

SPECIAL ISSUE: Urban and regional infrastructures

Exploring urban and regional infrastructure from a spatial perspective

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Abstract

Urban and regional infrastructures regain interdisciplinary interest in course of the ‘infrastructural turn’. Contemporary questions exceed beyond engineering and technology but reach into social, political, economic, and ecological spheres. Therefore, the ARL:Univie International Summer School 2021 “Urban and Regional Infrastructures” invited international young researchers to Vienna to discuss the state-of-the-art of infrastructure-related research. This special issue compiles the contributions and opens up the discussion on the present role, effects and future challenges of urban and regional infrastructures to an interdisciplinary planning-oriented scientific community.

Keywords

Infrastructure, urban and regional planning, digitalisation, transformation, sustainability

Introduction

Infrastructure has regained interest in geography and planning studies in course of a global, interdisciplinary “infrastructural turn” during the last two decades: “*Adopting a regional approach to infrastructure offers a series of vantage points and conceptual benefits that can enrich our understanding of a range of urban questions*” (Addie et al., 2020, p. 15). The current systemic questions around infrastructure development and planning exceed well beyond engineering and technology issues of the former centuries and reach into social, political, economic, and ecological spheres of debate (e.g. Moss, 2020). Global connectivity, mobility, digitalisation, urbanisation, energy demand, capitalist growth and crises attach their uneven trajectories to infrastructural networks and services (Schorn & Humer, 2021). Through that, the development of urban and regional infrastructures may shape new geographies of inequality and opportunities (Schnelzer et al., 2022) and standards of infrastructural provision – such as availability, accessibility, affordability, quality and variety

– are renegotiated (Humer et al., 2015). At the same time, normatively spoken, “good” governance and development of infrastructure can be a key for sustainability-oriented urban and regional planning as well as policymaking. Different infrastructures can be “important political sites in the (re)configuration of resource connectivities” (Williams et al., 2019). Furthermore, new approaches, such as public participation GIS (PPGIS), can help to “determine the availability of environmental opportunities that promote active travel and the related health outcomes” (Laatikainen et al., 2018, p. 1).

This is the point of departure of the ARL:Univie International Summer School 2021 “Urban and Regional Infrastructures”, which took place in Vienna. The summer school invited ambitious young researchers and was jointly organized by the German ARL - Academy for Territorial Development in the Leibniz Association and the Research Platform “The Challenge of Urban Futures” at University of Vienna. The summer school gave advanced master and doctoral students with disciplinary backgrounds in geography, urban and European studies, political sciences, sociology, spatial planning, public administration or sociology the opportunity to present and discuss their infrastructure-related research. The research addresses a variety of actors (from neighbourhood initiatives to businesses and government bodies), a range of issues (from mobility to green infrastructure), as well as diverse approaches and instruments such as social interactions, public participation and platforms as well as climate adaptation. The presentations and discussions delivered insight into selected facets of infrastructure planning and discourses, highlighted the role they play for urban and regional development, and addressed their consequences for spatial planning and development strategies.

All participants received individual feedback from international professors and experts. We were pleased to welcome academic keynote speakers, who enriched the program with inspiring talks and their valuable contributions as discussants during a panel discussion. Marketta Kyttä, professor in Land use planning at Aalto University, Finland, has a background in environmental psychology and participatory planning. She introduced “Participatory mapping as a tool to diagnose environmental health promotion processes and to enhance large-scale public participation”. Timothy Moss, Senior Researcher at the Integrative Research Institute on Transformations of Human-Environment Systems (IRI THESys) at the Humboldt University of Berlin, talked about “Remaking Berlin. A History of the City through Infrastructure, 1920-2020” and Erik Swyngedouw, professor of Geography at the University of Manchester, explored “Life and Death in the Urbicene: The Depoliticized Politics of Anthropogenic Infrastructures” in his keynote speech.

In addition, plenary sessions offered the opportunity to intensify the debate and develop joint research ideas. During the panel discussion moderated by Yvonne Franz (University of Vienna), Yuri Kazepov (University of Vienna), Katharina Spanlang and Florian Rautner (Caritas Vienna) debated social infrastructures based on the case of the SIForREF

project (<https://www.interreg-central.eu>). SiforREF analyses social innovation in the social and labour market integration of people with refugee experiences. The discussion underlined daily real-life challenges such as limited financial and human resources and the importance of trust for the implementation of social projects. Field trips provided by Elisabeth Gruber and Martina Schorn (both University of Vienna) to the newly built district Seestadt Aspern and the extension of the subway line number 5 in Vienna complemented the summer school programme. The combination of these scientific and social activities during the summer school thus brought the topic of urban and regional infrastructures to life.

The articles in this special issue

As guest editors of this special issue, we are delighted that participants of the ARL:Univie International Summer School 2021 submitted their manuscripts to an intensive double-blind peer-review process with external reviewers. The special issue “Urban and Regional Infrastructures” is divided in two parts: Volume 19, Issue 3 and Issue 4. The re-launch of EJSD (Servillo et al., 2022) provided a perfect opportunity for publishing the best articles of this summer school.

First, two articles focus on digital and data infrastructures. *Astrid Krisch* (TU Vienna) deals with Public Platforms in Vienna, now often understood as new forms of digital infrastructures. She focuses on the discursive institutionalization of public platforms and critically reflects on the role of local governments in developing digital infrastructures (Krisch, 2022). *Alessandra Calvi* (VU Brussel) focuses on the role of Data Protection Impact Assessment in achieving equality goals in the context of gender, data protection and the smart city (Calvi, 2022). She contributes to the discussion on how European data protection law could address Data Protection Impact Assessment as a suitable approach to making smart cities more inclusive, and specifically to empower women of diverse races, backgrounds, sexual orientations and abilities.

Second, two articles cope with governance and transformative innovation of urban and regional infrastructures. *Lucy Oates* (TU Delft), *Alison Edwards* (Utrecht University), *Aksel Ersoy* (TU Delft) and *Ellen van Bueren* (TU Delft) present a corpus-assisted discourse analysis of sustainability transitions in urban basic infrastructure services (Oates et al., 2022). They compare studies the Global North and the Global South to conclude that an integrated approach encompassing all dimensions of sustainability and a broader understanding of infrastructure services is needed for the transition to a sustainable urban future. *Richard Bärnthaler* (WU Vienna) problematizes “smart” lifeworld environmentalism and radical environmental movements as two predominant trends in urban environmentalism in search of articulation (Bärnthaler, 2022). He draws upon the concept of transformative innovation to translate conceptual reflections into a heuristic research framework for place-based development strategies using an ongoing case study analysis in Vienna’s periphery.

Third, two articles focus on the role of land use and urban planning. *Mark Scherner* (University of Vienna) discusses intergenerational ethics in land policy using Berlin's land policy as a wicked problem to show up consequences of unjust planning on land market (Scherner, 2022). On the basis of expert interviews, he builds on Cultural Theory to analyse Berlin's land and real estate policy between 1990 and 2020 as monorational re-solutions. The article puts forward a typology of risk perceptions in tendering processes. Secondly, *Johannes Herburger* (University of Liechtenstein) investigates the myth of urban densification surrounding the hegemony of densification in the case of the Alpine Rhine Valley in western Austria (Herburger, 2022). He uses discourse analysis and Ernesto Laclau's conception of hegemony to retrace how urban densification emerged through two dislocatory crises but is still confronted with rival articulations of primarily conservative actors.

Fourth, two articles contribute new insights on transport infrastructures. *Carine Assaf* (KU Leuven) and *Pieter Van den Broeck* (KU Leuven) explore the re-institutionalisation of transport policies by analysing neo-illegal transport communities in the Brussels Capital Region (Assaf and van den Broeck, 2022). They argue that fare evaders organise themselves as virtual communities to claim their rights to mobility, showing that fare evaders have the potential to be bottom-up actors. They are a symptom that embodies how transport policies fail under marketisation. *Jonas Lamberg* (Leibniz University Hanover) identifies key factors in planning and implementing autonomous public transport and highlights reasons and challenges of autonomous driving in public transport in Germany (Lamberg, 2022). He compares road- and rail-bound transport systems in urban and rural areas.

Conclusion

Urban and regional infrastructures have become increasingly important in science, politics and society in recent years and will continue to do so in the future. The development of urban and regional infrastructures does not only affect spatial planning but also many other inter- and transdisciplinary fields such as geography, ecology, economy, social and cultural aspects. Also, rural areas can be affected, for example when dealing with sustainable development, changing lifestyles and the provision of essential public services (Othengrafen et al., 2021). In the future, it will therefore be necessary to find sustainable and individually adapted solutions for dealing with the development of infrastructures, in order to be able to react to the current transformation processes in cities and the rural areas. The contributions included in this double special issue can provide initial insights by pointing at past and present challenges and future opportunities of urban and regional infrastructures.

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