



TSU Annual Report 2015

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INTRODUCTION

2015 was a period of transition for TSU with Professor Banister retiring from administrative and teaching duties and Dr Schwanen taking over the director role. There has been a turnover of staff with many long term TSU members leaving and new staff being appointed. Despite these changes 2015 has been a productive year with a number of new projects starting e.g. DEPICT and the British Council project about sustainable cities and resilient transport. This year has also seen a large number of high quality publications in reading journals. TSU's outreach continues with the Global Challenges in Transport short course programme and many presentations, seminars and workshops at various events over the year.

STAFF AND STUDENTS

Professor David Banister officially retired on 30th September but will remain affiliated with the TSU as Academic Associate and Emeritus Professor in Transport Studies. Dr Tim Schwanen has taken over as TSU Director since 1 September 2015.

In June Dr Julio Soria-Lara joined TSU as a post doc researcher for 18 months. He works on the project called [Backcasting Scenarios as Collaborative Learning Process: Involving Stakeholders in Transport Climate Policy](#) (BACK-SCENE) under supervision of Professor David Banister. Julio is funded jointly by the EU's FP7 Marie Curie programme and the Andalusian Ministry of Economy, Innovation, Science and Employment.

Dr Jennie Middleton has continued to develop her relationship with Kellogg College in her appointment as a Senior Research Fellow. The appointment has enabled her to work more closely with the college, and other fellows, in directing the Global Challenges in Transport Leadership Programme, leading the Transport and Sustainability module on the Masters in Sustainable Urban Development, and acting as an adviser to a number of college students who are doing postgraduate study in SoGE. She also sits on the Athena Swan Committee in the development of SoGE's Bronze Award submission.



Sally Pepperall and Dr Karen Anderton both started maternity leave in late June. Kirsty Ray is covering for Sally as TSU Administrator and PA to the Director until late June 2016.

In September, Dr David Bonilla stepped down from his position at the Transport Studies Unit to take up a research professorship at the Institute of Economic Research at UNAM in Mexico City.

In September 2015, Dr James Palmer became the Course Director of the School of Geography and the Environment's MSc in Nature, Society and Environmental Governance. He will remain affiliated with TSU in a research capacity.

Dr Denver Nixon joined as a post-doc researcher in November. He will be working with Tim Schwanen on the ESRC funded Designing and Policy Implementation for Encouraging Cycling and Walking Trips (DEPICT) project.

Dr Geoffrey Dudley left TSU in November but will collaborate with TSU on future projects as they arise.

Dr Nihan Akyelken left TSU in December to take up the full-time role of Departmental Lectureship at the university's Department of Continuing Education to work on the Sustainable Urban Development programme.

Lucy Mahoney and Andre Neves both left TSU to start new roles within Transport For London.

ACADEMIC VISITORS

We have had a number of visitors to TSU this year: Yannick Cornet, a PhD student from the Danish Technical University (DTU), Copenhagen has visited TSU on several occasions during 2015 to work with Professor David Banister on the [SUSTAIN – National transport planning – sustainability, institutions and tools](#) project funded by the Danish Council for Strategic Research.

Dr Kristin Linnerud and Professor Erling Holden visited us during October and November to work on the [Renewable Energy projects: local impacts and sustainability](#) (RELEASE) project in which Professor David Banister is a partner. The RELEASE project is funded by the Research Council of Norway, headed by Professor Erling

Toon Meelen, a PhD student at the Innovation Studies Group at Utrecht University in the Netherlands, spent seven weeks at TSU. During his time here he worked on a study of the





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geographical diffusion of car-sharing in The Netherlands and also on a more theoretical project: a new conceptualization of the role of users in sustainability transitions.

Frequent visitor to TSU, Dr Jerry Olsson from the University of Gothenburg spent two weeks in Oxford in late November and early December to continue collaborative research on mobility in the rural Philippines with Dr Tim Schwanen.

HIGHLIGHTS

Three DPhil students successfully completed and defended their dissertation in 2015: Lucy Mahoney, Andre Neves and Zichen Zhang.

Dr Tim Schwanen was awarded funding by the ESRC for a three-year period for a project entitled [Designing and Policy Implementation for encouraging Cycling and walking Trips \(DEPICT\)](#), in which the TSU will be collaborating with colleagues in the universities of Utrecht, the Netherlands and São Carlos in the state of São Paulo, Brazil. Together with Dr Denver Nixon, Tim will be examining the role of community-led initiatives in London and São Paulo to encourage walking and cycling and in creating infrastructures that are conducive to these practices. The project will use comparative research to engage with debates across human geography and the wider social sciences about infrastructures, community activism and the “worlding” of cities.

Professor David Banister was appointed as Chairman on the ERC Advanced Research Grants Panel for Environment, Space and Population (SH3) (2014-2015)

Dr Nihan Akyelken won the winning paper in the 2015 Young Researcher Award organised by the International Transport Forum. The Award Ceremony took place during a Gala Dinner in Leipzig, with the prize awarded totalling €5,000 <http://2015.internationaltransportforum.org/awards>.

TSU Visiting Research Associate, Dr Geoff Dudley, was [interviewed by The Guardian](#) in February on his research concerning the ‘high cost of keeping our politicians on the road.’ Geoff’s book [The Outer Cabinet](#) talks about the history of the Government Car Service, as this had become topical after Ed Miliband was accused of spending £757,000 on travel per year.

TSU DPhil student, Eric Chan, was awarded a Hong Kong Research Grant from the Royal Geographical Society to assist with fieldwork.

Dr Tim Schwanen was part of a bid led by Oxford City and County Councils to the Go Ultra Low Cities scheme by the Office for Low Emission Vehicles (OLEV) which saw Oxford as one of twelve British cities shortlisted to become centres of excellence for low emission vehicles.



Dr Christian Brand, Professor David Banister and Dr Karen Anderton were part of the MobOx consortium that has been shortlisted for a major UK-INNOVATE research project on integration and innovation in transport that will set up a research platform in Oxford to coordinate a range of data sources and projects on transport.

The new Newton Fund International Links project entitled [Sustainable Cities and Resilience Transport](#) was started with a visit by Professor David Banister and Dr Robin Hickman (University College London) to De La Salle University and Clean Air Asia in Manila.

The 3-year project [Servicing Policy for a Resource Efficient Economy](#), which was funded by the European Commission's Seventh Framework Programme and led from TSU's side by Dr Nihan Akyelken, reached successful completion with a final conference in Brussels on 12 June.

TEACHING

In Hilary Term 2015 Professor David Banister taught on the Geography BA course option on Transport and Mobilities, and on the MSc courses through the elective on Cities, Sustainable Mobility and Transport. He has also made contributions to the MSc course in Sustainable Urban Development run by the Department for Continuing Education. Until his retirement He had responsibility for the 12 BA Geography students in St Anne's College and for their Masters and DPhil students. He also taught on several of the short courses in the TSU's executive education programme on Global Challenges in Transport.

Dr Tim Schwanen has taken over Professor Banister's role at St Anne's College in October 2016. He has also continued earlier responsibilities, including the teaching and coordination of a core module on decision making processes in the MSc programme in Nature, Society and Environmental Governance; the teaching and co-ordination of the Geography BA course option on Transport and Mobilities; and contributions to the MSc elective on Cities, Sustainable Mobility and Transport, the MSc course in Sustainable Urban Development, and human geography tutorials at St Anne's College. Tim has also been involved in the supervision of five DPhil students (Thomas Ashfold, Eric Chan, Heuishilja Chang, Anna Davidson and Rafael Pereira), oversaw the completion of four MSc dissertations and taught on several of the short courses in the TSU's executive education programme on Global Challenges in Transport.

Dr Christian Brand supervised four DPhil students (Lucy Mahoney, Andre Neves, Zichen Zhang, Toru Kubo), with Lucy, Andre and Zichen having successfully completed in 2015. He continued to lecture on the MSc programme in Environmental Change and Management on





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transport and energy matters and supervised a number of MSc student theses during their summer projects.

Dr Jennie Middleton is Course Director for the TSU's executive education programme on Global Challenges in Transport, which consists of four short courses per year, and module leader for the MSc in Sustainable Urban Development on the Transport and Sustainability module. She also taught and co-coordinated- on the Geography BA course option on Transport and Mobilities.

Dr James Palmer became the Course Director of the School of Geography and the Environment's MSc in Nature, Society and Environmental Governance. He convenes core course modules on Governance, Politics and Policy – drawing on his research into EU biofuel and sustainable road transport policy – and Research Methods and Practice.

As part-time Departmental Lecturer at the Department for Continuing Education Dr Nihan Akyelken acted as the Academic Lead of the Transport and Sustainability module of the MSc programme in Sustainable Urban Development. She also taught on the Governance and Infrastructure, Development and Finance modules of the Global Leadership in Transport courses.

Dr Karen Anderton taught and tutored on Geography BA course option on Transport and Mobilities and lectured on the MSc in Sustainable Urban Development and gave a guest lecture on the University of Reading's MSc programme in Renewable Energy.

D.PHIL PROJECTS

Investigating the changes and effects in travel behaviour in response to physical interventions for walking and cycling (2009-2015) *Student: Lucy Mahoney Supervisors: Dr Christian Brand and Dr Tim Jones*

This research project used a mixed-method, longitudinal case study approach to examine changes and consequences of travel behaviour and wellbeing in response to physical interventions for walking and cycling. Her case study is the Pont-y-Werin Bridge (The Peoples' Bridge) in Cardiff, Wales (Connect2) working within the research consortium iConnect.ac.uk. Data for this study was collected from a sub-sample of participants from Penarth and Cardiff. Interviews were conducted with approximately 60 households to determine perceptions and beliefs, plus usage levels towards the scheme as well as an adapted Day Reconstruction Method (DRM) Survey to measure individual subjective wellbeing. The survey includes longitudinal measures of experience, evaluation and eudaemonia. Both data methods are supported by contextual fieldwork.



Evaluating travel behaviour change around walking and cycling interventions using a GPS mix method approach: The case of Connect2 Cardiff (2009-2015) *Student: Andre Neves. Supervisors: Dr Christian Brand and Dr Tim Jones*

This research project explored the relation between improved infrastructure for pedestrians and cyclists and its impacts on overall travel behaviour and carbon emissions. An area in Cardiff, where a bridge and new routes for cyclists and pedestrians were implemented was selected as case study and a longitudinal study of a cohort of residents was conducted between 2011 and 2012. In order to objectively measure travel behaviour, participants were asked to use personal GPS devices and travel diaries to record their travelling, including distance, mode used, frequency and purpose of trip. Patterns and longevity of travel behaviour (change) were measured and its relation with proximity to infrastructure and improved connectivity evaluated. This research aims to provide a better understanding of why improvements in the connectivity of infrastructure for walking and cycling are (or are not) effective, in what ways, for whom and in what circumstances. Andre is finishing writing up his thesis.

Electric vehicles in China: Policy, Energy, Environment, and Market potential in the future (2011-2015) *Student: Zichen Zhang. Supervisors: Professor David Banister and Dr Christian Brand*

This study evaluated the impact of different electric vehicle utilization scenarios on the transport system (including the energy consumption and emissions) and vehicle market, and forecasts the potential development trend of the electric vehicles in China by considering the different external variables. The lessons from the existing EV demonstration programme have been analysed. An evaluation framework has been developed to evaluate the EV penetration in China through a multi criteria perspective (Energy, Environment, Economic and Social). Finally, the policy recommendations will be investigated and discussed with the decision maker to further improve the policy strategy of the EV in China.

Breadth and depth of external linkages: manage external knowledge in an open innovation era (2012-2016) *Student: Liwen Wang. Supervisors: Professor David Banister and Dr David Bonilla*

This project studies how the configuration of external knowledge linkages influences firms' innovation performance, and consequently determines their financial performance. Following previous research on organization learning and knowledge search, we decompose a firm's external knowledge linkages into two distinct dimensions, external knowledge breadth and depth, and analyze how the breadth and depth of external knowledge linkages differently impact its innovation performance. Based on an innovation survey of the Chinese automobile industry, we have found that breadth and depth both contribute to innovation. However, external knowledge linkage depth has an inverted U-shape relationship with



innovation, namely its contribution will decrease when it reaches over a certain level. In contrast, external knowledge linkage breath has an accelerating effect in enhancing innovation, which might be unique to firms with complex technological system. Moreover, the effect of knowledge breadth translates into financial performance through enhanced innovation performance.

Technology innovation and policy instruments to advance low-carbon transport and renewable energy use in developing Asian economies. (2012-2017) *Student:* Toru Kubo. *Supervisors:* Professor David Banister and Dr Christian Brand

In order to help address the challenges of growing mobility needs, energy security, and global climate change, this research focuses on developing Asia, and it examines the potential role of low-carbon transport options, in particular the use of electric-drive vehicles (EDVs) that are powered by renewable energy sources through smart grid networks. The number of EDVs in Asia is expected to rise rapidly, and by integrating the ubiquitous battery storage capacity in public and private vehicles through smart grid technology, the entire grid system will be able to complement the intermittent nature of renewable energy sources such as wind and solar and can greatly enhance their penetration rates. The research examines the technical and economic merits of such integrated systems across several Asian economies, and it then evaluates possible policy instruments to promote these and other low-carbon transport schemes in selected countries, with the potential to become early adopters within the region.

The Potential of Cittaslow for the Resilience of Shrinking Communities in Japan (2013-2016) *Student:* Heuishilja Chang. *Supervisors:* Professor David Banister and Dr Tim Schwanen

Shrinkage – cultural, economic, environmental, demographic, and social decline – is increasingly pervasive in small urban settlements in industrialised countries. This research looks into the resilience of shrinking rural towns, and considers the possible revitalisation approach for these less advantaged communities. Two Japanese rural towns, Minami and Uchiko, which experiencing acute shrinkage, have been selected as case study. Using the adaptive cycle (Panarchy) model in evolutionally resilience, this research investigates the facilitators and inhibitors of the different types of community regeneration activities in these towns. It also examines whether and in what way Cittaslow (the Slow City approach) – a rising socio-cultural movement for sustainable rural development – can provide the elements which improve the identified facilitators and inhibitors. Cittaslow practices in four demographically declining Cittaslow member towns in Germany (Hersbruck and Wirsberg) and Italy (Altomonte and Pollica) have been investigated.

Bodies on the margins: Unsettling sustainable mobility through cycling in Los Angeles (2013-2016) *Student:* Anna Davidson. *Supervisors:* Dr Tim Schwanen and Professor Sarah Whatmore





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This project instigates a conversation between critical theory and urban cycling in Los Angeles, California, to consider how cycling subjects, practices and future cities are, and might be further, (re)conceptualized and imagined. Los Angeles has long been a case study and site for urban theory, but this project brings the underrepresented perspectives of critical race theory, queer and feminist material theory to questions of power and the body in urban mobility. It asks what political-economic, epistemic and material conditions allow for particular cycling subjects and practices, and who and what can (afford to be) mobilised by cycling. Ethnographic and visual methods are used to explore these questions at the interrelated levels of bodies, streets and the city.

Distributive Justice and transportation equity (2013-2016) *Student:* Rafael Henrique Moraes Pereira. *Supervisors:* Professor David Banister and Dr Tim Schwanen

The main focus of this project is to engage in more theoretically informed understandings of justice and equity that can guide policy-oriented research on distributive aspects of transport investments, service delivery and a social exclusion. To do so, the research works with theories of justice and equity from political philosophy and geography and utilises a case-study approach. The thesis analyses, among others, the transformations carried out in the transport system of Rio de Janeiro (Brazil) in preparation for the 2014 World Cup and 2016 Olympic Games and how such transport investments improve employment accessibility for different social groups and areas of the city. Informed by discussions on the political economy of transport infrastructure investment and planning, mega-events, and social justice, this research investigates how those transport investments in Rio shape the geography of opportunities in the city and to what extent they restructure and exacerbate socio-spatial inequalities.

The role of built environment and travel behaviour in influencing people's well-being – a case study of Shenzhen (2014-2017) *Student:* Eric Chan. *Supervisors:* Professor David Banister and Dr Tim Schwanen

This research seeks to examine how the built environment and travel behaviour influence people's well-being, using a city in China, Shenzhen, as a case study. Both qualitative and quantitative research methods are used to examine how built environment features affect travel behaviour and in turn influence people's well-being. Upon completion, this research can provide insights into improving the existing theories on the relationships between built environment, travel behaviour and well-being. Furthermore, practical implications on policy formation for sustainable urban and transport development can be assessed along with the means by which individual's well-being can be improved.

RESEARCH PROJECTS



Centre on Innovation and Energy Demand (RCUK, 2013-2018) Dr Tim Schwanen and Professor David Banister

Ambitious goals for reducing carbon emissions require the rapid and widespread deployment of energy efficient technologies throughout all sectors of the economy, together with far-reaching changes in infrastructures, institutions, social practices and cultural norms. The rate and scale of change required has few historical precedents and presents a major policy challenge. The Centre on Innovation and Energy Demand (CIED) contributes to this challenge by developing a socio-technical understanding of the emergence, diffusion and impact of low energy innovations. These include new technologies (e.g. heat pumps), organisational arrangements (e.g. car sharing) and modes of behaviour (e.g. cycling) that are expected to improve energy efficiency and/or reduce energy demand. CIED is a collaboration between researchers from the Sussex Energy Group (SEG) at SPRU, University of Sussex; the Transport Studies Unit (TSU) at the University of Oxford; and the Sustainable Consumption Institute (SCI) at the University of Manchester and is one of six Research Centres on End Use Energy Demand funded by the RCUK Energy Programme. Within CIED Dr Tim Schwanen is undertaking a specific project on innovations in urban transport. This project has three objectives seeks to identify factors and processes that facilitate and obstruct low energy innovation in urban transport and to examine to which extent these factors and processes are transferable across and within city-regions.

Project website: www.cied.ac.uk

Designing and Policy Implementation for Encouraging Cycling and Walking Trips (DEPICT), (ESRC, 2015-2018) Dr Tim Schwanen and Dr Denver Nixon

This project is part of a larger collaborative study about the features of the urban environment, governance of infrastructure, and local communities in São Paulo, The Netherlands, and/or United Kingdom that influence walking and cycling and how these features can be optimized to achieve sustainable urban mobility for all. The research in Oxford concentrates on community-led infrastructures and aims to understand who gets involved in community-led innovations in infrastructures for cycling and walking, why they get involved, what these innovations are, and where they succeed or do not succeed. It also seeks to assess the ways that community-led innovations in infrastructure can contribute to a more equitable and just transportation system. Fieldwork will take place in London and São Paulo, two international cities with profound social inequalities yet significantly different transportation challenges.

Project website: <http://www.depictmobilis.org>





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Sustainable Cities and Resilient Transport (British Council – Newton Institutional Links, 2015-2017) Professor David Banister, Dr Tim Schwanen, Dr Karen Anderton and Dr Nihan Akyelken

Actions in the transport sector to address sustainability and resilience should be designed to minimise transport disruption and maximise adaptive capacity, whilst at the same time reducing the air pollution exposure rate, ensuring high levels of accessibility, and reducing the impacts on the low income sector. This project will establish a Joint Research Centre on Transport Sustainability and Resiliency in the Philippines for the partnering institutions. The Joint Research Centre will eventually become a key resource in the Philippines and the ASEAN region to support initiatives of the governments, private sector and development agencies. In addition, research on transport resiliency and sustainability modelling and analysis will be conducted involving case studies in London and Manila. Ph.D Research Exchanges and extensive dissemination will also be part of the programme.

UK Energy Research Centre (UKERC) Phase III – Decision Making Theme, Energy and Transport topic (EPSRC, 2014-2019) Dr Christian Brand

Christian leads the energy and transport topic area jointly with the ECI in the third phase of the UKERC looking at challenges in energy decision making, including governance, actor decision making and systemic interactions of energy and transport systems. He leads a research project on Systemic Change and Decision Making in interlinked transport and energy systems. He also leads the transport element of on-going scenario development work, the development of the new Scottish Transport Energy and Air pollution Model (STEAM) and its deployment in strategic policy analysis for the ClimateXChange project funded by the Scottish Government.

Research and Development of the European Transport Network Model Transtools Version 3. Transtools III (EC 7FP, 2011-2015) Professor David Banister and Dr David Bonilla

The objective for this project is to upgrade and further develop the existing Transtools model (TT2) to a new and improved European transport demand network model. The project will develop TT3 to be a validated user friendly model that will provide policy makers with a tool of reassessing and developing better transport policies. The project encompasses all transport modes for the European Union.

Project website: <http://www.transport-research.info/project/research-and-development-european-transport-network-model-transtools-version-3>

Servicizing Policy for a Resource Efficient Economy (SPREE) (EC FP7, 2012-2015) Professor David Banister, Dr Nihan Akyelken and Dr Karen Anderton





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This is a three-year project within the environment theme under the European Commission's Seventh Framework Program (FP7). The aim of the SPREE project is to identify potential "Servicizing Policy Packages" for the establishment of Servicizing systems which facilitate the transition from selling products to providing services. The SPREE project will simulate their effect on absolute decoupling of economic growth and resource use, within three sectors: water, mobility and agri-food. TSU is leading the mobility work package. The SPREE project consists of four key-elements: a conceptualization and detailed definition of servicizing; a methodology which includes an advanced Agent Based Modeling (ABM) approach to structure and test options for Servicizing systems and policies; case studies in the partners' countries and; the development of a policy agenda. The key deliverables are 'Servicizing Policy Packages' that exploit existing synergies to achieve a truly sustainable economy where economic growth is decoupled from environmental impact, while achieving societal objectives such as an increased quality of life. The project was successfully completed in June 2015 with a final conference in Brussels. The feedback received from the European Commission in November 2015 was excellent.

Project website: <http://www.spreeproject.com>

TRANSFORuM: Transport 2050 (TRANSFORuM) (EC FP7, 2013-2015) Professor David Banister and Dr Karen Anderton

TRANSFORuM is a two year pan-European consortium project that brings together 11 leading research institutions (representing several leading universities as well as independent research institutes and think-tanks) from 9 EU countries (Austria, Czech Republic, Denmark, France, Germany, Norway, Poland, Sweden and the UK). TRANSFORuM is building a discussion forum which will bring together leading stakeholders and relevant actors to explore each of the goal themes – urban mobility, high speed rail, information and technology systems in transport and freight - focusing attention on research and innovation that will deliver against the policy objectives laid down in the 2011 White Paper.

TRANSFORuM provides a platform for stakeholders of all areas of the European Transport sector to understand what progress is being made towards the achievement of these goals and to develop common views and strategies on how these goals can be implemented in the coming years. TSU is leading the work package "Transformation is possible", which gathers information demonstrating where action has been taken that would deliver against the White Paper goals. This research will be used by TSU to develop case studies to inform the thematic working groups of the discussion forum and will also feed in and inform subsequent work packages over the course of the project.

Project website: <http://www.transforum-project.eu/>

Physical Activity through Sustainable Transport Approaches (PASTA) (EC FP7, 2013-2017)
Dr Christian Brand





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Will people's physical activity increase if conditions for walking and cycling improve? That's one of the questions for a four-year European research project involving extensive studies with over 14,000 participants in seven European cities, including London, Barcelona, Zürich and Vienna. Involving 12 research partners and 7 City Authorities across the EU, this project aims to promote physical activity by creating good conditions for walking and cycling. It is developing a tool that can be used to calculate the costs and benefits of investments in infrastructure and smarter choices for active transportation, walking and cycling. The project is producing information material and a compilation of good practices that can be used by decision makers at different levels. Christian is working across the research programme on integrating 'energy' and 'carbon' impacts into transport and health assessment methods and tools. He is also chairperson of the publications committee and leading on translating the lessons learned and major findings of the EPSRC 'iConnect' project (www.iconnect.ac.uk) into the conceptual framework, methodology and methods of PASTA.

Project website: <http://www.pastaproject.eu/home/>

Backcasting scenarios as collaborative learning process: Involving stakeholders in transport climate policy (BACK-SCENE). (EC FP7 and Junta de Andalucía (Spain), 2015-2017).
Dr Julio Soria-Lara, Professor David Banister

The backcasting approach has gained particular prominence in transport studies over the last years. The distinctiveness of this approach lies in taking a normative view of desirable endpoints in the future and then examining the means and pathways by which those futures can be reached. "BACK-SCENE" aims to further develop backcasting methodology by examining two sets of issues: (i) the assessment of backcasting scenarios and collaborative learning processes in urban transport and climate policy; (ii) and secondly the means by which research and action can be made more effective. These issues will be addressed by using an innovative methodology labelled "experiential research design". Its proponents highlight the idea that innovations in planning require not only research directed at understating planning problems, but also research directed at developing new approaches for solving them. Involving stakeholders is essential to the latter. The way in which the methodology is applied consists in sequential and reciprocal "learning processes" between planning researchers and stakeholders from an inter- and multidisciplinary viewpoint.

Project website: <http://www.tsu.ox.ac.uk/research/back-scene/>

OMPORS: Oxford Martin Programme for Resource Stewardship (Oxford Martin School, 2011-2016) Dr David Bonilla

This projects works across the sciences, social sciences and humanities to radically rethink global resource stewardship. These universally vital resources are subject to both



cumulative and systemic pressures arising from human activities, which put them under threat of severe degradation and even depletion. Around the world these key resources are subject to a wide range of property rights and management regimes, the environmental efficacy and social equity of which are subject to competing ideological claims and disciplinary critiques. The project brings together economists, philosophers, mathematicians and anthropologists and scientists.

Project website: <http://www.oxfordmartin.ox.ac.uk/research/programmes/resource-stewardship>

Everyday Mobilities of Visually Impaired Young People (John Fell OUP Fund, 2014-2016)
Professor David Banister and Dr Jennie Middleton

In collaboration with the Royal London Society of the Blind (RLSB), this project aims to use self-directed video as a method to understand the everyday challenges facing visually impaired young people as they move through urban space. It also seeks to move beyond a series of pre-defined assumptions concerning what the barriers to 'independent' mobility actually are. The results will help build the knowledge and skills base of the RLSB in terms of how 'independent' mobility can best be supported and help facilitate earlier interventions designed to mitigate potential social exclusion in later life. On successful completion of the project, recommendations will be made as to how transport infrastructures can be improved to take account of the needs of VI young people and a large collaborative grant application will be submitted.

The Drive for Sustainable European Road Transport: Science, Evidence, Politics and Power (John Fell OUP Fund, 2013-2016) Dr James Palmer

This research project uses in-depth qualitative research methods - including semi-structured interviews and documentary analysis - to address three central questions about the nature of European policy-making processes relating to sustainable road transport and about the interactions of evidence and policy in Brussels more broadly. The first question concerns the kinds of formal and informal processes through which European sustainable road transport policies - specifically on road vehicle efficiency and alternative fuels development - are formulated and modified. The second focuses on how scientific evidence, knowledge and expertise of various kinds are conceptualized in debates about sustainable road transport policy in Brussels, and on the ways in which these interact with specific policy and political processes. The final question is about the kinds of ways in which ideas, political interests and institutional factors interact to establish the broader public meanings and normative purposes of Europe's sustainable road transport policies.

The Politics of Decision-Making in Large Infrastructure Projects: The Case of High Speed Rail 2 (Rees Jeffreys Road Fund, 2014-2015) Dr Geoff Dudley and Professor David Banister





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The project seeks to gain greater insights into the dynamics of decision-making in large infrastructure projects, employing the case study of High Speed Rail 2. Little is understood about the intense political pressures that underpin these types of large and highly salient infrastructure projects, particularly in the crucial earlier stages, when decision-making is likely to take place under conditions of high uncertainty and controversy. Yet these political processes are likely to prove decisive in determining the fate of the project. A better understanding of these decision-making dynamics can therefore provide important insights into not only the reasons why plans for larger infrastructure projects may succeed or fail, but also the vital dynamics of these processes over time. In this context, the project employs a comparative analysis between HS2 and the earlier case of UK trunk roads in the twentieth century.

Working Paper: <http://www.tsu.ox.ac.uk/pubs/1067-dudley-banister.pdf>

National Transport Planning: Sustainability, Institutions and Tools (SUSTAIN) (Danish Technical University, 2011-2017) Professor David Banister

This project has helped establish National Sustainable Transport Planning (NSTP) as a coherent research topic across the social and technical sciences in Denmark, through the development of a set of interconnected and policy relevant principles, processes and tools. It has promoted future-oriented planning for a sustainable transport system, and to help advance a performance-based and learning-oriented approach in Denmark in accordance with international trends. David Banister is one of four international researchers with relevant expertise for SUSTAIN and he is part of the International Scientific Contributor (ISC) group and has been involved in advising on the structure of the research and in contributing papers on UK experience. He has been working with Yannick Cornet in Oxford as part of this project, and papers have been prepared for WCTR2016.

Renewable Energy Projects: Local Impacts and Sustainability (RELEASE) (Sogn and Fjordane University College (HiSF), 2014-2017) Professor David Banister

The primary aim of this project is to impart new knowledge on renewable energy projects' impact on local economies, local societies and local environments in pursuing a sustainable energy policy. This analysis will be carried out within the framework of sustainable development and reviewing the continued relevance of the Brundtland approach some 30 years after it was first articulated, and examining its effectiveness in local sustainable development. The project will examine investment under policy uncertainty, new ownership models and social acceptance, and the mitigation of environmental impacts. Erling Holden and Kristin Linnerud came to Oxford as visiting researchers to work on this project.



Sustainable Commuting in Oslo and Akershus (Institute for Transport Studies, Oslo, 2013-2015) Professor David Banister

This project provides knowledge on how to achieve changes in travel behaviour among commuters to the central hub in Oslo and Akershus. Through a combination of methods designed for commuting flow analysis, business surveys and interviews with people who make daily work trips within the zones, the project will generate new knowledge about the expected effects of measures and stimulus packages. The measures will be developed in the light of current forecasts for population growth, commuting and business development in Oslo and Akershus. Packages of measures adapted to the different zones will be proposed on the basis of the objectives set out within the Norwegian Transport Plan.

CRAFTTRANS: Innovating for more efficient and sustainable transportation among Norwegian craftsmen (2013-2016) Dr Tim Schwanen

This project examines the use of new technologies (including electric vehicles and smartphone applications to optimize work task scheduling) to facilitate more efficient and sustainable transport for Norwegian craftsmen and SMEs. A mixed methods approach is used in which qualitative and quantitative methods are combined. The project is conducted at the Institute of Transport Economics (TØI) in Norway. Tim Schwanen is involved primarily in an advisory capacity.

URBANEFF Investigating complex issues related to land use, transport and GHG emissions (Institute for Transport Studies, Oslo, 2014-2017) Professor David Banister

The primary aim is to contribute to more climate friendly development of the built environment to reduce carbon emissions from transport. The focus will be on identifying how urban traffic volumes and GHG emissions are linked in three different development situations: polycentric workplace locations, the relocation of warehouses within the urban area, and urban road capacity expansions. The output will be directed at decision makers and planners in helping determine more energy efficient urban forms that entail shorter distances and less use of private cars. The empirical part of the project will be carried out through a series of case studies, using both qualitative and quantitative methods.

Project website: <https://www.toi.no/urbaneff/category1503.html>



DISSEMINATION ACTIVITIES

TSU Public Seminar Series: Scalar Politics of Transport

Because 2015 was a year of general elections in which transport issues were expected to play a significant role, the TSU's annual public seminar series in Hilary Term had the politics of transport as its overall theme. Each of the four seminars focussed on a particular spatial scale.

The first seminar, chaired by Astrid Günemann from Leeds University, brought together Mark Major, from the EU's DG MOVE and Anne Shaw, from Birmingham City Council to discuss how Sustainable Urban Mobility Planning (SUMP) has significant potential to change the face of Europe's cities over the medium-long term and how Europe is playing a key role in facilitating such developments. Birmingham's ambitious plans to utilise the SUMP tool developed by the EU to address some of its fundamental transport problems were outlined. Engaging presentations and excellent questions from the floor combined to offer a very interesting discussion.

The second seminar took place in 3rd week and was chaired by Karen Anderton, from TSU. It was focused on the current plans and long term future for the low carbon transport sector across the UK. Jack Snape from the Committee on Climate Change was joined by Stuart Hay, the Scottish Director of Living Streets and Co-Chair of Transform Scotland to discuss how the Scottish referendum and the emerging changes to devolution may affect the policy levers available to Scotland and how/if this will alter the decarbonisation trajectories and approaches of both Scotland and the UK. Again, a lively discussion was had, questions focusing on whether the largely technocentric approach in the medium term currently adopted by the UK government towards achieving its 2050 80% emission reduction target is ambitious or comprehensive enough to tackle the issue livened the debate.

The third seminar took place in 5th week and was chaired by Denise Morrey, Oxford Brookes University. Its topic was the politics of infrastructure provision at the regional level, with a specific focus on Oxfordshire. Nigel Tipple from the Oxfordshire Local Enterprise Partnership started the session with a succinct overview of the many infrastructure developments currently undertaken in the region in order to make an economically strong region even more successful in the future. This was followed by a presentation by Tim Schwanen from TSU who reflected on the consequences of the creation of local enterprise partnerships across England for transport policy in general and the promotion of sustainable mobility in general. A lively debate followed between the presenters and members of the audience, many of whom were representatives of various community organisations in Oxford.





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The final seminar in 7th week focused on the most detailed of the spatial scales considered, in the series - the road space. Justin Spinney from the University of Cardiff and Martin Cassini from Equality Streets each gave a talk, and Jennie Middleton from TSU chaired. Justin spoke about his recent research on the design of heavy goods vehicles and safety implications for cycling in London, and Martin about how shared space designs can make streets and road crossings safer spaces, turning them again into places that strengthen local communities and where traffic is regulated in bottom-up ways rather than by means of traffic rules and lights. The talks led to an engaging debate between the two speakers and between them and the audience in which, amongst other things, the pros and cons of segregated cycling lanes were discussed.

Lunchtime Seminars

TSU continued the lunchtime seminar series which takes place on a weekly basis during term-time. This is an informal and internal series allowing TSU staff and students to present their research/discuss issues of interest/run through forthcoming conference papers etc. The convener of this seminar series is Rafael Pereira.

DISSEMINATION AND OTHER ACTIVITIES BY TSU MEMBERS

Professor David Banister has carried out many overseas lectures and visits. Highlights included visiting Brussels several times to chair ERC meetings, Istanbul to give the keynote lecture at CODATU, Copenhagen to give the keynote lecture at the 15th Anniversary of TERM (European Environment Agency). David travelled to Manila for the launch of the Sustainable Cities and Resilient Transport project and also to Sogndal (Norway) for RELEASE project meeting. In August he gave lectures at the Summer School at the University of Barcelona. David was also on the advisory board on the VREF programme on Transforming Urban Transport in Boston.

Dr Tim Schwanen gave a range of presentations at international conferences and other events. Tim gave key note talks at the DEMAND centre summer school on 'Peaks, Sites and Cycles' on 14 July at the University of Lancaster and in a workshop on walking and cycling during the 14th conference of the International Association for Travel Behaviour Research (IATBR) on 20 July in Windsor. He also gave papers at the annual meeting of the Association of American Geographers (AAG), 21-25 April in Chicago; at the Fourth Global Conference on Economic Geography, 19-23 August in Oxford; and at the annual international conference of the Royal Geographical Society (RGS) with the Institute of British Geographers (IBG), 1-4 September in Exeter. At these three conferences he presented findings on his ongoing research about innovation processes in urban transport. Tim was also one of the speakers during the TSU's public seminar series on the spatial politics of transport.





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Dr Christian Brand continued to work closely with the Environmental Change Institute's Lower Carbon Futures team where he is the Energy and Transport theme leader. Christian gave a number of invited talks and lectures including: invited lecture on 'co-benefits' of climate change mitigation in transport at the WHO in Bonn; Invited Research Lecture at Oxford Brookes University on the future of transport and energy; and invited presentation on integrating consumer and car market heterogeneity into energy-economy-environment system models at an IEA-ETSAP workshop in London. Christian actively engages and fundraises with Mobility Oxford (MobOx) CIC partners including Preston Motorsport, Zeta Automotive, OCC and Oxford Brookes. Christian continues to engage more widely with the collegiate university in his role as the Assad Kotaite Senior Research Fellow in Transport Studies at Linacre College Oxford.

In June Dr David Bonilla attended a one-week workshop organised by the World Bank in Rio de Janeiro Brazil. David also gave a talk on developments in emissions control regulation, on fuel economy regulation and on gasoline demand at the same event. David also organised two seminars at the Oxford Martin School in Oxford. The first seminar took place in January 2015 and the second in April. David attended various seminars at the Blavatnik School of Government in Oxford. In January, David attended the annual conference of the University Transport Studies Group (UTSG) at the City University in London. David stepped down from the Executive Committee of the UTSG after a three-year period.

Dr Jennie Middleton has presented preliminary research findings from her research on the everyday mobilities of visually impaired young people at invited seminars at the University of East London and Keele University and in themed sessions at the AAG annual meeting in Chicago and the RGS/IBG Annual International Conference in Exeter and. Jennie has also been involved in the TSU public seminar series through contributing to the series planning and acting as discussant.

Dr Nihan Akyelken presented research findings at the AAG annual meeting and RGS/IBG annual international conference, and she presented and led the mobility research panel at the SPREE Final Conference in Brussels in June 2015. She was also a panellist at the pre-AAG symposium "Cloud, Crowd and Urban Governance" held at the Urban Planning Department of the University of Illinois in Chicago. At the RGS/IBG conference she led a double session on Inequalities in Transport and Mobilities Research and presented her paper on gendered commuting patterns. She was invited to take part at the 2015 International Transport Forum to receive her Young Researcher of the Year Award. As part of this event, she took part in the "Women for a Connected World" session. She was also invited to speak about studying and doing research on transport and mobility in the UK in Istanbul by the Istanbul Technical University in October 2015. She was invited to give a talk on the future of urban mobility and technologies at the BPA event in Margate, Kent in June 2015. Lastly, she was invited to give a talk on Infrastructure, development and finance at Somerville College in July 2015 as



part of the Public Policy and Governance Training programme of the Jindal School of Government.

In January Dr Karen Anderton participated as an expert at the EU Tide Project Urban Mobility Workshop in Brussels. Karen was on the International Review Panel for the 2015 Canberra Conference on Earth System Governance and was a guest speaker at the Blavatnik School of Government's Sub-national Government's seminar series in March. In April, a paper entitled "A Covenant Of Halflings? Developing a Roadmap for the European Urban Transport Goal," co-authored with colleagues from TRANSFORuM was presented at the WCTR SIG G3 Conference in Malta. In May she presented papers co-authored with Dr David Beeton at EVS28 in Korea and with Dr Joana Setzer during a meeting organized by the COST Action Innovations in Climate Governance (INOGOV), at the VU Amsterdam. Karen continued to serve as the Energy Community Leader for Sofoi and an Associate of Urban Foresight.

Dr Geoffrey Dudley gave a paper at the 2015 Conference of the Universities' Transport Study Group (UTSG) entitled Expertise and the Dynamics of Decision-Making in Large Infrastructure Projects: From UK Trunk Roads to High Speed Rail 2. In the context of HS2 and the role of expertise, Geoffrey submitted (with Professor David Banister) written evidence on this topic to the House of Lords Economic Affairs Committee, who were conducting an inquiry into The Economics of HS2. The Committee published its Report in 2015 (HL Paper 134) and reference is made to their evidence on pp 103-104.

Dr James Palmer attended the 10th International Conference in Interpretive Policy Analysis in Lille in July 2015, presenting a paper on the science and politics of the EU's Cars and CO2 regulation, which aims to enhance road fuel efficiency. In September 2015 he published a commentary on the VW emissions scandal on The Conversation, addressing its implications specifically for the inclusiveness and transparency of EU policymaking processes.



TSU PUBLICATIONS

Reports

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