

Parallel session F1

**Thinking (through) Infrastructure**

Monday 11 November, 14.00 – 15.30

Pearson Building G07

Chair: **Dr Jenny McArthur**, Lecturer in Urban Infrastructure and Public Policy, UCL

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**Designing the Off-Grid City: Empowering the Transactions of Infrastructure**

Prof. Aseem Inam, Chair in Urban Design, Cardiff University

The paper fundamentally rethinks what constitutes urban infrastructure and its future design by proposing a theoretical framework and attendant research agenda. The paper investigates how residents transact [i.e. have interactive exchanges] with urban infrastructure [e.g. water, sanitation, transportation, communication, energy] in the Global South via 'off-grid' approaches [i.e. highly creative ways, such as informal strategies and social innovations]. The theoretical framework is based on two innovative premises. The first is that the conjunctions of people and their transactions with each other and with urban infrastructure in the global south in fact constitute a type of unique infrastructure itself [i.e. people as infrastructure, following Simone 2004]. The second is that these types of people/people and people/infrastructure transactions can be further designed to empower residents and create transformative urban practices [i.e. designing urban transformation, following Inam 2014]. Integrating these two premises, the paper further develops this theoretical framework via a long-term research agenda focusing on cities of the Global South [e.g. Africa, Asia, Latin America, Middle East]:

- Through critical analysis of the existing literature, to challenge conventions of urban infrastructure by examining human transactions with each other and with material grids and service flows.
- Through systematic analysis of grounded case studies in different contexts, to gain an understanding of the vast creative potential of informal strategies that marginalized residents already deploy to address urban challenges.
- Through a research model of co-production via south-south and north-south partnerships with researchers, practitioners and activists, to develop common theoretical understandings and examine propitious [i.e. future design] implications of this fundamental rethinking of urban infrastructure as systems of informal transactions.

By pursuing this research agenda [some of which is already well underway], the paper proposes new ideas about the power of design, such as the everyday creativity of citizens and transdisciplinary collaborations necessary to redesign urban infrastructure.

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**The materiality of pipes: heterogenous infrastructures**

Dr Maria Rusca, Researcher in Water and Society, Department of Earth Sciences, Uppsala University

In light of recent geographic calls for re-materialising urban political ecology and critical water studies, this paper discusses how the materiality of pipes, the inherent properties of H<sup>2</sup>O and the social world interact and co-constitute each other at different scales. Through the case of water supply in Lilongwe (Malawi) it examines water flows, heterogeneous infrastructural configurations and their relations to, and enmeshment with, the human. It reflects on how infrastructures transform the physicochemical and bacteriological quality of drinking water, and co-determine continuity or discontinuity of water supply across urban spaces. Through a practice lens we shed light on infrastructures 'in use', the practices and consumption patterns they sustain, and on how they co-shape social relations and transformations. As we come to recognise the multiple ontologies of water, we call for an interdisciplinary approach that engages with the biophysical properties of water, the technical characteristics of infrastructures and the choreographies of power that determine infrastructural configurations and water flows. We conclude that an engagement of critical water studies with hydrological and engineering scholars contributes to both taking materiality seriously and furthering conceptualisations of the production of inequalities in the urban waterscape.

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### **The Infrastructural 'WE': the Gendered Materiality of Infrastructure and its Governing**

Dr Hanna Ruszczuk, Postdoctoral Research Associate, Department of Geography, Durham University

Building on the burgeoning collective of urban infrastructure literature, this paper pushes the concept of infrastructure further into the gendered, social sphere of overlooked, regional cities of the global South. This research is a call to consider what manifests urban infrastructure through a feminist lens focusing on power relations, scales and gendered relations in cities. This paper addresses two gaps in urban studies. Firstly, the conceptualisation of urban infrastructure is broadened to consider infrastructure in the form of gendered, social 'WE' ness. The collective 'WE' as invisible, laboured social infrastructure becomes an object of inquiry. These forms of 'WE'-ness occur within women's groups and neighbourhood groups – informal groups that residents create and participate in in their everyday lives. This paper specifically showcases the invisible yet vital infrastructural role women's groups implement in the form of social labour mitigating against everyday concerns and perceived risks of the city. Through this infrastructure, Nepalese cities are sustained and maintained. Secondly, this article draws attention to the gendered materiality of infrastructure and how it is governed. An examination of gender relations and power struggles showcases how local authorities govern by deciding who is acknowledged as a form of 'WE'-ness (only neighbourhood groups) and how the government manages this governance space through invisibility to suit its development agenda. Women are essential to the development of the city under the terms and conditions established by the patriarchy. This conceptual understanding of infrastructure as a 'WE', social and laboured, creates a scholarly opening for urban studies to consider the experiences, struggles, strategies and limitations of residents in a new light. This is only possible through interdisciplinary readings of infrastructure in regional overlooked cities of the south.

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## **Is the “neoliberal” trope enough to think (through) water infrastructure? Reflections from Indian urban diverse realities**

Marie-Hélène Zérah, Research Director (Urban Studies), Institute of Research for Development; Centre d'études en sciences sociales sur les mondes africains, américains et asiatiques, Université Paris Diderot

In this presentation, I will question the relevance, the limits and the paradoxes of the 'neoliberal trope' in reading urban water governance in India since the 1990s. The methodology is resolutely comparative, based on research carried out over time, and grounded in a cross-territorial approach that looks at urban settlements ranging from metropolitan cities to urbanising villages. It argues that the diversity of socio-spatial arrangements is at the heart of a DIY urbanisation, born of a creative tension between everyday practices, official norms and tacit rules, and the structuring framework of public action. This DIY reality embodies localised and circumscribed forms of social contract that reflect both the inventiveness and the fragmentation of urban society.

I will highlight how some of the notable changes in water governance are consistent with the expected effects of neoliberal policies. These include the privatisation and the commodification of basic amenities, and the push for a public modernisation inspired by the new public management paradigm. Nevertheless, a more in-depth analysis shows that there is no uniform application of these principles that are selectively implemented across space thanks to the constraining socio-economic conditions, the resistance of the intermediate administration and elected representatives, and the inertia of institutional structures. The effects of reforms are varied and contrasting, ranging from an aggressive neo-liberal agenda in some metropolitan cities to a furtive agenda of retraction of the State in small towns. These ambivalent trajectories show that contemporary mutations are shaped by multi-causal effects rooted in history, social structure and networks, institutional legacies, and contemporary rationales. The intersection of these effects results in the diverse and contingent nature of water provision that defies any singular explicatory frame.