

Gendering Infrastructure: An Introduction

Yaffa Truelove and Sneha Annavarapu¹

At regional, national and international scales, gendered symbolism and power relations shape the forms and meanings that buildings, roads and digital infrastructures take. Yet, despite the pervasiveness with which gender affects our everyday life, gendered dimensions of infrastructure have received relatively less attention in the literature compared with other aspects of the social, political and cultural embeddedness of infrastructure. In this issue of *Roadsides*, we aim to add to the emergent but significant scholarship that tackles the conceptual and analytical intersection of gender and infrastructure (see Schwenkel 2015; Thompson 2016; Datta and Ahmed 2020; Sultana 2020; Annavarapu 2022; Truelove and Ruszczyk 2022; Alda-Vidal et al. forthcoming; Truelove and Sabhlok forthcoming). Instead of thinking about gender as just another variable to keep in mind while assessing the impact of infrastructure in daily life, we contend that – as a relational and intersectional concept, as a category of self-identification and as lived experience – gender fundamentally shapes infrastructure and is, in turn, shaped by infrastructure (Kern 2021).

¹Each author contributed an equal share of labour to this article. The order of authors is thus arbitrary.

This issue of *Roadsides* brings together diverse approaches to thinking about gender in relation to infrastructure with a view to expanding our conceptual, analytical, methodological and empirical horizons. Emerging from the multifaceted contributions to this issue, we explore the following three themes: 1) gendered infrastructures of labour and care, 2) gendered infrastructural imaginaries and contested futures, 3) gendered forms of infrastructural coping and resistance.

Gendered and fragmented infrastructures of water in Shimla, India.

Photo: Naomi Hazarika, 2022.



Gendered Infrastructures of Labour and Care

A significant literature engages with the ways that labour can be understood with regard to infrastructure as both undergirding its function and viability, as well as forming a type of infrastructure in and of itself: piecing together networks and enabling materials and things to move and flow (Star 1999; Harvey and Knox 2012; Anand, Gupta and Appel 2018). Authors in this issue bring a gendered dimension to this important scholarship by examining and explicating the important ways that gendered labour and care constitute often unseen yet critical infrastructures, which in turn produce rippling social, material and environmental consequences. Gender relations become the terrain on which social infrastructures, resilience and care are forged.

Oldenburg and Buevas's scholarship in Cartagena, Columbia reveals how women's labour and care practices make it possible for housing infrastructure to be built amidst peripheral environments of mud, soil and flooding. Weaving together the stories of women's efforts to "resuscitate" rubble as "building material for 'filling up' houses," they reveal the ways in which gendered labour and care have complex effects for women's bodies, communities and belonging in the city. While ensuring materials and land can be shored up to make housing viable, these time-consuming practices take an enormous toll on the women's wellbeing. In an alternate vein, Rivera's article captures the nuanced ways infrastructures of care can shape and mitigate the challenges that

characterize women's labour, focusing on women street vendors in San Salvador. Using the term *acuerpamiento*, a concept that empirically emerges from street vendors' own narration of their care experiences and support systems developed through a theatre company, Rivera demonstrates how "the bodies of the caregivers and the spaces they inhabit become essential parts of the infrastructures of care that sustain and support everyday life."

Gendered infrastructural labour and its connections to practices of care are also embedded in development projects and the actions of the state. Rehman's contribution considers how the labour of state workers in regulating dengue in Lahore rests on dominant gendered assumptions concerning women, space and mobility. The practices and obligations of state workers who comprise Lady Sanitary Patrols reveal and concretize gendered ideologies regarding women's role in caretaking domestic environments, and women workers' role as specifically 'indoors' and preserving women residents' *pardah*. Similarly, in depicting how state-directed development of infrastructure simultaneously reifies unequal gender ideologies, relations and labour, Kang's article focuses on the "infrastructure aunties" of Seoul – working-class, middle-aged women who have been cleaning the subway systems in South Korea since the 1970s. Conceptualizing infrastructure as labour, Kang shows how the aunty labour that keeps the city moving is exploited.

Finally, Debarry's investigation of irrigation development in rural Ethiopia uncovers gender-differentiated dimensions of infrastructural labour associated with international funding for large-scale infrastructure. Utilizing visual methods in which participants' photograph their labour and practices surrounding irrigation, Debarry traces how irrigation development exposes "gendered, aged and classed bodies not only to stress and harm, but also to becoming living infrastructure themselves."

Gendered Infrastructural Imaginaries and Contested Futures

The authors in this issue also bring out the nuanced ways that transformations in infrastructure are tied to competing gendered infrastructural imaginaries and aspirations which in turn produce contested futures. Explicitly or implicitly, the articles here probe certain fundamental questions that reveal how infrastructure is gendered: Who is the imagined user of infrastructure? What kinds of intersectional power relations and/or exclusions do these imaginations and assumptions around gendered behaviours and aspirations produce? What sorts of futures are imagined and in turn created?

Perera demonstrates how the relocation of families from *wattes* settlements to high-rises has been an integral part of making Colombo a "world recognized city" since 2012. However, as Perera argues, this infrastructural imaginary of world-classness obscures the impact that urban resettlement has had on women's labour and leisure, on filial and familial relations, and on neighbourly intimacy, comfort and security. As she points out, "the desired aesthetics of controlled order is promoting [gendered] disorder of a different kind." Similarly, Hanna Rusczyk's piece indicates how paved and clean streets in urban Nepal are specifically gendered desires and can serve to reify gendered power relations. She shows how gendered modalities of political engagement and participation

reflect and also shape how and why masculinized infrastructural imaginaries of road construction are being supported by the state. The logic of exclusion is, thus, built on an implicit devaluation of the collective aspirations, desires and concerns of women in various political-economic and socio-cultural contexts.

This point comes to a sharp focus in Sugawara's research on how menstruating women experience the rail infrastructures in Tokyo. Sugawara shines a light on how menstruation is not just a biological or cultural issue, but an infrastructural one; centring menstruation as a highly common and painful experience lays bare the assumptions around gender and able-bodiedness that undergird transport infrastructures. This infrastructural apathy and/or ignorance cements stigma and secrecy around menstruation, relegating it (back) to the sphere of 'the private,' and thereby reproducing gendered norms in society.

Despite – or, perhaps because of – the gendered exclusions produced by competing infrastructural imaginations and aspirations, there are also emergent imaginations of feminist and queer futures. In a provocative exploration of how the socio-material conception of “the straight line” concretizes capitalist, patriarchal and heteronormative relations into the world, Dominic Davies puts forward a call for a queer engagement with infrastructure. This conceptualization that celebrates collective repair and posits an interlinking and weaving of lines, he contends, makes space for queering the masculinized notion of “the perfect infrastructure as a straight line passing through frictionless terrain.”

Gendered Forms of Infrastructural Coping and Resistance

Explicating the centrality of gender in the production and reproduction of infrastructure also invites us to reckon with strategies of coping and resistance. Whether we conceptualize them as intentional or incidental, as tactical or spontaneous, all the articles in this issue engage with acts and articulations that signal an orientation to the status quo. And while our intention is hardly to romanticize these ways of coping and/or resisting, there is also an invisibilization of gendered labour if one does not account for it. We therefore pull at the threads of situated agency in some of the articles – not to celebrate individual heroism but to document the means through which chronic and episodic exclusions engender responses, if not outright refusals, and at times produce some sort of incremental transformation.

Sugawara details how menstruating commuters in Tokyo resort to a variety of tactics to manage pain and discomfort during travel. Similarly, Perera discusses how women in Colombo end up working more and for longer than before, in order to adjust to the domestication demanded by modern high-rises. Debarry, too, shows how women in Koga rationalize the laboriousness of their work as a form of duty and, thus, cope with the unevenness of norms and expectations that keep large infrastructure projects working. Oldenburg and Buelvas reveal how practices of care that are deeply gendered become ways in which vulnerable, low-income households in Cartagena build infrastructural belonging. In all four cases, anticipating and accommodating infrastructural betrayal become coping mechanisms by design, and at times open up spaces where resistance can take a stronger foothold.

Elsewhere, infrastructural exclusions produce more overt forms of resistance and refusal. Kang, for instance, points to how subway aunties in Seoul build ethics of care and resistance with other precarious workers by participating in organized labour movements. Rehman, too, notes that despite the gendered and classed inequalities in the labour that operationalizes dengue management in Lahore, female health workers “reclaim time and space” by registering their presence in the urban public fabric while also participating in protests to demand better labour conditions. Highlighting a different modality of resilience, Rivera details how a theatre company created by women street vendors in San Salvador becomes a space of care and communitarian belonging – a refuge in, and a refusal of, the violent vulnerabilities they are operating in.

Taken together, the articles here help shed light on why gendering infrastructure is both critical and integral for understanding how infrastructures come into being and shape our everyday lives and environments. Thinking infrastructurally, we propose, necessitates thinking also about gender relations and their myriad manifestations in social life.

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Sneha Annavarapu is a qualitative sociologist whose research interests centre around urban infrastructure, mobility, class relations and gender in India. She is currently Assistant Professor of Sociology at National University of Singapore, with a joint appointment at Yale-NUS College. She has published articles in academic journals such as *Social Problems*, *Journal of Historical Sociology* and *Journal of Consumer Culture*, and has also written for media outlets like *Public Books* and *Economic and Political Weekly*. Sneha is also a regular host on the New Books Network podcast.



Yaffa Truelove is an Assistant Professor in the Department of Geography at the University of Colorado, Boulder. Drawing on feminist and urban political ecology, her research primarily examines the connections between urban waterscapes and socio-political processes in cities of the Global South. Recent work includes research on the gendered and socio-political dimensions of water scarcity and infrastructure in Shimla, India, as well as the embodied dimensions of infrastructural violence in the cities of Indore and Delhi. She is coeditor, along with Dr Anu Sabhlok, of the book *Gendered Infrastructures: Space, Scale, and Identity*, forthcoming from West Virginia University Press.

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