

**THURSDAY, 21 April**

**14.40 - 16.00 Parallel Sessions**

**Public Transport Meets Autonomous, Connected, Cooperative Mobilities**  
*[Marshrutka — Zenne 23]*

Convenors

Andrei Kuznetsov\* (European University at Saint Petersburg)

Nikolay Rudenko\* (European University at Saint Petersburg)

Chair: Adam Borch, Åbo Akademi University

**Fei Yu, Centre for Mobilities Research, Lancaster University**  
***Autonomobility justice in China: A mixed methods study of how autonomous vehicles could shape future mobility systems***

This empirical research provides an insight into the potential social inequality and injustice of autonomobility in China. It coins the concept of an emerging autonomobility system. The study concerns the social and cultural impacts of this emerging autonomobility system that is challenging mobility justice, which is promoted as the integral to sustainability (Sheller, 2020). Sheller argues that equality and justice issues are the very core of sustainability, which is to become a process with the power transforming society. Basically, the theoretical frame includes Mimi Sheller's (2018) mobility justice and Foucauldian conceptualizations of modern power.

In the context of the development of transport policy in China, autonomous vehicles (AVs) are regarded as a means to achieving a "green" transition to sustainability and reduce carbon emissions from the automobile. I am interested in the social implications of AVs, and how the transformations relating to AVs may impact citizens' mobile experience and engender social inequalities. To put it more precisely, AV technologies are reshaping our society and our spaces. However, we know little about how they will wield power to shape our lives for both better or worse. Thus, my research revisits the relationship between the car and our mobile lives contributing to a deeper understanding of the emergence of AVs and an autonomobility system.

References

Sheller, M. (2018). Theorising mobility justice. *Tempo Social: Revista De Sociologia Da USP*, 30(2), 17-34.

Sheller, M. (2020). Mobility justice. In *Handbook of research methods and applications for mobilities*. Edward Elgar Publishing.

**William Riggs, University of San Francisco School of Management**  
***Developing Sustainable, Cooperative and Just Business Models for Autonomous Public Transport and Urban Mobility***

The development of autonomous vehicle technology has tremendous potential to transform our entire urban landscape. One way is by radically reshaping the way we think about design of streets but also about the use and management of roads themselves. This paper posits that streets can be places for play, for socialization and culture, for economic activity and climate mitigating greening. At the same time the paper also argues that also need management to support goals for equity and sustainability. This means creating a commercial path for autonomous passenger service and ridesharing while setting priorities

for sharing and electrification. Based on data from qualitative and quantitative analysis of management methods this work discussed, how transportation technology can play a vital role in developing future communities and how planners and engineers can revolutionize future roadways.

**Thomas Vanoutrive, Urban Studies Institute, University of Antwerp**  
***Visualizing the irony of mobility as a shared, autonomous and smart service***

The meaning of public transport is subject to change due to the rise of concepts and policy paradigms such as Mobility as a Service (MaaS), shared and smart mobility. It is often stated that existing frames of reference have difficulties in grasping the essence of these models. However, part of the conceptual confusion might be related to the euphemistic portrayals and one-sided advertising of what is promoted. In particular economic concepts are prone to conceptual ambiguity. For example, a term like sharing is in many cases used to describe vehicle renting. In this contribution, we will first present some cartoon-like drawings that highlight the situational irony present in contemporary discourses on MaaS, public transport, autonomous vehicles and sharing. This method is similar to tactics of activist groups that play with claims of their opponents. The irony is situational because not the communicator but someone else sees something as ironical. Subsequently, the concepts will be brought together in a kind of conceptual mapping that uses the same, simple graphical language. This forms the basis of a visualized scenario which may look a bit more dystopian than the usual depictions of the future of mobility.

**Liliia Zemnukhova\*, European university at St. Petersburg, Sociological Institute of the FCTAS RAS**  
***How to make autonomous vehicles publicly accepted? Discussion of the ethical issues***

Ethical issues in the development of algorithms in autonomous vehicles (AVs) have always been controversial, but in recent years they have become particularly acute due to their public effect. The accidents with AVs on the streets, among other road users, become information occasions for ethical discussions. Media, regulators, developers, researchers, and users debate borders and norms, acceptability and rules, responsibility and consequences of AVs as public actors. Two large sets of ethical issues arise in these debates. On the one hand, AV algorithms – as well as most AI-based technologies – are problematic in terms of transparency, vulnerability, and biases. In this regard, the professional community offers probable solutions: companies create ethical commissions or committees; independent research institutes (for example, AINow, State of AI) provide general recommendations for their development, and some national regulators devise alternative traffic rules. On the other hand, a discussion concerns the responsibility of AVs on the roads, the conformity of their decisions in specific situations, and the established moral order in public space. Corporate anthropologists (for example, M. Cefkin) suggest considering existing rules and practices that can potentially be taken into account in the design of AV algorithms. Social researchers of algorithms attempt to conceptualize ethics as coordination, as practice (Metcalf, Moss, boyd, 2019), or as a subject of negotiation (Govia, 2020). I propose to focus on ethical narratives as they are discussed in the context of public space on the example of Russian AV developers.

**Nikolay Rudenko\*, European University at Saint Petersburg**  
**Denis Kvasniuk\*, European University at Saint Petersburg**  
***Precise nature of Autonomous vehicles and the changes of the public transportation***

One of the AVs' selling points in the developers' narratives is that AVs will have an opportunity to be more exact than traditional public transport. E.g., while buses could transport people from one bus stop to another, autonomous vehicles can carry people away from point to point. IT company Yandex put it in this way: "With the advent of autonomous vehicles, all transport modes will merge. Press the button, the car you need arrives, efficiently transport from point a to point b". That is, exactness is the added value of AVs.

However, although the exactness as the selling point was emphasized in many public talks, it seems today we are far from realizing it in the existing designs of the AVs. E.g., Waymo's CEO Tekedra Mawakana complains that one of the biggest problems in driving people around the city in AVs is to know exact points where it is possible and comfortable for the people to drop in and drop off. Meanwhile, San Francisco Public Transport Agency criticized General Motors-based company "Cruise" that in the promo videos of the latter passengers illegally hopping in and out of vehicles in the middle of the street instead of at the curb.

The challenges that AVs' developers face lie in the fact that public transport in the cities was historically co-evolved with the public spaces and urban forms. Metro stations and bus stops were aligned with important parts of the city. Today, when AVs' developers oppose public transportation and promote AVs' vision as a more precise and convenient way of moving through the city, they challenge the existing alignments and create controversies in the public spaces.

In this talk, I want to show that the arrival of AVs can bring about profound changes in the public spaces and the infrastructure of public transportation if the developers continue to emphasize the exact point-based capacity of the AVs.