# Introduction: Infrastructural Stigma and Urban Vulnerability

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**Introduction to the Special Issue: Infrastructural Stigma and Urban Vulnerability**

**Abstract**

In this introduction to the Special Issue 'Infrastructural Stigma and Urban Vulnerability', we outline the need to join up debates on infrastructural exclusion on the one hand and urban stigma on the other. We argue that doing so will allow us to develop a better understanding of the co-constitutive relationship between the material and the symbolic structures of the city shaping urban exclusion and vulnerability. Positing that stigma is not merely a symbolic force but has significant material effects, we show how urban dwellers often experience it in deeply embodied ways, including through impacts on their physical health. Furthermore, stigma is not only imposed on the built environment through discourse, it also emanates from the materiality of the city; this agentic role of the city is often disregarded in sociologically-informed approaches to urban stigma. When infrastructures become sites of contestation about urban inclusion, stigma can be utilised by stigmatised residents to demand connection to public networks, and the wider symbolic inclusion this entails. Through examining the issue of infrastructural stigma in cities and urban territories across the Global North and Global South, as well as the places in between, the nine articles in this Special Issue pay attention to the global relationalities of infrastructural stigma. Ultimately, our focus on the infrastructural origins of stigma draws attention to the structural causes of urban inequality – a reality which is often occluded by both stigma itself and by prevalent academic approaches to understanding it.

**Keywords**

infrastructure, stigma, vulnerability, urban health, urban exclusion

**Introduction**

This Special Issue is the outcome of the research workshop 'Urban vulnerabilities: infrastructure, health, and stigma' held at University College London in June 2018. It was Professor Vanessa Watson, long-time Professor of City Planning at the University of Cape Town and the Global South Editor of *Urban Studies,* who initially suggested the journal as an

ideal outlet for a collection of articles on infrastructure and stigma, and supported us throughout the process. Sadly, and to the great loss of the urban studies community, she passed away while this Special Issue was in production. She was a valued teacher, colleague and friend who made deeply meaningful contributions to the field, and she will be deeply missed. We therefore dedicate this issue to her memory.

Following the workshop discussion, which took place long before the current pandemic, this Special Issue critically examines how the stigma of infrastructural disconnect perpetuates urban inequality and exclusion – an issue, we would argue, that is highly relevant to the current urban condition in which the pandemic is preying on pre-existing disparities in the Global South and North. More specifically, through a collection of articles examining different cases and theoretical trajectories, this Special Issue explores the links between the material aspects of infrastructural neglect – how it operates on the body, creates dependencies and vulnerabilities, transmits affective charges – and the political effects of social stigmatisation. In the most basic sense, infrastructures, as the means of spatially defining and structuring relations in the city, are both shaped by and shape power-relations. At the same time, stigma attached to spaces – especially those lacking certain public services – is often used to further legitimise and reproduce infrastructural exclusion by demarcating symbolic boundaries, imaginations of Otherness, or lack of deservingness of certain populations. Thus, the nine articles in this Special Issue interrogate the interplay between the material networks of the city and the immaterial stigma that derives from them and at the same time exacerbates, perpetuates and justifies exclusion.

The Special Issue is situated at the intersection of two debates in urban studies. First, the growing body of work on infrastructures' role in shaping urban politics and citizenship, with

the materiality of networked services understood as an important determinant of urban exclusion and participation. Second, the literature on structures and spaces of urban stigma which has especially gained traction in sociologically-informed approaches. Despite their overlapping concerns, these ongoing conversations have rarely engaged with one another in depth. This Special Issue therefore synthesises new thinking on the relationship between urban infrastructure and stigma in order to develop a better understanding of the co-constitutive relationship between the material and the symbolic structures of the city that shape urban exclusion and vulnerability. In doing so, it aims to bring together these still-disparate debates, with a broader ambition of disciplinary and theoretical decompartmentalisation.

This introduction to the Special Issue proceeds as follows: We begin by outlining the existing work on ways infrastructures participate in urban exclusion, arguing that symbolic aspects play a key role in these processes and are thus worthy of further investigation. In the second section, we sketch out key debates on urban stigma, which we find often lack discussions of the concrete spatial, material, or embodied ways in which stigma operates and manifests. We therefore point to the need to think these two debates – on the materiality of infrastructural neglect and the role of stigma in urban exclusion – together. In the third section, we note that particular notions of vulnerability and urban health are deeply affected by the intersection of infrastructural exclusion and stigma, as has become all too apparent in the current pandemic moment. The final section before the concluding remarks provides an overview of the papers in the Special Issue while tracing some of the cross-cutting themes that emerge from them.

**Infrastructure and urban exclusion**

Since Graham and Marvin's *Splintering Urbanism* (2001), which demonstrated how infrastructure not only connects but also disconnects, segregates and isolates different parts of the city, the literature on urban exclusion by way of infrastructure has proliferated. In the so-called 'infrastructural turn', the socio-technical assemblages of public service provision have been utilised as 'windows into social worlds', a heuristic for understanding the city and the social relationships within it (Angelo and Hentschel 2015). However, infrastructures are not merely the products of human relations, outcomes of socio-political processes in the city, or material manifestations of the political. Infrastructures, we suggest, actively shape the degree to which residents can take part in urban life. Put differently, infrastructures have the agentic power to structure social interactions in cities (Amin 2014), often beyond their stated or intended technical function (Shamir 2013).

While it is clear that infrastructures play a key role in processes of urban exclusion, urban studies literature examining how the physical structures of the city contribute to marginalisation rarely accounts for the non-material impacts of infrastructure. Rodgers and O'Neill's (2012) notion of 'infrastructural violence' highlights the capacity of networked services to exclude by restricting access to vital resources, thus perpetuating urban inequality. In studies following in this vein, disconnection from the network is equated to Galtung's 'structural violence', where built-in, indirect, and often silent violence 'shows up as unequal power and consequently as unequal life chances' (Galtung 1969, 171). Unsafe drinking water may expose urban dwellers to disease, inadequate street lighting may result in higher levels of crime, insufficient public transport may reduce employment opportunities. Oftentimes, residents must then make up for the gaps in public service provision by purchasing private solutions, resulting in financial strain and a further constraint of possibilities for acting in the city. In its causes, such infrastructural violence mirrors the 'profoundly mundane' and

'boring' (Star 1999, 380) workings of public services, but its effects can be as devastating as the 'slow violence' (Nixon 2011, Davies 2019) of environmental disaster and toxicity.

Despite acknowledging the significant impact of infrastructural violence, much of the literature on infrastructural inequality fails to examine in detail how it operates on the embodied or psychological levels, or where the 'symbolic violence' (Bourdieu and Wacquant 2012) of infrastructure might lie. While Rodgers and O'Neill note that infrastructural violence consists of 'more than the physical forms of suffering' created by infrastructural exclusion, and that these physical effects facilitate emotional harm and wider forms of social exclusion (2012, 407), they do not articulate how this relationship operates. Pointing in this direction, Larkin (2013) importantly observes that infrastructures act not only through their technical function but through symbolic and affective registers, with technological connectivity and large-scale works associated with a sense of modernity (see also Anand et al 2018). While the modern city is one in which infrastructures run underground and metabolic processes function almost 'miraculously', spaces of pollution and disease have often been framed as the 'dystopian underbelly of the city' (Kaika and Swyngedouw 2000, 136), places modernity has not reached. On the other hand, when infrastructural services are extended to such spaces, the stigma of urban exclusion can be lifted (e.g. Anand 2017).

Reflecting their important role as symbolic boundary markers, infrastructures are increasingly recognised as important sites where the terms and limits of (urban) citizenship are negotiated (von Schnitzler 2016, Anand 2017, Fredericks 2018, Lemanski 2019). As large-scale, often public projects which are frequently accessed at the individual household level, infrastructures function as nodes connecting the state, planning authorities, and institutions on the one hand and residents' everyday experience of the city on the other (Graham and

McFarlane 2015, Nolte and Yacobi 2015). Lemanski (2020, 592) therefore argues that 'infrastructure functions as the embodiment of citizenship for both citizens and the state', although there are frequently disjunctures in the way both parties understand the contract of infrastructural citizenship. If 'public services' are for the public, they distribute those resources a community holds in common and deems a basic right. Disconnection from those networks then also entails a symbolic exclusion from that public, a demarcation as external to the community of rightsholders. Thus, infrastructures also become tools to delineate the boundaries of belonging in the city, a means of excluding those not deemed full urban citizens.

Particularly the absence or malfunction of infrastructures ensuring public hygiene – water, sewage, solid waste, as well as electricity – holds symbolic power that can be wielded to advance or justify urban exclusion. Due to deeply ingrained notions about cleanliness and visceral reactions to dirt, the absence of sanitation infrastructures can serve to paint the excluded as outside modernity and the normal political order, thus operating as a key propagator of urban stigma. Dominant urban discourses have historically conflated filth or disease in marginalised areas with the moral defects of their inhabitants, thereby legitimising the existing social order (Otter 2004, Campkin 2007, Nightingale 2012). The abjecting power of disgust elicited by waste as 'matter out of place' (Douglas 2002, Kristeva 1982), or of sensations associated with contamination (Tan 2013), can serve to draw intra-urban boundaries and constitute those living in unsanitary conditions as the city's constitutive Other – either as deserving of further exclusion or as requiring forceful state intervention (Stallybrass and White 1986, Cresswell 1996, Sibley 2002, Gray and Mooney 2011). Given that infrastructural (dis)connections can denote much more than mere technical access, that they frequently serve to delineate the boundary of urban belonging, modernity, citizenship,

and even humanity, there is a significant potential for engaging embodied, symbolic and affective approaches in the study of infrastructures as socio-technical systems.

## Spatial forms of stigma

In sociological approaches to urban exclusion, the issue of stigma has received renewed interest in recent years, particularly in the wake of the 2008 financial crisis and austerity. Studies frequently revisit the seminal work of Goffman (1963), who defined stigma as a social relation rather than an attribute of the affected individual (although a physical characteristic such as a 'deformity' may appear to be the origin of the stigma). Current work on the sociology of stigma seeks to move beyond 'Goffman's decidedly apolitical account of stigma' (Tyler 2020, 23, see also Tyler and Slater 2018) and places particular emphasis on the need to examine stigma's structural and processual nature (Link and Phelan 2014). Stigma here is understood as a 'label' affixed by others, which can have very tangible material effects – for instance when resulting in decreased health outcomes among stigmatised groups (Link and Phelan 2001). Link and Phelan further emphasise the deployment of stigma within systems of power and oppression by coining the notion of 'stigma power' to denote that 'stigma is a resource' which allows stigmatisers 'to obtain ends they desire' (2014, 24).

Tyler (2020) in particular highlights the importance of 'stigma as a *material* force, a structural and structuring form of power' (9, our emphasis). She drives home this point by describing embodied imprints of violence – 'tattoos, brands and whip marks inscribed on the bodies of the enslaved' (13) – as the original stigmata, thus foregrounding the physical violence of stigma, which was long framed as 'symbolic, diffuse, slow and indirect' (15). Stigma, it is clear, can have devastating, violent impacts on human lives. However, even in such material accounts of stigma, the directionality appears to only be one of 'stigma power' manifesting

itself on bodies or in space, never one in which material circumstances culminate in stigma – a void that this Special Issue aims to address.

Discussions of spatialised, and specifically *urban*, forms of stigma have been dominated by Wacquant's (2008) notion of 'territorial stigmatization', which has been widely taken up in urban studies literature (e.g., in this journal, Huey & Kemple 2007, van Eijk 2012, Garbin & Millington 2012, Pinkster 2014; for a wider overview, see Slater 2015). The framework put forward in *Urban Outcasts* (2008), where Wacquant examines racial segregation both in the French working-class *banlieue* and the Black American 'ghetto', weds Goffmann's notion of stigma with Bourdieu's theory of symbolic power, adding 'territorial stigma' to Goffmann's earlier typology of stigma. However, despite Wacquant's focus on spatial seclusion, Sisson (2021, 666) rightly notes that the territorial component of territorial stigma has received 'scant attention'. In Wacquant's notion of territorial stigmatisation, space appears to be a mere conceptual 'anchor' (Wacquant et al 2014, 1272) for negative representations and stereotypes, as stigma need not necessarily be based on actual material circumstances:

> 'Whether or not these areas are in fact dilapidated and dangerous […] matters
> little in the end […] [T]he prejudicial belief that they are suffices to set off socially
> noxious consequences.' (Wacquant 2008, 239)

The physical decay of stigmatised urban areas are mentioned but these conditions only ever appear to be results of stigma, not vice versa. Such places might be '"depressing" and "uninspiring"' (2008, 177) but the stigma attached to them appears to emanate from discourse alone, not the material circumstances of state abandonment. In Wacquant's approach, symbolic power structures social space, and social relations are reified in physical space (Wacquant 2014, 2016), meaning that the spatial is primarily viewed as an outcome of symbolic and socio-political processes. The work of urban studies scholars, however, has

long been based on the understanding that the social and the spatial exist in a dialectical relationship (Lefebvre 1991, Soja 1980): not only is space shaped by social relations, it also shapes them. Therefore, in addition to examining how stigma can affect cities, we deem it necessary to ask how the built environment, in turn, shapes stigma.

We suggest, therefore, that the materiality of the city is more than the projection surface for discursive stigma, but rather an actor which can also produce stigma. This is occasionally alluded to in the Wacquantian framing of urban stigma. Thus, Slater (2018) shows how stigma is discursively attached to certain types of public housing, thereby legitimising their defunding. (For an overview of a range of other studies that apply Wacquant's framing to public housing estates, see Sisson 2021, 664.) In this way, the stigma linked to inadequate services perpetuates residents' infrastructural exclusion. Here, the ability of stigma to alter material circumstances comes to the fore, as it is argued that delineating certain areas of the city as 'outside the common norm' paves the way for exceptional treatment of those areas (Wacquant 2008, 240): spatial containment and material disadvantages are justified and even exacerbated through stigma. The manner in which the materiality of the city creates stigma independently, or exacerbates discursive stigma, however, is not fully accounted for. Indeed, since territorial stigmatisation focuses on mainly the *discursive* production of stigma, Pasquetti (2019, 852) notes that the 'affective dimension of experiences of spatial stigma' still 'remains undertheorized'. We would add to this the material and embodied dimensions of urban stigma and set out to examine them in the assembled set of articles.

The fact that the ways in which material circumstances can coalesce into stigma have generally been ignored by these studies serves as our starting point for reading the work on infrastructural exclusion in conjunction with literature on urban stigma. We interpret Tyler

and Slater's (2018) call for examining stigma's relationship with socio-political structures of power, and particularly the interest in the 'stigma of place' (Ibid, 738), as much from a spatially-grounded point of view focused on the built environment as from a 'new materialist' (Coole and Frost 2010) perspective which is attentive to the agentic capacities of matter. This Special Issue therefore asks how stigma materialises into physical form, and, vice versa, how the built environment, through material and affective impacts on urban dwellers, translates into stigma.

## Urban health and vulnerability

With the above discussion in mind, let us return to the current Covid context. We have seen over the past two years that the effect of the pandemic varies depending on the strength of existing urban infrastructures. There is already clear evidence that housing conditions, green and sanitation infrastructures play a crucial role in shaping the health of populations (Gibson et al 2010). Yet these days we observe that insufficient infrastructural conditions not only affect the transmission of Covid, but also decrease the ability of stigmatised urban dwellers to cope with the disease. A current case from the US illustrates this argument clearly – Ahmad et al (2020, 10) found that '[c]ounties with a higher percentage of households with poor housing had higher incidence of, and mortality associated with, COVID-19.'

Here our understanding of infrastructural stigma and urban health coincides with Horton's recent statement that the current health crisis is not a pandemic but rather a syndemic, which indicates how urban and spatial elements – including infrastructure – influence the accumulation of various health conditions and how these are experienced in a given urban context. A syndemic approach '…provides a very different orientation to clinical medicine

and public health by showing how an integrated approach to understanding and treating diseases can be far more successful than simply controlling epidemic disease or treating individual patients' (Horton 2020: 874). To put it differently, infrastructure and social stigma are the core of syndemic urbanism where 'lockdown', 'physical distancing', 'hand washing' or 'working from home' are not options in the many cities where a majority of inhabitants live in poorly serviced neighbourhoods and informal settlements. In such settings, recent studies show, the impact of lockdown on mental health – itself highly-stigmatised – is also higher (see case studies from Kenya, Nigeria, Pakistan and Bangladesh in Ahmed et al 2020).

Indeed, we stress, our health and wellbeing are deeply embedded in socio-technical systems around us; infrastructures serve as a form of 'exoskeleton' – they are extensions of our bodily selves on which our survival depends (Gandy 2005). This ontological 'dependency on infrastructure' (Butler 2016) makes human bodies, as well as urban systems, vulnerable and thus turns infrastructures into particularly salient sites for interrogating urban stigma from an embodied point of view. Stigma here is not only the outcome of spatial exclusion, but also the cause of urban configurations that exacerbate embodied vulnerability and exposure to harm.

### The approach and articles in the Special Issue

The papers in this Special Issue examine this intersection of infrastructural exclusion, stigma, and urban vulnerability through case studies from cities in the Americas, Asia, North Africa and the Middle East as well as Europe. The articles examine a range of infrastructures, including water, heating, waste, sanitation, security, health, and sound. While the studies'

settings and specific infrastructures of focus often differ vastly, we outline here a range of cross-cutting themes that emerge.

*Global relationalities of infrastructural stigma*

Existing paradigms of infrastructural exclusion and urban stigma have frequently drawn on case studies and theorised the city from the perspective of the Global North. Graham and Marvin's (2001) 'modern infrastructural ideal' has been critiqued for its limited applicability in the Global South (Kooy and Bakker 2008, Zerah 2008, Lawhon et al 2018). Wacquant's argument about territorial stigmatisation is made on the basis of examples in the United States and France, joined under the umbrella of 'advanced urban marginality' and 'characteristic of the post-Fordist metropolis' (Wacquant et al 2014, 1275). In line with a growing body of literature that decentres the Global North, views Southern urbanisms as valuable spaces of theory-making, and theorises urban processes 'across Northern and Southern cities' (Lemanski 2014), this Special Issue develops concepts across the Global South and Global North – and the places in between. The latter include post-colonial and post-Soviet spaces, as well as the ongoing settler-colonial situation in Israel/Palestine. Notably, two contributions examine the 'interchange of Global North and South' (Gamlin, 2021) in Ciudad Juárez on the US/Mexico border, highlighting the relational nature of infrastructural stigma across the North/South divide. Rather than think dichotomously about the Global North/South, this collection of articles therefore aims to tease out a common theorisation of the relational nature of stigma across urban spaces, one which also takes account of the globally relational geographies of infrastructural violence (cf. Jabary Salamanca and Silver, forthcoming).

In her article, Jennie Gamlin contextualises gender violence in Juárez, including gang violence and violence against women, within the city's role in the global economy. She argues that the gendered exploitation of labour in this industrial city results in a stigmatisation of masculinity, and develops the notion of 'edgework' to denote a violent means of renegotiating stigmatised identity. She argues that infrastructural inequalities resulting from colonial pasts and globalised presents have become 'vectors for violence', and therefore Juárez 'can offer a critical location from which to rethink the awkward urban encounters of globalisation and the coloniality of development as a destination' (Gamlin, 2021). In situating local (direct) violence within wider global configurations of (indirect or structural) violence, Gamlin thus points to the global relationality of infrastructural violence and stigma. These tense global interdependencies become heightened in border regions, thriving on the link between infrastructural connection and inequality.

In a further urban geopolitical approach to the Ciudad Juárez/El Paso locality, Camillo Boano and Ricardo Marten show how the border checkpoints between the US and Mexico function both as a dividing line and as connecting nodes, and thus come to bundle official and illegal activities. The authors contextualise Juárez's spatial taint within the local infrastructures that define the border, both criminal and formal checkpoints, whose extreme securitisation reflects the geopolitical importance of the border. Developing the concept of 'checkpoint urbanism' allows the authors 'to rethink the border and its territorial impact beyond its administrative confines' (Martén and Boano, 2021). By reading the border nodes as essential to 'economic growth but also violent entrepreneurship' (Martén and Boano, 2021), the article troubles commonly-made distinctions between infrastructural issues in the Global North and the Global South, including the formal/informal divide.

*Embodied and health effects*

Infrastructurally-mediated stigma, as we have described it here, is a symbolic bordering process. Unlike in territorial stigmatisation, this form of defamation is not necessarily linked to a demarcated location but to particular socio-technical arrangements. In fact, several papers in this collection focus on the way infrastructural stigma targets non-sedentary or highly mobile groups, who are not 'plugged in' to networked services in the same manner as sedentary residents (Moreno-Leguizamon and Tovar-Restrepo, 2021; Yacobi and Milner, 2021; Plueckhahn, 2021). Therefore, in contrast to Wacquant's place-based stigma, the stigma of infrastructural disconnect is in fact often linked to the *absence* of a delineated territory. The distinguishing feature of infrastructural stigma, as the authors in this collection discuss it, is the way it is experienced in an embodied and affective manner in everyday life. Stigma is not merely imposed through external discourses about an area or a group of people, it is perceived with all senses, felt in a range of emotions, and directly affects both physical and mental health.

Rebekah Plueckhahn examines stigma arising from people's associations with the effects of heating provision in the post-socialist capital of Mongolia, Ulaanbaatar. In this city, heating infrastructures are essential due to extremely cold climatic conditions. Vast urban areas of land plots are not connected to the centralised heating system, and people living within these areas are subject to what she calls 'environmental stigma' arising from their association with air pollution. Focusing on people living in the interstices between these disconnected land plots and apartments connected to heating infrastructure, Plueckhahn examines how assessments of infrastructural 'quality' allow people to navigate the effects of air pollution but also become a way of moving beyond discourses of stigmatisation. Expanding upon Wacquant's notion of territorial stigmatisation, Plueckhahn (2021) thus shows how

'environmental stigma' is associated with residents' use of certain kinds of heat production and 'the types of environments that arise from this', thereby moving beyond the confinement to a specific territory.

Focusing on the forced settlement of a non-sedentary population, Haim Yacobi and Elya Lucy Milner examine the links between infrastructural provision and health outcomes among Bedouin communities in the Negev/Naqab desert in southern Israel. They show how the service provision for indigenous and Jewish citizens of Israel differs vastly, based on the state's recognition of their settlements. As a result, unrecognised Bedouin communities are disproportionately affected by severely worse health outcomes, demonstrating the authors' point that settler colonialism must be taken into account in any space-based analysis of health inequalities. Even more, the infrastructural stigma associated with disconnect 'justifies and facilitates' the state's 'ongoing territorial control' and is used as a mechanism to forcibly settle and urbanise traditionally non-sedentary Bedouin communities. In this way, infrastructural stigma perpetuates settler colonialism. Through a focus on 'urban territory' in the informal urban fringes, the article also highlights the importance of examining the reach of the urban beyond the city.

The embodied nature of infrastructural violence is problematised in Maria Malmström's study of the sonic infrastructures affecting the lives of male political activists in post-revolution Cairo. Stigmatised as 'dangerous' opponents of the military regime, they are subjected to state institutions' use of sound to 'control, monitor, limit and threaten' (Malmström, 2021). The ways in which sound is deployed in public and private spaces, as well as carceral institutions are felt in deeply embodied ways, in the most extreme cases when sound is used as a form of torture. Nonetheless, Malmström's interlocutors also utilise sonic

means to create a sense of home in spite of the threat of arrest, displacement and even death. Reading sonic vibrations as material and embodied and foregrounding the importance of 'non-conscious forces', the author thus emphasises the role of the auditory in both 'masculine subjectification' and urban exclusion (Malmström, 2021).

*Resisting Infrastructural Stigma*

Yet infrastructures are not only points of top-down delivery and distribution – whether of services or of stigma. They are also nodes of negotiation and contestation, as the literature on infrastructural citizenship shows. Butler (2016) argues that vulnerability should also be seen as the corollary of a subjecthood based on interconnection and relationality, meaning infrastructural vulnerability can also be transformed into collective demands and action. As several of the articles in this collection show, infrastructures can therefore become sites and means of protest as well as tools of resisting stigma. While the dehumanisation and symbolic exclusion of infrastructural (and especially waste-related) stigma are intimately felt, the demand for equal infrastructural citizenship occasionally utilises a kind of 'stigma reversal' (Kusow cited in Tyler and Slater 2018): here, the private shame of infrastructural stigma is brought into the open, and inadequate sanitation is not accepted as a personal or community taint, but problematised as a social justice issue for the entire city (cf. McFarlane and Silver 2017, Garb 2019).

Adriana Allen examines auto-construction strategies on the periphery of Lima, where new arrivals to the city navigate the stigma of infrastructural disconnect. Allen pays particular attention to the ways in which stigma forecloses access to collective strategies of action and resistance. She develops the notion of 'stigma traps' (cf. Allen et al 2017) to denote the way vulnerability accumulates: 'As those stigmatised become individualised, isolated and

undermined, they also are deprived of being part of a collective experience, and are deeply challenged when reclaiming their agency as entitled citizens' (Allen, 2021). On the other hand, the ways residents of informal settlements deal with infrastructural uncertainty and make physical upgrades to living quarters can be viewed as 'de-stigmatisation strategies'. These seek to address both residents' immediate infrastructural needs and the wider structural factors that make them vulnerable. Thus, close attention to everyday planning and the debates around infrastructural (dis)connect can reveal 'the micro-politics of how stigma is negotiated, apportioned and resisted' (Allen, 2021).

Carlos Moreno-Leguizamon and Marcela Tovar-Restrepo's contribution focuses on the health care needs and encounters of members of minority ethnic groups living in commuter towns outside London. They show how BAME and Gypsy and Traveller patients in particular face institutional stigmatisation which restricts their access to full health services. However, minority patients also resist such stigma by opposing existing power structures, eliding identification, and 'produc[ing] new forms of self-representation'. As such, the authors show that, rather than merely being reified or fixed in place, infrastructural stigma is dynamic and 'can catalyse and produce new social identities and forms of subjectivity not entirely determined by power' (Moreno-Leguizamon and Tovar-Restrepo, 2021). Urban infrastructures, including England's National Health Service, emerge as 'crucial sites in which stigma is produced, reproduced, negotiated and renegotiated on a daily basis' (Moreno-Leguizamon and Tovar-Restrepo, 2021).

Similarly highlighting the possibilities for the contestation of infrastructural stigma, Hanna Baumann and Manal Massalha's (2021) piece focuses on the proliferation of waste in marginal areas of East Jerusalem. Here, while political and judicial decisions on these

neighbourhoods remain in suspension, the abjecting power of waste is used to draw the boundaries of urban citizenship through the experience of everyday life. Despite their marginalised position in the city, Palestinian residents leverage the potentially boundary-crossing health impact of their neighbourhoods' waste crises in order to obtain legal assurances regarding their right to the city. The authors thus highlight the role of infrastructural interdependency in even the most segregated cities, whereby the infrastructural exclusion of some creates vulnerability for all. The article shows how residents refuse to internalise the stigma imposed on them by the city authorities and instead reflect it back to them, thereby turning infrastructural stigma from a private source of shame into a public social justice issue.

Catalina Pollak Williamson's examination of the Victorian public toilet's contested history also deals with this boundary between the public and the private when it comes to infrastructural stigma. Her article details a proposal for making this history visible through a site-specific artistic intervention at a derelict underground toilet in central London. In doing so, she shows how 'critical spatial practices can operate as a form of pedagogical urban praxis' (Pollak Williamson, 2021), and seeks to counteract the stigma attached to sanitation infrastructures. Her proposal to turn the toilet into a playful civic space, illustrated through a photo essay, aims to encourage viewers to consider what has been lost as public amenities have increasingly been shut down in the UK and calls for 'the re-appropriation of the Victorian ideal of public civility' (Pollak Williamson, 2021).

### Concluding remarks

As this set of articles shows, the stigma of infrastructural disconnect is often framed as self-inflicted or linked to an inherent attribute of a given community, thus blaming the victims of

urban exclusion for their own situation. However, thinking with infrastructural stigma allows us to foreground the produced nature of stigma by underscoring that it is often an effect of disconnect. By focusing on the infrastructural origin of stigma, we draw attention to the structural causes of urban inequality – a reality which is often occluded by both stigma itself and by prevalent academic approaches to understanding it. At the same time, the articles draw attention to the way stigma coalesces into infrastructural configurations that increase urban vulnerabilities, and that – like all urban processes – they are constantly (re)produced and (re)negotiated.

Our hope is that this Special Issue will initiate an interdisciplinary conversation among urban scholars and experts, acknowledging the necessity to understand the infrastructure/stigma nexus as a determinant of urban justice. As planners, architects, and urbanists, we should proactively identify patterns of systematic stigmatisation that undermine the well-being of individuals and communities in cities, especially in a (post-)pandemic world.

This selection of articles accentuates the need to consider the accelerated urbanisation process in recent decades and the fact that most of the world's population lives in urban territories, thus requiring thought about the well-being of city residents not just during a health crisis. This is even more significant because social and economic gaps are widening within and between cities, and questions of environmental and social justice are shaping everyday life for urban dwellers. This is the time to think about the infrastructural stigma in the context of urban inclusion and health as a proactive field, one which can contribute to the physical and mental wellbeing of urban populations. If social cohesion and collective responsibility form the basis for a new civil contract – one which prioritises social justice rather than social fragmentation, planning of public spaces and infrastructure as public goods

rather than commodities, and healing our welfare services – we may be able to overcome the urban manifestations of the current crisis. More broadly, the notion of infrastructural stigma as we have proposed it not only adds a further dimension to our understanding of urban vulnerability and exclusion, but is essentially about creating awareness of questions of redistributive justice in the city.

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