

The University of Hong Kong
University College London

**Symposium
on**

**The Role of Transport in Transiting to Liveable and
Sustainable Cities in Europe and China**

Updated on 30thApril, 2018.

Date: 9th May 2018 (Wednesday)

Time: 9:00 am – 5:30 pm

Venue: CPD 3.28, 3/F The Jockey Club Tower, Centennial
Campus, HKU

PROGRAMME SCHEDULE (TENTATIVE)

08:30 – 09:00	Registration
09:00 – 09:10	Welcome Speech Professor William Hayward The University of Hong Kong
09:10 – 09:15	Opening Remarks Professor Becky P.Y. Loo The University of Hong Kong
Photo-taking of all invited speakers, guests and HKU ITS fellows	
THEME 1 Sustainable Urban Transport: Current Situations, Challenges and Opportunities in Europe and China	
09:15 – 09:45	The Evolution of Urban Transport Policies in Western European Cities: Causes and Consequences Professor Peter Jones, University College London
09:45 – 10:15	Urban Transport Inequity in Transition China: A Literature Review and Agenda for Future Research Professor Pengjun Zhao, Peking University
10:15 – 10:45	Automatic Extraction and Generation of Vehicle and Pedestrian Navigation Path for Smart City Professor Anthony G.O. Yeh, The University of Hong Kong
10:45 – 11:00	Coffee Break
THEME 2 Sustainable Transport Policy and Planning: Empirical Evidence in UK and China	
11:00 – 11:30	Understanding the Usage of Bike Sharing and Its Determinants in China: A Case Study of Nanjing Professor Feng Zhen, Nanjing University
11:30 – 12:00	A Chance for Growing Economies to Accelerate Their Transport Development Processes? Dr Clemence Cavoli, University College London
12:00 – 12:30	CREATE: Defining the Next Stage of Cities and Their Transport Systems Dr Tom Cohen, University College London
12:30 – 14:30	Lunch (for invited guests only)
THEME 3 Transport, Land Use and Sustainability: Principles and Theories in Urban Planning	
14:30 – 15:00	A Continuum Modeling Approach to Land Use, Transport and the Environment Problems Professor S.C. Wong, The University of Hong Kong
15:00 – 15:30	“Familiar Strangers” around Metro Stations: Implications, Visualization and Determinants Dr Jiangping Zhou, The University of Hong Kong
15:30 – 16:00	Railway Station Redevelopment: Regeneration or Gentrification? Dr Robin Hickman, University College London
16:00 – 16:15	Coffee Break
ROUNDTABLE DISCUSSION	
16:15 – 17:15	Roundtable Discussion on Sustainable Transport Strategies in Shaping a Liveable City
17:15 – 17:30	Closing Remarks Professor Peter Jones University College London

ABOUT THE SYMPOSIUM

Currently, the world's population is becoming increasingly urbanized, which is presenting huge mobility challenges for cities, given commitments to meet the Sustainable Development Goals. Cities with high levels of motorization are attempting to constrain and reduce traffic levels and move towards sustainable mobility and liveability; while cities in developing countries are faced with a stark choice of repeating the evolutionary mistakes of many of the cities in more developed countries, or 'leapfrogging' car-oriented mobility to directly develop cities around the principles of sustainable mobility and liveability. This symposium brings together leading researchers in HKU and UCL who can share existing methodologies and findings of sustainable mobility with this broader spatial and socio-technical context in their own regions of the world. This symposium also aims to senior academics, policy makers and practitioners from across China to share their suggestions to tackle the upcoming mobility challenges.

MAJOR PARTICIPANTS (HKU)

Professor Becky P.Y. Loo (HKU Convenor)	<i>Professor & Head, Department of Geography, HKU Director, Institute of Transport Studies, HKU</i>
Professor Anthony G.O. Yeh	<i>Chan To Haan Professor & Chair Professor, Department of Urban Planning and Design, HKU Director, Geographic Information Systems (GIS) Research Centre, HKU</i>
Professor S.C. Wong	<i>Francis S Y Bong Professor & Chair of Transportation Engineering, Department of Civil Engineering, HKU Associate Dean, Faculty of Engineering, HKU</i>
Dr W.Y. Szeto	<i>Associate Professor, Department of Civil Engineering, HKU Deputy Director, Institute of Transport Studies, HKU</i>
Dr Jiangping Zhou	<i>Associate Professor, Department of Urban Planning and Design, HKU</i>
Dr Pengyu Zhu	<i>Assistant Professor, Department of Geography, HKU</i>

MAJOR PARTICIPANTS (UCL)

Professor Peter Jones (UCL Convenor)	<i>Professor of Transport and Sustainable Development, OBE, Centre for Transport Studies, Department of Civil, Environmental and Geomatic Engineering, UCL Scientific Coordinator, EU Horizon2020 CREATE project</i>
Dr Clemence Cavoli	<i>Research Associate, Centre for Transport Studies, Department of Civil, Environmental and Geomatic Engineering, UCL</i>
Dr Tom Cohen	<i>Senior Research Associate, Centre for Transport Studies, Department of Civil, Environmental and Geomatic Engineering, UCL</i>

Dr Robin Hickman

*Reader in Transport and City Planning, The Bartlett
School of Planning, UCL*

INVITED SPEAKERS / PARTICIPANTS

Professor Pengjun Zhao

*Professor in Urban Transport Planning, School of Urban
and Environmental Sciences, Peking University
Director, Centre for Urban Planning and Transport
Studies, Peking University*

Professor Feng Zhen

*Professor in Urban Planning and Design & Vice-dean,
School of Architecture and Urban Planning, Nanjing
University
Director, Jiangsu Provincial Laboratory of Smart City
Design and Visualization Technology, Nanjing University*

Dr Wangtu (Ato) Xu

*Associate Professor, School of Architecture and Civil
Engineering, Xiamen University*

DETAILED PROGRAMME

Welcome Speech



Professor William Hayward (HKU)

Professor William Hayward is Dean of Social Sciences and Professor of Psychology at the University of Hong Kong. He gained a BA and MA from the University of Canterbury (New Zealand) and a PhD in Psychology from Yale University. He held initial academic appointments at the University of Wollongong and the Chinese University of Hong Kong. He was then Head of the Department of Psychology at the University of Hong Kong (2008-2013) and Head of the School of Psychology at the University of Auckland (2014-2017).

Professor Hayward's research program is focused on how people make sense of the visual world around them. He has published extensively in the areas of object and face perception, and visual attention. He has received HK\$7 million from the Hong Kong Research Grants Council, and additional funds from the Australian Research Council. He is Partner Investigator on the Australian Research Council's Centre of Excellence in Cognition and Its Disorders. He is Associate Editor of the *British Journal of Psychology*, and until recently was Associate Editor of *Visual Cognition*. He is also on the editorial boards of three leading international journals.

Opening Remarks



Professor Becky P.Y. Loo (HKU)

Professor Loo is Professor of Geography (Full Professor since 2009) and Head of Geography (first female Head of Department since its establishment in 1954) at the University of Hong Kong. She serves as the Director of the Institute of Transport Studies at the University of Hong Kong. Her current research interests are transportation, e-technologies and society. In particular, she is interested in applying spatial analysis, surveys and statistical methods in analysing pertinent issues related to sustainable transportation. Key issues that she has been tackling include carbon dioxide emissions from transport sources, regional transport infrastructure (including airports, ports and railways) and development, transit-oriented development and walkable communities, and road safety. In addition, she is conducting research on the pervasive effects of e-technologies (defined as microelectronics, informatics and telecommunications) on society. Professor Loo is Founding Editor-in-Chief of *Travel Behaviour and Society*, Associate Editor of the *Journal of Transport Geography* and *Transportmetrica A: Transport Science*. She is on the Editorial Boards of the *International Journal of Sustainable Transportation*, *Journal of Urban Technology*, *International Journal of Shipping and Transport Logistics*, and *Geographical Research*.

Introduction: About the Project of the Role of Transport in Transiting to Liveable and Sustainable Cities in Europe and China

Abstract: The project sets out to initiate cross-disciplinary collaboration between UCL's Centre for Transport Studies (Department of Civil, Environmental and Geomatic Engineering) and the wider UCL Transport

Institute, and the Institute of Transport Studies at the University of Hong Kong. The two partners propose organising two joint events to kick-start this initiative, one in Hong Kong and one in London focusing as their main theme on 'Sustainable Transport in the Future City'. The first would take place in Hong Kong and comprise a symposium drawing together senior academics, policy makers and practitioners from across China. The symposium would include presentations by four members of UCL staff: Professor Peter Jones, Dr Clemence Cavoli, Dr Tom Cohen (all of whom have worked closely on different aspects of the CREATE project) and Dr Robin Hickman. Following the symposium, a special journal issue will be prepared, and a report would be produced in both English and Chinese for distribution to a wide urban audience. The subsequent workshop would take place in London. This would take the form of a working meeting attended by a larger number of UCL staff and three core members of HKU's faculty. The purpose of this meeting would be to plan future collaborations and activities in two broad areas: (i) joint applications for research programme funding and (ii) shared elements of teaching at Master's level.

Theme 1

Sustainable Urban Transport: Current Situations, Challenges and Opportunities in Europe and China



Professor Peter Jones

Peter is a member of the Independent Transport Commission, the DfT's Science Advisory Council and co-chair of its Joint Analysis Development Group. He is Scientific Co-ordinator for the EU funded 'CREATE' project on trends in urban mobility, is a member of the Commission on Travel Demand and of the London Roads and Streets Commission. He was awarded an OBE for services to national transport policy, in January 2017. He has a wide range of transport research and teaching interests, covering both analytical methods and policy. These include transport policy, traveller attitudes and behaviour, travel trends and the determinants of travel demand, traffic restraint studies, accessibility studies, policy option generation, major transport economic and social impact studies, public engagement, development of new survey and appraisal methods, and advances in urban street planning and design.

Title: The Evolution of Urban Transport Policies in Western European Cities: Causes and Consequences

Abstract: The presentation will summarise some key findings from the European Commission funded 'CREATE' project, which has examined the evolution of transport policy in five Western European capital cities, over the past 50 years. Despite differences in size and cultural context, the policy discourses have followed a broadly similar trajectory, from the 'car-oriented city' to the 'sustainable mobility' city, to one with a greater focus on 'cities as places'. This has been triggered by 'internal' changes in political priorities and public attitudes, often supported by 'external' pressures (e.g. the oil crises of the 1970s and the growing concern about CO₂ emissions). This has had major implications for the kinds of policy measures that are prioritised and the ways in which urban streets are designed. The effects on levels of car use have been significant: from growth to a levelling off and more recently a decline in car driver modal shares ('peak car') – in London, for example, down from 46% of all residents' trips in the 1990s to 32% in 2016.



Professor Pengjun Zhao

Professor Pengjun Zhao is Professor in Urban Transport Planning in the School of Urban and Environmental Sciences, and the Director of Centre for Urban Planning and Transport Studies at Peking University. He is also the Editor-in-Chief for *Cities* (Elsevier). He obtained his PhD degree and postdoctoral training in Urban Planning at University of Groningen, the Netherlands. His research mostly focuses on sustainable transportation, travel demand management and spatial planning. He has more than 120 research outputs, of which many were published in international peer-reviewed journals, such as *Transportation Research A*, *Transportation*, *Urban Studies*, etc. He was ranked as one of Most Cited Chinese Researchers by Elsevier for Year 2014, 2015, 2016 and 2017 consecutively. He has obtained more than RMB 7.2 million of research grants as the Principle Investigator (PI) for 22 research projects which were funded by international and domestic organizations, such as EP7 (EU), EPSRC (UK), NSFC (CN), etc.

Title: Urban Transport Inequity in Transition China: A Literature Review and Agenda for Future Research

Abstract: Urban transport inequity is increasingly attracting interests by researchers and politicians. It has become an important research theme in the field of urban studies or transport studies. However, our existing knowledge of urban transport inequity is mainly based on cases from Western World. Cases in developing countries could contribute to generalization of the knowledge since there are significant differences in transport and socioeconomic contexts between Western World and developing countries. China has been experiencing a transition from a centrally planned system to market system since the 1980s. The transitional socialist-style social equity is being broken by the increasing market power and a changing society. An increasing social inequity has been reported in many fields including transport. Although some studies have been done, findings and conclusions are still fragmented and ambiguous. A complete story of urban transport inequity in China is still missed. The paper aims to conduct a thorough review of literature about urban transport inequity in China. Firstly, a conceptual framework for studying urban transport inequity is proposed according to the theoretical arguments in the field. Secondly, literature about urban transport inequity in China is reviewed in terms of the evidences, determinants and impacts of urban transport inequity in China. Thirdly, critical discussions were conducted on the existing empirical studies in terms of research methods, data and theoretical contributions. Finally, an agenda for future research about urban transport inequity in China is proposed.



Professor Anthony G.O. Yeh

Professor Anthony G.O. Yeh is Chan To-Hann Professor in Urban Planning and Design and Chair Professor of Department of Urban Planning and Design and Director of GIS Research Centre, and former Dean of Graduate School, Director of Centre of Urban Studies and Urban Planning, Institute of Transport Studies, and Head of Department of Urban Planning and Design at the University of Hong Kong. He is an Academician of the Chinese Academy of Sciences and Academy of Social Sciences in the UK and a Fellow of TWAS (The Academy of Sciences for the Developing World), Hong Kong Institute of Planners (HKIP), Royal Town Planning Institute (RTPI), Planning Institute of Australia (FPIA),

Royal Institution of Chartered Surveyors (RICS) and Chartered Institute of Logistics and Transport (CILT). His main areas of specialisation are in urban development and planning in Hong Kong, China, and South East Asia and the applications of geographic information systems (GIS) as planning support system.

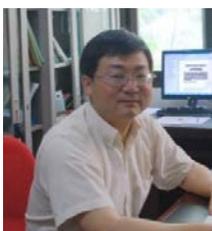
He has published over 30 books and monographs and over 180 international journal papers and book chapters. He also serves as editorial board members in major international journals and honorary professors and external examiners of a number of universities and research institutes in China and S.E. Asia. He has been Founding Secretary-General of the Asian Planning Schools Association and Asia GIS Association, Founding President of the Hong Kong GIS Association, Chairman of the Hong Kong Geographical Association, Vice President of the Commonwealth Association of Planners, Vice President of the Hong Kong Institute of Planners, and Chairman of the Geographic Information Science Commission of the International Geographic Union (IGU).

Title: Automatic Extraction and Generation of Vehicle and Pedestrian Navigation Path for Smart City

Abstract: The advancement of outdoor and indoor positioning sensors and automatic vehicles has provided the technologies for the development of smart mobility in smart cities. However, these technologies alone cannot be adequate for smart mobility. They have to be supported by geospatial data. Manual methods for creating and updating them are not only costly but also time consuming. Automatic extraction and updating of geospatial navigation information from GIS and indoor layout plans is much needed so that they can be generated and updated frequently. Vehicle navigation GIS is often stored and conceived as centre line graphs. However, navigation paths in which the centre lines are located can be considered as a combination of polygons. By decomposing navigation paths, such as roads, from longitudinal road markings in a GIS into basic lane polygons and later overlay them with transverse road markings, such as turning information and speed limit, can generate lane-level road network data that can be further combined to road-level centre lines for vehicle navigation. Such polygonization method can be extended to extract pedestrian navigation paths from Building Information Modeling (BIM) model that is becoming a standard for the building industries. The geometric and semantic information in BIM can be used for generating indoor layout plans that can be decomposed into basic polygons representing open and closed indoor spaces. From these open and closed indoor space polygons, grid graphs and skeleton graphs for pedestrian navigation can be automatically generated and updated.

Theme 2

*Sustainable Transport Policy and Planning:
Empirical Evidence in UK and China*



Professor Feng Zhen

Professor Feng Zhen is Professor in Urban Planning and Design and the Vice-dean in the School of Architecture and Urban Planning, the vice-director of Smart City Research Institute, and the director of Jiangsu Provincial Laboratory of Smart City Design and Visualization Technology at Nanjing University. Besides, he serves as the Director of Urban Geography Committee of China and vice-director of big data committee of Chinese Society for Urban

Studies. His research interest includes information and communication technology and travel behaviour, smart city, liveable city and planning, and urban and regional economics. He has more than 300 research outputs, of which were recently published in international peer-reviewed journals, such as *Urban Studies*, *Transportation*, *Journal of Transport Geography*, *Cities*, *Habitat International*, *Tourism Management*, etc. He is a member of the Editorial Boards of the *Transportation Letters*.

Title: Understanding the Usage of Bike Sharing and Its Determinants in China: A Case Study of Nanjing

Abstract: China used to be called as “the kingdom of bicycles”. However, the share of bicycles in people’s daily trips declines along with the rapid urbanization in the last three decades. Recently, there is a surging growth in bike sharing in urban China. More than 200 Chinese cities have developed bike sharing system, which has attracted increasing scholarly attention on its usage characteristics and potential influence on people’s mode choices. Theoretically, the use of sharing bikes may reverse the model shift trend from walking, bicycles and public transport to private cars, and thus contribute to a more sustainable transport development. However, up to date, very little has been written to document the use of sharing bike. Using two empirical cases in Nanjing, this presentation aims to analyse the usage characteristics of sharing bike and its influencing geographical factors. Methodologically, the real-time data on sharing bike rent/return location and time in Jiangbei new district and the questionnaire data on university student users in Xianlin Campus are both analysed. In Jiangbei new district case, we found that the community density and distance to metro stations are the most important factors accounting for the usage of sharing bike. In Xianlin Campus, we found that the trip purpose and the layout of campus and other facilities have heavily influenced university students’ choice of sharing bikes. The findings provide useful insights for urban planners to promote people’ use of sharing bikes.



Dr Clemence Cavoli

Dr Cavoli is a political scientist and historian by background, expert in multi-level governance linked to sustainable development and innovative policy-making and planning. She specializes in environmental and transport policies, in particular linked with urban mobility. Her current research projects investigate the extent to which growing cities can accelerate their urban transport development processes to support sustainable mobility. Clemence advises supranational, national and local policy-makers. She regularly works as an independent expert and consultant for the European Commission and was seconded to the Science and Research Unit at the UK Department for Transport and to the EU Commission, DG MOVE. She holds a Ph.D from UCL which assessed the impact environmental European Union laws and programmes have had on urban mobility policies. Prior to this she was a project manager and a consultant on sustainable mobility at the Universidad Autonoma Madrid, Spain. She holds a Masters Degree (first class Honours) from the Sorbonne University which she undertook partly in the USA, at Carleton College, and partly in Spain at the Complutense in Madrid.

Title: A Chance for Growing Economies to Accelerate Their Transport Development Processes?

Abstract: The need to avoid ‘Car-oriented’ policy trajectories in growing urban economies is urgent. As those cities’ GDP and population grow, car ownership and car use are likely to increase – resulting in strong negative externalities - unless public authorities and/or private companies provide an alternative at an early development stage. Implementing sustainable mobility and land use policies is crucial to achieve several key SDGs, in particular goal 11. This presentation highlights common challenges faced by mobility policies in emerging economies, ranging from administrative, to cultural, political or behavioural issues – drawing from findings from five Eastern European and Middle Eastern cities as part of the EU CREATE project. The irreversibility of a process that initially sees public authorities prioritizing car use is questioned. Importantly, the study considers whether growing economies that are experiencing rapid private motorisation can learn from these insights, and ‘short-circuit’ this development process – speeding up the implementation of more sustainable transport policies and avoiding wasted investment in roads-based infrastructure.



Dr Tom Cohen

Tom Cohen is Senior Fellow (Research & Teaching) at UCL’s Centre for Transport Studies. Tom is leader of the CREATE package called Future Developments and he teaches transport policy and transport behaviour change. Tom’s first degree was in Mathematics and Philosophy and he later obtained an MSc in Transport Studies before spending a decade in transport consultancy. Tom commenced his doctoral studies at UCL in 2009 and was awarded his PhD in Environmental Studies in 2013. In 2016 he led a research project for the UK government on the social and behavioural aspects of automated vehicles and he continues to be involved in work on that theme. His principal research interests are transport governance and decision making, transport/mobility justice and citizen participation in transport planning.

Title: CREATE: Defining the Next Stage of Cities and Their Transport Systems

Abstract: In addition to analysing the evolution of transport policy and governance in a group of western-European cities, the Horizon-2020 CREATE project has also looked forward, asking how cities might develop in the future. This presentation offers a view of so-called “Stage 4” cities, embracing a holistic view of transport – who travels, which journeys they make and when, as well as how the journeys are made. This view addresses opportunities to rationalise travel through more co-ordinated planning across sectors and through less transport-intensive location decisions. It envisages an increase in the effective capacity of the network, achieved by smart management tools. And it also addresses the issue of justice in mobility and transport. The presentation will include discussion of the methods, indicators and interventions that might be associated with a city at this stage.

Theme 3

Transport, Land Use and Sustainability: Principles and Theories in Urban Planning



Professor S.C. Wong

Professor S.C. Wong is Chair Professor of Department of Civil Engineering and Associate Dean of Faculty of Engineering, and was conferred the Francis S Y Bong Professorship in Engineering, at the University of Hong Kong. He received his BSc(Eng) and MPhil degrees from the University of Hong Kong and a PhD in Transport Studies from University College London. Professor Wong has published extensively in reputable international journals with high impact factors. He has published more than 300 papers in refereed journals, in addition to numerous conference papers and presentations, including 80 keynote and invited talks. His journal articles have attracted more than 5,000 citations, garnering him an h-index of 38 according to the ISI Web of Science. He is currently Editor-in-Chief of *Transportmetrica A: Transport Science*, and *International Journal of Sustainable Transportation*, and serves on the editorial boards of other fourteen journals, including *IEEE Transactions on Intelligent Transportation Systems*, *Transportation Research Part B*, *Accident Analysis and Prevention*, *Transport Reviews*, etc. Locally, Professor Wong is currently a Justice of the Peace, and Vice-Chairman of the Town Planning Board of the Hong Kong SAR Government. In 2015, Professor Wong was awarded the Bronze Bauhinia Star by the Hong Kong SAR Government.

Title: A Continuum Modeling Approach to Land Use, Transport and the Environment Problems

Abstract: Air pollution has become a pressing issue, and the transport sector is an important source of emissions. For example, global warming has become one of the most acute problems of our time, and it is reported that the transport sector is responsible for about a quarter of global CO₂ emissions, in which about three quarters of transport-related CO₂ emissions are generated by road surface transport. On the other hand, other pollutants, such as nitrogen oxides, sulphur oxides, particulates, affect people's quality of life and health. Because of the strong interactions between land use and transport, it is useful to develop an integrated model for the land use, transport, and the environment (ILUTE), which helps to devise sustainable land use and transport policies that are environmentally compatible. The prediction of housing location choices is important for making decisions on how to allocate resources for land use developments, and the spatial analysis of air pollution and housing location choice in urban cities becomes an interesting but challenging problem. Traditionally, this problem is studied using a discrete modelling approach, in which a detailed network is constructed, and linked to an environmental sub-model to estimate the environmental impacts. In this study, we adopt an alternative continuum modelling approach, which focuses on the general trends and patterns of distribution and the travel choices of road users at the macroscopic rather than microscopic level. In the presentation, we describe the modelling and simulation of the dispersion of vehicle exhaust in a hypothetical city with a single central business district (CBD). We determine the long-run average pollutant concentration in the city based on the distribution of wind speed and direction in a year. Then, we develop a model for the integrated land use, transport, and the environment, in which air quality based on the above long-run pollutant concentration, among other factors, are assumed to influence people's housing location

choices. This will in turn change their travel behaviour. Within the city region, all vehicles are assumed to be continuously distributed over the whole city, and the road network is relatively dense and can be approximated as a continuum. Traffic movements satisfy the reactive dynamic user equilibrium principle, and pollution dispersion model is governed by the advection-diffusion equation. Numerical examples are used to demonstrate the effectiveness of the model and solution algorithm.



Dr Jiangping Zhou

Jiangping Zhou, is Associate Professor in the Department of Urban Planning and Design at The University of Hong Kong (HKU) since 2017. He has brought much international experience, knowledge and network to his post at HKU. Prior to HKU, he was Lecturer (Assistant Professor) in Urban Planning at University of Queensland, Australia and Assistant Professor in Community and Regional Planning, Transportation and Sustainable Environments, Iowa State University, US. His primary research interests are in sustainable urban and transportation systems and associated policy and planning studies, especially from a comparative perspective and based on emerging data such as cellular network data and smart card data. He has authored and co-authored over 100 scholarly articles, and his research has appeared in peer reviewed international journals such as *Journal of American Planning Association*, *Environment and Planning A*, *Urban Geography*, *Journal of Urban Planning and Development*, *Transport Policy*, *Cities*, *Habitat International* and *Transportation Research A/D*.

Title: “Familiar Strangers” around Metro Stations: Implications, Visualization and Determinants

Abstract: Why can cities in general be more productive and richer than villages? Some scholars believe that the main reason lies in economic agglomeration and spillover effects. But what exactly can trigger those effects? Some argue that face-to-face interaction, along with other factors such as human capital, communication, built form, development density and professional network, as the premise and booster of the effects. Cities with tall buildings and high population/employer density may be a pain for those who prefer and enjoy a countryside lifestyle; however, such cities can better facilitate a variety of face-to-face interactions, with “familiar strangers” as one of them. Familiar strangers are those urban residents or visitors who encounter one another at various locales in the city. Prior to the emergence of big data such as smartcard and cellular network data, it is mostly through discrete evidence, anecdotal personal experience and/or movie/novel episodes that we know the existence of the familiar-stranger phenomenon and perceive its magnitude. Nobody knows exactly where familiar strangers encounter the most, how many familiar strangers on average there are at a specific locale and which factors would affect the distribution and the number of familiar strangers at a locale.

Using a week’s smartcard in 2015 of Beijing, the capital of China with a population over 20 million, we have quantified and visualised the distribution and the number of familiar strangers at different metro-served areas (MSAs)-metro stations and their respective surroundings. By revisiting relevant literature and by introducing extra data such as local road network data, cellular network data and the average number of points of interest (POIs) and

applying tools such as sDNA, principal component analysis and cluster analysis, we have explored socioeconomic implications and determinants of familiar strangers.

We found that familiar strangers are significantly associated with detected cellphone users, the number of road intersections, public-service POIs and mean crow flight distance of local road network. Depending on factors such as road network indicators based on sDNA, built environment (e.g., POI number and mix), detected cellphone users and the number of strangers, local MSAs can be classified into 7 groups. We found that familiar strangers display varied patterns between weekdays and weekends. They could either represent the number of workers/commuters going to or from the same MSA or people entertain, encounter and/or deliberately meet at the same MSA. With limited data, we still cannot link familiar strangers to topics such as economic vitality, location-specific attractiveness and business opportunities/profits.



Dr Robin Hickman

Dr Robin Hickman is a Reader from the Bartlett School of Planning at University College London. He has research interests in transport and climate change, urban structure and travel, integrated transport and urban planning strategies, the affective dimensions of travel, discourses in travel, multi-criteria appraisal, and sustainable transport strategies in the UK, Europe and Asia. His recent books include *Transport, Climate Change and the City* (Routledge, 2014), *Handbook on Transport and Development* (Edward Elgar, 2015), and *Improving Interchanges: Toward Better Multimodal Railway Hubs in the People’s Republic of China* (Asian Development Bank, 2015). He has developed over 60 journal articles, book chapters, published reports and working papers.

Title: Railway Station Redevelopment: Regeneration or Gentrification?

Abstract: The redevelopment of railways stations and their surrounding neighbourhoods offers many opportunities in terms of regeneration, yet there are also concerns over the potential gentrification of areas and displacement of the existing population and local businesses. The most prominent voice on these issues is typically from the project promotor, reflecting their position of power in the decision-making process, but there are other voices to be heard, including varied views from the local community. This paper uses Q methodology to develop discourses associated with the proposed High Speed Two project and redevelopment of Euston station (London, UK) and the surrounding neighbourhoods. 28 in-depth surveys are used with local residents, local employees, politicians, local government officers and academics, covering attitudes to the proposed Euston redevelopment. The Q method analysis highlights three major discourses: the ‘Community Activist’, the ‘Rail Promoter’, and the ‘Optimistic Practitioner’. Understanding these different discourses, and their components, is important for decision-makers in ensuring that investment strategies can better reflect the different viewpoints evident in the public domain.

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