commuting on shorter distances, as well as the more niche practice of long-distance commuting by bike. The use of e-bikes on longer distances contains elements of both short-, and long-distance commuting. The design and motor- assistance of the e-bike allows for more convenient and carefree cycling, while it retains the element of physical exercise, which offset the inconvenience of increased travel times compared to the car on longer distances. This makes the e-bike a viable alternative to car or public transport on longer commuting distances. In order to increased use of e-bikes in commuting, municipalities and businesses need to improve infrastructure and e-bike specific cycling-friendly facilities, that support the ease-of-use practice of cycling on shorter distances.

The article is based on research conducted in 2014-2015, as well as the preliminary results from “Test an E-bike”, a large-scale mobility experiment by Gate 21 in Copenhagen, in which 1700 commuters tried out an e-bike for a period of 3 months. Gate 21 has collaborated with the authors and provided data from the experiment.

Robert Bradshaw (Maynooth University, Republic of Ireland): ‘Technical Citizenry and the Realisation of Bike Share Design Possibilities’

Contemporary or “smart” bike share schemes have exploited the capacity of information and communications technologies to effectively automate systems and deliver improved mobility and convenience for citizens in a way that is both sympathetic to the environment and cost effective for service providers. However research in the sector has tended to view schemes as technically homogenous with comparatively little attention paid to the potential of collaborative design processes to deliver on goals which transcend quite narrow definitions of efficiency and sustainability. As the industry evolves and new forms of engagement emerge, collaborative design has the potential to enrol riders in knowledge sharing and decision making practices which frame them, not as passive recipients of information and services, but as active participants in the creation of the systems they appropriate. Using a lens derived from Andrew Feenberg’s critical theory of technology, this paper reports on a case study conducted in Hamilton, Canada, which explored these themes through an analysis of the design and implementations strategies used to realise their bike share scheme in the real world. The findings reveal the system to be integral to, and reflective of, a new liberatory and inclusive politics emerging within the city. The scheme was seen to embody Feenberg’s notions of democratic rationalization and technical citizenry, with institutional expertise and lay experience combining in imaginative and mutually coherent ways to create a technology which embodies a diverse but complimentary set of goals and ideologies.

Shaun Williams (Cardiff University, Wales): “‘Pleased to announce you’ll never cycle here’: Imagining the ‘(bi)cyclist’ in urban design orthodoxies and cycling infrastructure’

This paper addresses questions of cycling inequalities that are generated by a preference of accommodating utility cycling, alongside presumptions of the needs for leisure cycling. It is argued that (a) cycling design guidance assumes a young, flexible bicyclist that is suitable for the challenges urban cycling, and (b) users which deviate away from this normative bicyclist (such as tricycle and E-bicycle users) are accommodated with recreational, ‘segregated’ spaces. Drawing upon research with the EPSRC funded cycle BOOM project on the experiences of older cyclists in the UK and my own postgraduate research, this paper provides discussion on social inequity concerning the needs, skills, and desires of differently-abled bodies to perform ‘taken for granted’ manoeuvres that the imagined pedal cyclist-bicycle hybrid is believed to be capable of.

Contributing to the cumulative literature on mobile methodologies, this research employs mobile observations and video elicitation interviews, and an adapted qualitative mobile method, the ‘cycle-through’ focus group, to explore urban design perspectives and the social context of mobility of tricycle and E-bicycle users. Synthesising with literatures on mobility and belonging, urban design, and post-structuralist theories, this paper provides an account of the spaces where tricycle and E-bicycle users’ corporal mobility is perceived to be facilitated and where it is perceived to be restricted. From the perspective of users, this paper thus seeks to illustrate that if we critically ‘unpack’ the cycle design orthodoxy, reconsidering what we accept as design standards of physical infrastructure, we can begin to open opportunities for everyday mobility and access to the urban environments regardless of age, ability, or desires for cycling.

Working alongside Sustrans Cymru, this research seeks to assist Welsh local authorities with statutory duties of consultation for the Active Travel (Wales) Act, 2013. It looks to go beyond gathering the views of the ‘usual’ suspects of cycling, facilitating this discussion through the views of alternative types of cyclists by identifying the time-space politics that is inscribed to the urban environment.

Robin Lovelace (Leeds University, UK): ‘Tools of the trade: adapting 20th Century transport models for 21st Century challenges’

Transport models have an enormous influence on transport plans, with major impacts on the attractiveness of active travel. Yet these models were developed in a different era, when the aims of transport policy were very different from what they are today. This paper provides a brief review of what transport models are, demystifying the methods and software underlying their operation. The review finds that transport models provide useful and relatively objective information to public and private sector researchers but that their public utility is hindered by proprietary licenses, inaccessibility to the public and emphasis on unsustainable modes. Overall it seems that transport models are not fit for solving 21st Century issues: they reduce the ‘option space’ visible to policy makers and perpetuate the 1950s view of a car dominated future, rather than illustrating what is possible. Opportunities for the future are demonstrated with reference to a new breed of open source, citizen contributed and publicly accessible transport planning tools. Rather than start from scratch, the paper explores how methods and concepts from traditional transport models, such as ‘predict

and provide' can be repurposed for active travel planning. The paper concludes with insight into how the transport planning tools of the 20th Century can be upgraded, and in some cases replaced, so they can tackle the challenges of the 21st.

Toby Smith (UC Davis, USA): 'Mapping the Cycling Body: Urban ontologies, locative knowledge, and digital drift in the Age of Strava'

At the beginning of May, in Los Altos Hills, a wealthy Silicon Valley city, a council proposal was unanimously passed that bans the use of mountain bikes in the Byrne Preserve, an open, grassy area in the west part of the city. The overwhelming evidence that convinced the council to enact the ban was a printout of the fastest mountain biking runs through the park's 6 Strava trail segments.

Although this is not the first instance of Strava's database information being centralized in legal and policy issues – a 2012 lawsuit alleged that Strava was responsible for the death of a Bay Area cyclist while attempting to reclaim his leaderboard status on a treacherous descent in Berkeley – here, the potential for the sort of broadly accessible surveillances enabled by Strava's continually growing use database threatens new modes of capture and mobility tracking that produce surveillant terrains in spaces both urban and rural. But can the capacities for tracking enabled by Strava also gesture us toward new forms of play and resistance in those same spaces?

This paper examines the always-present threat of surveillances present and future enfolded within ongoing practices of self-tracking via social cycling and fitness apps and considers modes of playful opposition born of those same practices. By placing Foucault's conception of an "anatomy-chronological schema of behavior" into conversation with Debord's "derive," a mode of urban movement contingent on playful passage, I consider the continuous negotiation between visibility and play present in the act of urban cycling itself, as well as integral components to the use of Strava – a digital platform that gamifies both time and space.

Session 3: Cycling Inequalities

Martin Emanuel (Uppsala University, Sweden): 'From Victim to Villain: Cycling, Mobility Policy, and Spatial Conflicts in Stockholm, ca 1980'

This paper seeks to inform present-day policy-making for sustainable mobility through a study of cycling politics, infrastructure, and practice in Stockholm in the years around 1980. Having experienced a surge for almost a decade, in the early 1980s, cycling levels in Stockholm declined, and only recuperated again in the 1990s. Like in present-day Stockholm, debates around cycling in 1980 were not focussed primarily on struggles between automobility and cycling, as one would perhaps believe; they were grounded in tensions between cyclists and *pedestrians*. Within a predominantly car-based mobility regime, "cycle-friendly" measures were taken at the expense of pedestrians rather than motorists. The co-existence of cyclists and pedestrians was further complicated by the popularisation of light-weight, multi-gear (high-speed) bicycles and the emergence of a new subculture of urban sport cycling. Within a few years only, the image of the cyclist transformed from the victim (of automobility) to the villain, and, for this reasons, something less easily supported by local politicians. Similarly today (although with some important changes in the socio-economic position of cycling and approaches to urban traffic planning), in a situation of rapid increase of bicycle commuting in Stockholm, cyclists and pedestrians are pitted against each other to an extent that, it is argued, might jeopardize the future of cycling. Thus, notwithstanding this year's conference theme, focussing on the sustainable *futures* of cycling, this paper aims to better understand potentials for such brighter futures through historical inquiry. Drawing on social practice theory, the paper is however essentially an empirical one based on historical method and using a diverse set of sources, e.g. city council minutes, newspaper articles, cycling organisations' member magazines, bicycle producers' marketing material, and archive material from the local Traffic Department. Although every city has its peculiarities, also in terms of cycling culture, it is believed that the Stockholm case is relevant at least for other cities where cycling is making its comeback from rather low levels, such as in most British cities.

Anne Jensen (Aarhus University, Denmark): 'Cycling, sustainability and the power of mobility cultures'

Cycling is frequently linked to sustainable (urban) mobility, and while cycle mobility offers large environmental gains relative to motorized automobility (Banister 2011), the social (and economic) sustainability opens a different perspective on cycle mobility, in particular the interwoven dimensions of

environmentally friendly transport and social equality, across time (intergenerational) and space (local – global). Also societal – and urban – transitions involve mobility and especially cycle mobility in a central position in order to e.g. reduce CO2 emissions and improve air quality and health, while transport practices have shown extremely difficult to change (Schwanen et al, 2012), influenced heavily by widespread regimes of automobility. Increasingly, attention is turning to also address cultural and affective aspects of mobility (Sheller, 2016; Aldred and Jungnickel 2014).

This paper investigates in which ways working with cycling cultures can stimulate transitions to sustainable mobility, and how this is affected by power mechanism. Using perspectives of Foucault's bio-power and the shaping of mobile selves through discipline and practice (Sheller 2016; Foucault 2003, Jensen 2013) and perspectives of capacity for movement (i.e. motility, Kaufmann 2001) through cycle skills, the paper investigates a case of a non-profit cycling repair workshop and hire business in Copenhagen, Baisikieli. Baisikieli combines the promotion of cycling for everyone based on recycled bikes with building mobility capacity in Mozambique where they offer bikes as well as training of bike repair mechanics. The study shows how the rationale of the cycle repair workshop is based on specific perceptions of cycle cultures that through mundane practices and norms affect how people shape their mobile selves, in Copenhagen as well as in rural areas of Mozambique. Through working in practice with developing cycling from a non-profit business angle, Baisikieli partly follows governmental mobility regimes while concomitantly tracing new mobility regimes that, through shaping what cycle mobility is and stimulating cycle mobility capacity, at its very core combine social and environmental sustainability.

Angela van der Kloof (Mobycon, Delft, The Netherlands): "Cycling for everyone' in the Netherlands'

Cycling for everyday travel is encouraged across nations as a healthy, active and environment friendly choice. It is, however, not seen or accepted as such across every population, gender, cultures and ethnicities. Scholars have reported how cycling in many parts of the Western world is disproportionately dominated by the affluent and white male; the primary reason being the attributes of safety and image of cycling, which resonate differently across the segments of the population. One can assume that in a country like the Netherlands, where the infrastructure and the image of cycling is far from inconspicuous, these differences would be less prevalent. How valid is this assumption? Do socio-cultural and ethnic backgrounds play a role in assuming bicycling as a conscious travel choice in the Netherlands? Interestingly, these questions have rarely been addressed.

Similarly, bicycle ownership rates, the level of bicycling skills and bicycle use amongst immigrants in the Netherlands have hardly been addressed in the literature. In this study, we intend to report on the change in cycle share for non-native Dutch from 1970's onwards, based on the national travel surveys (CBS) and data we can acquire from Dutch cities. Next to that we will make a compilation of what researchers have written about these statistics. With this we expect to find where there is a gap in current research in the Netherlands addressing ethnic and social-cultural backgrounds and cycling. We will propose a conceptual framework and a research plan to address the influence of ethnic and social-cultural backgrounds on cycling behaviour in the Netherlands.

Amy Lubitow (Portland State University, USA): 'Barriers to Routine Cycling for Women and Minorities in Portland, Oregon'

The health benefits of bicycling are well understood; numerous studies link increased cycling activity with improved health outcomes (1). Garrard et al. (2012) suggest that the cycling behavior most likely to generate broad, population-level health benefits is everyday routine cycling- including running errands and taking other short trips. Despite these health benefits and new investment in cycling infrastructure, overall cycling levels in the U.S. lag behind many other nations. Amidst findings of increased ridership, research still finds that women and racial minorities are underrepresented as cyclists in the U.S. (2) While quantitative data may reveal estimates of these disparities, we know little about the motivations or deterrents experienced by individuals (3).

This research paper therefore uses data from 30 in-depth interviews with women and minorities in Portland, Oregon to clarify ongoing barriers to bicycling that prevent those who own a bike (and are thus not limited strictly by economic barriers) from becoming more routine cyclists.

Findings suggest that barriers for marginalized cyclists range from concerns about infrastructure limitations

to overt racial and gender discrimination experienced while riding. Data also shed light on the unique social position of mothers, who often face challenges transporting children. These findings suggest that cycling mobilities are critically linked to intersecting and overlapping identities and that efforts to increase diversity in bike ridership must acknowledge the unique challenges experienced by marginalized groups.

Marina Kohler Harkot (FAUUSP, São Paulo, Brazil): 'Why don't women cycle in São Paulo? An analysis on the low rates of women commuting cycling in São Paulo, Brazil'

There is very little data available on commuting cycling in the Metropolitan Region of São Paulo. Carried out every 10 years by the subway company, the Origin-Destiny Survey is the main research for travel patterns in the region and receives critiques on not being able to capture properly active transportation patterns, including cycling. The cyclists association also carry out bike counts and other kinds of research that play an important role on advocacy for cycling infrastructure, but their methodological down points make it difficult to use the data to estimate the amount of regular bike trips in São Paulo.

Even if there is not many quantitative knowledge about cycling in the area, there is though a remarkable disparity in the amount of male and female bike-commuters: according to the Origin-Destiny Survey, in 2007 no more than 15% of the cyclists were women (OD, 2007). Plus, the series of bike counts carried out by the Ciclocidade show a little over 8% of women cyclists.

What could be the reason for such differences? This presentation will analyze the available information on women and cycling in the city, looking at the context of the paradigm change adopted by the municipal administration of São Paulo in what concerns to urban mobility public policies - especially the increase on the cycling infrastructure, which has grown from 63 kilometers in 2012 to 463 kilometers in 2016, in addition to traffic calming measures.

Plus, there will be presented some hypothesis on São Paulo's women low cycling rates in contrast to Brazilian cultural aspects, traditional gender roles and the evolution over the past decades of the place Brazilian women occupy in the urban environment.

Kevin Hickman (Inclusive Cycling Forum, UK): 'Lost in translation - is cycling's lingua franca ignoring disabled people?'

In 1893, only five years after it was founded in Yorkshire, the Bicycle Touring Club rebranded itself as the Cyclists' Touring Club to become inclusive of tricyclists. In 2016, the World Cycling Alliance seemingly turned the clock back by calling for the creation of a UN designated World Bicycle Day which again, based on an unchanged definition of the word bicycle, would not include tricycles, nor hand-cycles or any cycle other than "a vehicle with two wheels, one directly in front of the other, driven by pedals."

Is this because the words 'bicycle' and 'bicycling' have become synonymous with 'cycle' and 'cycling' across the world? And if so, does it make disabled cyclists invisible to the readers and listeners of cycling literature?

A selection of English language cycling literature is analysed, both contemporary and historic, to determine when, in what countries, and in which contexts, the terms bicycl(e), tricycl(e) and hand-cycl(e) appear. For non-English speaking countries the nouns and verbs bicycle, tricycle and hand-cycle are translated into the country's language to determine whether a direct translation exists and if it is being correctly translated into the English language. The extent to which the inclusive terms cycle and cycling have been supplanted and the possible causes is discussed.

A method for discovering whether and to what extent the awareness of consumers of cycling literature is affected by the terms used to describe different cycle types is sought. Specifically: Can word choice exclude disabled people? Can word choice be used to include disabled people? Which words exclude and which include?

Finally, are there relevant examples of a word changing its meaning over time such that an exclusive word in the present becomes an inclusive word in the future? ie, does it matter?

Session 4: Cycling Governance (Part 1)

Fanny Paschek (University of Greenwich, UK): 'The governance of cycling in London'

In 2013 former London Mayor Johnson committed to delivering 'substantial – eventually transformative – change' both for people currently cycling in the capital and those aspiring to. In his Cycling Vision he further acknowledged that such transformative change also required that the bicycle no longer be treated 'as niche, marginal or an afterthought, but as [...] an integral part of the transport network'. In order to understand the potential of this ambitious vision translating into a successful 'transformation' my PhD research has focussed on studying the governance of cycling in London as part of a broader socio-technical change process involving not only material and infrastructural changes, but also institutional, cultural and discursive change.

Drawing on documents and interviews with a variety of public and private, governmental and non-governmental actors across multiple scales (Local Authority/Greater London/UK/EU level) this research highlights both structural selectivities, e.g. institutions giving strategic advantage to some stakeholders and their actions over others, and agential selectivities, e.g. the differential ability of various stakeholders to read and exploit or circumvent such structural selectivities for their purposes. In doing so the research draws attention to these selectivities and how they interact to variously hinder or facilitate broader socio-technical change towards a more cycling-friendly London. The research hopes to aid relevant stakeholders in understanding barriers and opportunities for strategic action towards a more cycling-friendly city by encouraging them to develop a dynamically relational understanding of their position vis-à-vis other stakeholders in cycling governance processes.

Fieldwork for this PhD research has been concluded and findings will soon be submitted for examination. I hope to contribute to this year's Cycling & Society Symposium by using it as a forum to present this research to academics, activists, practitioners and other interested stakeholders and to hear whether the findings and/or the framework resonate with them.

Hugh Mackay, Hillary Reed and Tom Wells (Open University, UK; Cycling UK RTR - Portsmouth; New Image Bicycles): 'Cycling governance: the structure of cycling organisations and their effectiveness in shaping policy'

This paper provides a mapping and analysis of the structure, organisation and activities of some of the key cycling organisations (including Sustrans, British Cycling and Cycling UK) and their influence on government policy. Its focus is primarily on Wales but it also addresses England, the UK government at Westminster and includes some reference to Scotland. It thus explores one area of civil society across the nations of the UK. The contemporary situation is contextualised with a little history of cycling organisations, notably regarding memberships and activities.

The paper examines the constitutional and organisational structure of these key organisations, in terms of governance and participation. It compares and contrasts organisations in terms of club/ representative/ democratic models versus professional/ supporter models. Key models of third sector governance and management are applied to understand and categorise how these bodies are structured and how they operate.

The paper also examines the external environment, or the context in which they operate. It looks at the activities of these organisations and their modus operandi – the profile and lobbying of these bodies. Here the discussion is framed by theories of representation and civil society, answering the question 'how and to what extent do these organisations shape debate and policy?' There are several dimensions to this, and two are considered: the lobbying of politicians and political parties on an ongoing basis, for example at election times, party conferences etc; and the representation of cycling interests in the specific policy-making contexts: who has what access, and how do they use it? What is the relationship between member or supporter activity and activism, and the professional lobbying of the organisation? What is the nature and extent of collaboration, partnership or co-operation between these bodies? In what ways and areas do they influence the policy process?

The paper concludes with some thoughts about the key dilemmas and possibilities for cycling organisation and lobbying in the UK.

Gabriele Schliwa (The University of Manchester, UK): 'What the hack!? Exploring civic hackathons for participatory urban governance – The case of cycling'

The concept of the smart city has received considerable criticism for its overly techno-centric approach to urban planning and management that neglects to consider social issues around inclusion and exclusion and the ethical issues of privacy that can arise from third party uses. For citizens, becoming a user of technologies is often presented as progressive 'participation' or 'empowerment'. City systems increasingly become a digital marketplace where citizen-consumers' participation is increasingly involuntary and current smart city initiatives fail to create real sustainable value. Mobility is one of the key themes within smart city agendas as it is essential for a city to function properly and cope with the ever increasing trend of urbanisation and densification. Civic society-led initiatives such as living labs and civic hackathons emerge with a promising potential to solve urban challenges, providing a space for new forms of governance through collaborative experimentation and problem-focused iterative learning. Based on design thinking principles, the main idea behind these initiatives is to identify user needs in order to co-create appropriate problem-solving solutions.

In this context, this paper adopts a case study approach to explore how design-driven initiatives aimed at urban cycling are set up, engage citizens from the bottom up and can be embedded in urban governance to potentially co-create solutions that facilitate a modal shift to cycling. CycleHack has been chosen as a case that suits best the process (design-driven urban innovation) as well as the application area (cycling). The not-for-profit civic hackathon brings people together from around the globe to come up with ideas to tackle the barriers to cycling and provides them with the tools and space to prototype them in under 48 hours. Exploring the role of smart technologies from the user perspective, this paper unpacks the emerging smart cycling agenda from civil society perspective.

Sally Watson (Newcastle University, UK): 'Probing elusive power structures within a city's cycling politics'

Transport cycling in all its forms (performing, production and politics) is pushing hard against the socio-technical system of automobility, as described by Urry (2004). The spatial turn combined with the need to re-apportion urban space away from the car (Pooley et al, 2013; and Pucher & Buehler, 2012), making the implementation of transport cycling incontestably political. In resistance to automobility, velomobility studies, such as by Koglin (2014), are emerging under the new mobilities model (Sheller et al, 2006) investigating current imbalances and redirecting future trajectories toward a more sustainable society. Our investigation seeks to uncover and dissect the structures of power and politics present in a city that has started a tentative transition away from the private car.

Using Jensen's staging mobilities framework (Jensen, 2013, page 6), we will begin our examination by looking from 'above' and carry out document analysis on transport-related policies for Newcastle upon Tyne. This gives us an understanding of the way highways and public spaces are valued, albeit in a theoretical political plain. The actual practical plain will be evaluated through space observations and interrogation of secondary data sets. Looking from 'below' we will assemble a user perspective on the possibilities and needs of space reallocation through interviews and natural observations. Bringing the 'above' and 'below' together we will discuss what the pressures are that are put on the practices that produce space and the political skills to command a transport transition. In conclusion we will draw on our activist backgrounds to formulate ideas for the decision-making and campaigning processes involved in making Newcastle's civic society fit for cycling.

Alan Munro (consultant researcher, UK): 'Everybody wants to change the world: Re-imagining future notions of 'activism' in cycling'

Like it or not, being a cyclist has tended to involve being an 'activist' of some description. In fact, there is a notion that just by being on one's bike one is making a 'stand'. It is part of the history of cycling that activism has impacted, sometimes majorly, on the provision of cycling infrastructure and cycling-friendly laws. Unlike other forms of transport, it seems as if such a turn requires the support of activism.

However, the notion of the 'activist' may be a problematic one. Like many notions we use unthinkingly, like 'love' or 'art', it may be a nexus of disparate elements such as private feelings, public affirmation, culturally-specific ideas, perhaps passed down through generations. Thus, 'activism' as a concept is surrounded by popular tropes, representation through film and writing, and culturally specific frameworks of thought that lead us to think of it in particular ways. However, as with 'love' and 'art', those popular tropes may be far

from lived experience.

We will investigate if such tropes may not reflect lived reality, but may actually present damaging misconceptions that could actually deter those who might otherwise get involved in some form of campaigning. It may also lead those in activism to have damaging perspectives on their own behaviour. Rather like the idea of the 'soul mate' can bring to bear a whole analogical framework to 'love' with concomitant, and sometimes quite damaging, expectations, we wish to look at conceptions of activism and possible correctives from the lived experience of activists themselves.

Most likely, the future of cycling will be tied up with activism of some form. For sustainable transport, we require sustainable conceptions of the activism that helps bring it to fruition.

Neil Andrews and Isabelle Clement (Wheels for Wellbeing, UK): 'Beyond the bicycle: towards a true cycling revolution'

Cycling infrastructure is often designed with the fit and the brave in mind – as a result, disabled people are routinely denied access to adequate cycling opportunities. However, research shows us that in some parts of the country 15% of disabled people use a cycle to get around occasionally or often, compared to 18% of non-disabled people.

There are significant barriers that prevent more disabled people from cycling. Lack of inclusive cycling infrastructure (e.g. poor road surfaces, kissing gates and bridges) presents one problem. On a policy level, there has been a failure to recognise the need for appropriate parking and storage facilities for non-standard cycles. As a solution, we have proposed that cycles be recognised as mobility aids and have advocated the piloting of a 'blue badge scheme' for disabled cyclists, including those who cycle oversized and non-standard cycles. Similarly, investment in e-cycles and hire schemes for non-standard cycles is essential if greater numbers of disabled and elderly people are to be encouraged to cycle.

Off the road, a lack of awareness and information on inclusive cycling opportunities, a dearth of academic research and literature on the subject and an under-representation of non-standard cycles in policy and design imagery continue to discourage many more disabled people from considering taking up cycling.

From our own experience, we are able to demonstrate that bicycles are not the only form of cycle; just as athletic, white males are not the only type of cyclist. We will evidence that by prioritising cycling investment to those with the highest needs and requirements, policymakers can deliver infrastructure that is accessible to everyone, regardless of fitness or strength. In turn, this will produce significant health benefits for those most likely to be inactive in society and experience isolation and could unleash a true cycling revolution: cycling by the majority, not the exception.

Session 5. Cycling Governance (Part 2)

Alistair Sheldrick and Gabriele Schliwa (The University of Manchester, UK): 'Policy Learning and Sustainable Urban Transitions: Mobilising Berlin's Cycling Renaissance'

This presentation will communicate key contributions from a forthcoming Urban Studies paper based on research conducted as part of the ESRC funded Manchester Cycling Lab at the University of Manchester. The paper draws on an empirical study of Berlin and Manchester to offer a critical exploration of the role of policy-learning in contemporary cycling governance.

Cities are increasingly seeking to learn from experiences elsewhere when planning programmes of sustainable transition management, and the contingencies of policy-learning arrangements in this field are beginning to receive greater attention. The paper applies insights from the field of policy mobilities to the burgeoning field of transition management to critically explore a proposed 'learning relationship' between Berlin (Germany) and Manchester (UK) around cycling policy. Drawing on qualitative data, the paper casts doubt over the existing consensus attributing recent growth in bicycle use in Berlin to concerted governmental interventions. A multi-actor analysis suggests that contextual factors caused the growth in cycling and that policy has been largely reactive. The emergence and circulation of the Berlin cycling renaissance as a policy model is then traced through policy documents and interviews with actors in Manchester, UK, to understand why and how it has become a model for action elsewhere. It is concluded that Berlin's cycling renaissance has been simplified and mobilised to demonstrate the requisite ambition

and proficiency to secure competitive funds for sustainable urban transport. The paper develops an original study of the role policy knowledge and learning play in sustainable urban transition management, and argues that attending to the dynamics of policy learning can enhance our understanding of its successes and failures.

Dag Balkmar (Örebro University, Sweden): 'Bicycling and politics: movements, strategies and visions in bicycle activism in Sweden'

The Swedish national government, as transport authorities and many Swedish municipalities, are currently planning and implementing ambitious programs that are designed to promote cycling and increase the share of cycling among everyday travel modes. However, with more 'pro-cycling' discourses and in the wake of antagonism and lack of road space for increasing numbers of cyclists, new forms of bicycle activism appears to be on the rise.

The purpose of this paper is to describe and analyse the ways in which bicycle activists in Sweden construct their politics and the role of bicycle activism as a vehicle for contributing to more sustainable cycling futures. What are their concrete approaches and strategies that inform their activism? How do activists and advocates view bicyclists as e.g. vulnerable, angry or marginalized subjects, and how do they view their roles as spokespersons for these groups? What alternative visions for cycling and cyclists are expressed? Empirically the paper focuses on three expressions of contemporary bicycling activism/advocacy; the Swedish national cycling advocacy organization, the ad-hoc "Ghost Bike Sweden" and the on-line based "Bike Maffia"-initiative in Stockholm.

It is argued that all three reflect a "contested terrain" with regard to approaches and strategies to bicycle activism (Vivanco 2013, 103). Although all three share an ambition to improve conditions for cyclists, they reflect core differences in their strategies and views on bicycling as contested practice: from more pragmatic, policy- and solution-oriented approaches to explicitly political and hands-on street-level activism. All three organisations/initiatives also represents different forms of grassroots organisations with different capacities to participate within formal governance structures. However, the more activist based initiatives seem to create spaces for new forms of political engagement beyond formal institutions – initiatives that also are worth listening to.

JP Amaral (Bike Anjo, São Paulo, Brazil): 'Brazilian society and Municipalities together for the inclusion of bicycles in urban mobility plans'

"Bicycle in the Plans" is a project designed by Bike Anjo, Transporte Ativo and União de Ciclistas do Brasil with support from ICS. It aims to cooperate with municipalities and local bicycle organisations to promote the adequate inclusion of bicycles in Urban Mobility Plans (UMP) in Brazil.

In 2015, all municipalities with over 20.000 inhabitants should have presented an UMP, but only 30% accomplished it, mostly due to lack of governance or technical guidance.

To tackle this challenge, this project developed a national campaign to mobilize municipalities towards governance and include cycling as a main priority in their UMP. The main activities were: the development of a pioneer reference guide on bicycle inclusion in urban mobility plans as a tool for technicians, civil society and municipalities; local advisory for 10 cities during 1 year; and an online platform with a full toolkit to promote awareness and inform about the progress on the UMPs: <http://bicicletanosplanos.org>.

Within 6 months of the campaign, the following results were achieved:

23 cities are participating in the campaign;

7 cities developed an urban mobility plan and 6 include cycling;

3.450 copies of our Guide were sent to stakeholders and was downloaded 721 times by 273 cities in all states of Brazil and other 4 countries;

The campaign had 17.000 views and almost 1.800 supporters;

The launch workshop had 400 online viewers and 14 cities were present;

2 meetings were held with the city hall of Fortaleza, 2 workshops developed by Salvador and Fortaleza, participation in public hearings and consultation processes.

Still 2 technical workshops will be held at the biggest Brazilian Bicycle event, an on site advisory with two

chosen cities, Maringá and Bragança Paulista, is being arranged, as well as a final status report of the UMPs in Brazil.

Chelsea Tschoerner (Nürtingen-Geislingen University of Applied Sciences, Germany): 'From transport planning to policy for mobility: Cycling policy in Munich as an example of new forms of governance for everyday mobilities'

Planning and policymaking in the transport sector have gone through dramatic changes over the last decade. In Germany, the rise in environmental awareness since the 1980s has shaped policymakers' and the public's normative perspectives on what constitutes sustainable and environmentally-friendly movement. At the same time, policymakers' and planners' practices continue to strongly reflect an ideational framework that is rooted in the organization of traffic flow and the objectification of dynamically-lived mobilities as measurable objects for planning. The 'system of automobility' (Böhm et al. 2006, Urry 2004, Geels et al. 2012) remains strongly present, not only in everyday life, but also in policy cultures.

This presentation will look at the case of local policymaking for cycling in the city of Munich, Germany, in order to better understand this changing field of planning and policymaking in the transport sector. I argue that cycling promotion in Munich reflects much more than planning for the bicycle as a sustainable mode of transport. It goes beyond transport planning as such and reflects the new organization of various stakeholders in the making, shaping and changing of policy and mobilities realities in Munich (Tschoerner forthcoming). I ask: How were these changing governance structures in Munich fostered, as well as hindered and limited? And what specific constellations of actors, practices and narratives have been central for fostering new cycling policy in Munich?

Policymakers in Munich increasingly say that by promoting cycling, they aim to foster a 'new mobility culture'. In practice though, it seems that it is precisely these processes of promotion which are central to such change. The sustainability of everyday cycling practices and the fostering of a more sustainable urban system in Munich thus might rather be described as dependent on not only a 'new mobility culture', but furthermore a 'new policy culture'.

Chihyung Jeon (Korea Advanced Institute of Science and Technology, South Korea): 'Dams and Bikes: The Four Rivers Bikeway and the Contested Mobilities in South Korea'

The bicycle often stands for an alternative, eco-friendly form of mobility, and bicycle riders are usually assumed to be "environmental citizens" who express their values and concerns by choosing to bike and demanding better policies and infrastructure for bicycles. In this paper, I complicate this familiar characterization by examining South Korean bicycle riders' response to the construction of the Four Rivers Bikeway. The Bikeway was planned as a part of the Four Rivers Restoration Project, the biggest construction and development work in Korean history to manage four major rivers in the nation. Whereas environmental groups, experts, and citizens strongly opposed the Restoration Project for its potentially devastating impact on the ecosystem of the rivers, most bicycle riders welcomed and then enjoyed the nationwide network of bicycle roads built along the rivers. As the riders remain indifferent to the broader environmental politics within which their traversing of the "nation's land" on a bicycle was made possible, they appropriate, and are appropriated by, the political construction (or destruction) of rivers, environment, and mobility. The healthy, nature-loving riders on the Four Rivers Bikeway had a paradoxical effect of masking the environmental consequences of the Four Rivers Restoration Project. In confining themselves within a leisurely, depoliticized mode of bicycle mobility, these riders manifest a peculiar kind of "cycling citizenship," one that is less self-reflective environmentally and more compliant politically than that of exemplary bicycle riders elsewhere in the world.

Fariya Sharmeen (Radboud University Nijmegen, The Netherlands): 'Cycling Innovations towards Urban Transitions in Energy, Policy and New Modalities'

While cycling is promoted as a sustainable and active mode of transportation, its use is limited to short intra-urban distances and as a feeder mode to access public transit. A limitation that potentially could be conquered through the provision of unobstructed cycling infrastructures. An example of such is the fast cycling route connecting the twin cities of Nijmegen and Arnhem in the Netherlands, offering a lucrative and healthy alternative to driving or using public transit to work. However not everyone can cycle as fast even when the route is unobstructed owing to either physical or weather conditions or both. To that end, e-bikes and solar bikes can offer superior alternatives ensuring speed, safety and low emission at a relatively

reasonable cost.

Along these realisations, cycling is gaining its long overdue attention in shaping sustainable urban regions of the future. Increasingly urban regions are offering innovative and shared modalities including cycling to improve the living and travel choices in a more sustainable way. Motivational campaigns to promote cycling have also evolved to be more innovative, involving social media and smartphone applications, by means of using kilometre traveled as currency to exchange for retail purchases, for example. Such initiatives, however, often are seen outside of the mainstream transportation planning. Even in a country like Netherlands, bicycle-friendly policies often depend on the activities of the so-called policy entrepreneurs. The recent interest for cycling in the Netherlands and the rapid increase in bicycle use in many cities around the world can in part be attributed to a new generation of active inventive forms of 'policy entrepreneurship'.

With this view in mind, in this study, we present the ongoing cycling innovations in urban regions, taking the Netherlands as the case study. Further to that we highlight the need for specific policy interventions, the ongoing innovations around it and delineate the role of policy entrepreneurs.

Session 6: Cycling Innovations (poster presentations)

Tobias Barnes Hofmeister (Norwegian University of Science and Technology): 'Co-creation and persuasive technologies for increased urban cycling: a practice oriented design approach'

Urban mobility practices account for one fifth of global oil consumption, subjecting cities symptomatically to traffic congestion and exhaust fumes. Cycling is often proposed as remedy to improve urban sustainability and its liveability. However, the complex nature of cities reinforces prevailing mobility practices through circular causalities, thus often leaving cycling modal shares at marginal levels. The city as material artefact emerges through the interactions of its actors, but once emerging, it affects them through a recurrent relationship in which social and physical structures shape and constrain agency and vice versa. Due to their scale and complex multi-stakeholder nature, cities are incomplete and nonlinear. Thus, their final characteristics are not determined by designers and planners, yet rather their citizens, who can be seen as latent designers. Acknowledging the potentially decisive impact of citizen behaviour for urban transformations, this article explores the effects of involvement and social persuasion to increase bicycle modal shares. The analysis draws on social practice theory and explores how co-creation methodologies and socially influencing systems can supplement practice-oriented design interventions. Social practice theory, as a bridge between structure and human agency, focuses on the integration of meanings, materials and competencies into routinised everyday activities. Innovation or replacement of specific practice elements allows for practices to change in space and time. The article presents a methodological approach to alter mobility practices and maintain their new composition through identifying pivotal practice elements to be subjected to socially influencing systems. The discussion illuminates the potential effectiveness of these methodologies and contributes to the development of strategies for supplementing practice-oriented design interventions in the context of urban mobility.

Conor Walsh (University of Leeds): 'Using early adopters from the 11 Shared-use Electric bike schemes in the UK to build a policy framework to increase adoption and use'

The impressive growth of Bikeshare in cities across five continents is testament to governments trying to encourage cycling in an effort to reduce vehicle numbers in cities. The number of cities operating Bikeshare systems has increased from 13 in 2004 to 855 as of 2014. This can be seen within the more impressive growth of Shared Mobility services in cities, Rideshare services such as Uber and Lyft have become global transport providers overnight. Bikeshare and ride-share which are known as part of the Shared Mobility economy, maximise the use of vehicles by sharing them among multiple users, increase the number of transport options, and reduce transportation costs for users and society at large.

To date there has been little research in the UK context- London excluded. There are 16 cities in the UK offering Bikeshare with over 100, 000 casual and annual users (Bikeplus, 2016), the user figures are swelled by the inclusion of London's Santander Cycles users. There is very little published data on Bikeshare use in the UK, this has changed as Bikeplus, a representative body for Bikeshare operators in the UK, have launched the first UK wide monitoring survey of Bikeshare users which finished in September 2016. This

survey includes questions regarding the socio-demographic profile of users, travel behaviour, motivations for use and barriers experienced when using the scheme.

This research will provide early insights into UK Bikeshare through the analysis of these survey results. Of consideration will be who are the users of UK Bikeshare and how do they compare to profiles of the local cycling populations? In addition to this, the survey results will shed light on the extent to which Bikeshare can facilitate modal switch from conventionally fuelled vehicles. Results will be at an individual scheme level and aggregated to UK to provide regional and national conclusions. Finally, this research will consider the possible opportunities and challenges in UK Bikeshare based on the survey results and analysis.

Rorie Parsons (Newcastle University): 'Cycles of Opportunity? Cycling Social Sites of Newcastle-upon-Tyne'

The paper reports empirical research on the importance of 'social sites' and their contribution to the cycling practice within Newcastle-upon-Tyne. Social sites refer not only to physical entities but also electronic forms, with the rise of cycle campaigning and blogging online. More specifically this term can be interpreted to include: pressure/advocacy groups, cycle workshops, cycle hubs, cycle shops, and cycle clubs (e.g. racing clubs, leisure clubs or alternative groups such as 'fixie' bike groups), of which some have recently been explored (see Aldred, 2013; Spurling and McMeekin, 2015; Vandermeersch and Batterbury, 2016). By exploring the role of a number of social sites, matters of how these spaces attract individuals not only already cycling or on the periphery but also those who do not cycle, identifies the role of non-state actors currently in cycling governance. Do these sites provide services not currently provided or no longer provided by local government; enrol individuals into an equitable form of cycling practice; provide spaces of stabilisation where marginal(ised) cycling identities can be 'comfortably' performed without the fear of suppression; or alternatively, nurture a sub-cultural 'alternate' cycling practice? The contribution of this non-state cycling network within the local political environment is yet to be articulated and therefore provides an important departure point in envisioning the development of sustainable cycling futures.

Hamish Thomas (University of Leeds): 'Does an Agent Based Model Explain How Infrastructure Improvements Affect Cyclists Behaviour in London?'

The advantages to cycling are well documented, however barriers still exist and uptake is not equal amongst all members of society. A major barrier to cycling is the perception of danger, high quality infrastructure provision can significantly reduce the risks, and Transport for London have embarked on a step-change improvement, with the introduction of segregated cycle lanes along parts of the superhighway network and at notorious junctions. This study examines the effects of these improvements. Specifically, this research looks at several different cycling groups, their decision making processes and seeks to find out what differences exist and to what extent they affect behaviour and interaction with the new infrastructure.

While safety concerns may be given as the primary reason for a reluctance to cycle by many, this masks the true complexity of the decision making process. Research by others has provided an insight into other factors which impact on the decision to cycle and the route taken, these include; Lifestyle, Awareness, Subjective Norms, and Individual Capacity.

In this study, the literature on cycling behaviour has informed the construction of a Mixed Quantitative and Qualitative survey, this will be undertaken with assistance from TfL at Oval junction in London. This site was chosen due to its notoriety as a dangerous junction prior to improvement work. The survey research informs the "rules" of an Agent Based Model which will display the decision making process of cyclists when presented with improved infrastructure. The integration of social science and modelling brings the potential to better understand the processes and systems that interact in the London cycling environment.

Identifying cycle user groups that will benefit from infrastructure improvements will allow policy makers to focus upgrades on locations with the greatest potential to increase cycling uptake by groups currently marginalised from cycling.

Session 7: Everyday Cycling (poster presentations)

Jamie O'Hare (Newcastle University): 'Exploring the relative influence of perceptions, attitudes, and the social environment on utility cycling'

In order to determine which policy choices can enable non-cyclists to start cycling and current cyclists to make more utility journeys by bike it is important to understand the factors influencing the intention to cycle. Better understanding these factors will allow policy makers to promote interventions which can unlock the potential health and societal benefits of increased cycling levels.

Using a socio-ecological framework this paper investigates the relative importance of perceptions, attitudes and the social environment on the intention to make utility journeys by bike. This research is based on data collected through an online access panel in February 2016 from both current cyclists and non-cyclists (n = 2086). This data is analysed using PLS-SEM (Partial Least Squares-Structural Equation Modeling) and sub-groups are compared using a non-parametric approach (PLS-MGA). This builds on the growing body of research which investigates the choice to cycle in the context of psychological frameworks to better understand the drivers behind people's cycling behaviour.

Through the comparison of sub-groups this research touches on the potential pitfalls of dealing with heterogeneous data wherein the picture at an overall level can mask underlying patterns. The key findings are that positive attitudes to cycling are relatively important in predicting whether a non-cyclist would consider utility cycling, however, for current cyclists attitudes become less important and the perception that cycling is convenient compared to other modes is the most important factor. This highlights the importance of shaping the social and psychical environment so that cycling is an easy option.

Comparison by gender suggests that perception of the local cycling environment is more important for female cyclists, this feeds into previous research on the effect of the presence of cycling infrastructure and perceived vs objective safety.

Bernhard Wieser (Alpen-Adria-University): 'What makes a bicycle unsustainable?'

Desired, idealized and faced with high expectations the bicycle lies at the heart of sustainability concepts. Far beyond its potential as an ecological and healthy means of transportation for urban mobility the bicycle is a symbol for a post-fossil society. Yet, a closer look reveals that the bicycle is by no means without carbon footprint, neither in its use nor in its production. Moreover the bicycle depends on built environment which again requires resources for its construction, maintenance and use.

In my contribution, I aim to outline factors that help to assess the bicycle with regard to its sustainability potential. In particular, I will look into production, and patterns of use. I will highlight that practices of repair, replacement and disposal are crucial in the ecological performance of the bicycle as a manufactured product. In such a way, I aim to contribute to an understanding that goes beyond the bicycle as a seemingly emission free means of transportation.

Along these lines, it becomes clear that there lies a great potential in improving patterns of use in order to make the bicycle a more ecological material object. I will conclude that, sustainability policies need to pay more attention to support actions that promote repair practices and longer cycles of use than merely focussing on urban infrastructure investment in order to encourage bicycle use.

Graeme Sherriff (University of Salford): 'After a few minutes we all thought we were Bradley Wiggins'. HGV drivers on bikes and the normalisation of cycling'

Whilst cycling, for sport and utility, is gaining in popularity, the 'various barriers to cycling ensure that it remains a very marginal means of urban travel' (Pooley et al 2013: 150) and is it important to be realistic about the extent of the challenge of normalising it as mode of transport. Research suggests that other road traffic forms a particularly significant barrier, in terms both of its intensity and of the behaviour of other road users. In UK towns and cities, people cycling generally have to negotiate streets dominated by motor traffic whilst many find this street environment deters them from cycling at all.

One important approach to promoting and normalising cycling as a mode of transport then is to equip individuals to confidently cycle in traffic and research has indicated that cycle training courses can help to do this (Sherriff, 2014). One finding of research into attitudes towards cycle training of those who already

cycle is that it is important that cycle training is not viewed in isolation: more specifically, that cycling is not singled out as the one mode of transport that needs to address cycle safety, since it is often drivers of motor vehicles who pose the greatest risk. As well as expecting individuals to skill up to protect themselves, then, it is important to address driving practices that may put them at risk.

Safe urban driving courses currently being delivered in Greater Manchester can be understood as a response, and this paper reports on research into training provided to HGV drivers. HGVs are a relevant target for such training, with lorries historically accounting for a disproportionate number of walking and cycling deaths (TfL 2014). As a group of professional drivers they are expected to engage in Continuing Professional Development (CPD), creating a context within which to situate additional training.

The course includes classroom elements that cover understanding why people cycle and the theory around road positioning that is taught in cycle training with a view to drivers better understanding why individuals make the manoeuvres they do when cycling. Additionally, the trainees spend some time cycling on roads, trying out road positioning and experiencing sharing the roads with traffic. Many of the participants have not cycled in traffic for decades.

This paper reports on research that seeks to understand the impact of this new course, and to place it in the context of other educational and technological approaches to enhancing safety. The research comprises participant observation and qualitative interviews with trainees. In particular, it considers the experience of the participants in relation to cycling and in sharing the roads with vulnerable road users; their motivations for taking the course; reported changes in attitudes towards those cycling and cycling provision on the roads; reported changes in driving practices; and the challenges they may face in implementing what they have learned during the course. It explores the potential contribution to enhancing the cycling environment, to normalising cycling, and to understanding the dynamics of sharing the road.

Stella Shackel (University of Liverpool): 'Cycle route demand and intimidating overtaking by vehicles'

To enable higher levels of sustainable cycling mobilities, perceived safety and respect from other road users needs to be increased with regard to cyclists (potential and actual) on the road network. This is particularly important where all users share the same road space.

An aspiration of the separation of cycle traffic from high volumes of motorised traffic is unlikely to be achieved in the short to medium term in the UK, thereby the shared road experience must be improved. Any perceived danger or fear of cycling may reduce cycling levels and discourage potential cyclists from attempting to cycle on the road network, hence disrupt active travel policies. In particular, people cycling on-road can feel intimidated by 'near misses', which include close proximity overtaking by motor vehicles. Reported incidents for the Near Miss Project showed that near miss experiences can be everyday and peak during the morning commute, with close overtaking making up nearly a third (29%).

The road markings, lane widths and positioning of the cyclist can affect overtaking vehicle proximities and speeds, but there has been little comparison with the current used or predicted cycle route network. As a case study, a comparison of updated intimidating overtaking event data were made with cycle route demand, as predicted by tools such as the National Propensity to Cycle Tool. Identification of hotspots of events in relation to road infrastructure were made.

Comparative data, such as these based on mobile observational data collection, can provide evidenced answers to enable better design of cycle routes leading to safer sharing of the available road space. Therefore, this would increase the perceived safety of cycling on the current and predicted network and