ARTICLE

WILEY

Social infrastructure and the public life of cities: Studying urban sociality and public spaces

Alan Latham [iD] | Jack Layton [iD]

Department of Geography, University College London, United Kingdom

Correspondence
Alan Latham, Department of Geography, University College London.
Email: alan.latham@ucl.ac.uk

Abstract

Libraries, laundrettes, and lidos. Pizzerias, plazas, and playgrounds. Sidewalks, swimming pools, and schools. These are just some of the kinds of spaces and facilities that contribute to the public life of cities. Drawing on the arguments of the sociologist Eric Klinenberg, this article develops the concept of "social infrastructure" as a way to research and value these kinds of spaces. Social infrastructure helps in recognising the public dimensions of often overlooked and undervalued spaces. It draws attention to the breadth, depth, and textures of sociality that can be afforded by different urban environments. In developing the concept of social infrastructure, this article pulls together four related strands of social scientific inquiry: work on infrastructure; publicness and public space; sociality and encounter; and the politics of provision. An infrastructural approach to the topic of public space presents geographers with some productive tools for understanding the public life of cities.

1 | INTRODUCTION

What makes a good city? Economic opportunity, certainly. Engaging and challenging architecture, maybe. Accessible cultural amenities, almost definitely. But also places where it is possible to make connections with other people, even be part of a community. Cities are full of intricate and often surprising social networks—networks that help bind people together and provide important resources in times of stress. A key dimension of a good city is its collective public

character. In *Palaces for the People*, the sociologist Eric Klinenberg (2018) makes the argument that a whole range of physical and institutional infrastructures are crucial for the development and maintenance of social connections. This is an argument *for* social infrastructure. That is, an argument for the role places such as libraries, parks, sports facilities, schools, and community centres play in making a good city and recognising the critical contribution they make to the social life of cities. These places matter as they are sites where strangers can meet and mix with others with whom they share their neighbourhoods and cities. More than just fulfilling an instrumental need, they are sites where cities can be experienced as inclusive and welcoming. For Klinenberg, social infrastructures are necessary for nurturing public life, but also for addressing and preventing some of the most pressing concerns of contemporary urban life: countering social isolation, negotiating difference, and creating places for all—regardless of age, race, gender, sexuality, or income. To think about social infrastructure is to provide an intellectually robust account of how and why places like libraries, parks, community centres, lidos, and even cafes matter for the collective public life of cities.

This article makes an argument for the study of social infrastructure. This is based on our research that has grappled with the value of places like gyms, cafes, skate parks, swimming pools, and football fields and attempted to articulate why these places matter. It is a situated approach building on our research in Europe, North America, and New Zealand but is an approach that connects with others researching similar issues in other parts of the world (Berney, 2017; Sennett, 2017; Simone, 2010). Thinking about social infrastructure involves bringing together four related strands of social scientific inquiry. Firstly, the paper considers what infrastructure is and how it supports social life. Secondly, it explores the interrelated nature of "publicness," public life, and public space. Thirdly, it focuses in on the socialities of urban life. And, finally, it helps to develop a prospective politics of provision: a politics that relates to how cities are planned. In short, this is to argue for an infrastructural approach to the public life of cities.

2 | INFRASTRUCTURE, SOCIAL INFRASTRUCTURE, AND HOW TO STUDY IT

Infrastructure has emerged as a central focus in social and urban theory. Within geography, much of this work owes a debt to Graham and Marvin's (1995, 2001) work on the physical infrastructures of water, power, transportation, and telecommunications provision. They argue that changing forms of infrastructural provision have created an increasingly splintered landscape where some groups are systematically excluded. Here, physical infrastructure represents "congealed social interests" (Graham & Marvin, 2001: 11, citing Bijker, 1993). Similar arguments have been advanced by Gandy (1999, 2005, 2014) who talks of infrastructure as a kind of cyborg which is a physical morphological entity but is also entwined with political and cultural dynamics. Developing the domestic dimensions of infrastructure, Kaika (2004) highlights how infrastructure reaches into the private sphere of the home (Birkenholtz, 2010; Button, 2017; Chelcea & Pulay, 2015). And Heynen, Kaika, and Swyngedouw (2006) examine the ways nature and infrastructural networks are part of an entangled political economy (Ioris, 2012; Silver, 2016; Swyngedouw, 2009). Of course, urban infrastructures are not uniform. Graham and McFarlane (2015) discuss the diverse ways infrastructures function across the Global North and South. They also make the observation that there is a sociality to this nonsocial infrastructure. A lot of informal human, political, and cultural work gathers around and goes into infrastructure (Amin, 2014; Cesafasky, 2017; Truelove, 2011). Simone (2004) has taken this argument further, arguing that people themselves can be understood as infrastructure: They help the economy, communications, power, and water of cities to function (McFarlane & Silver, 2017). Much of this work comes in the context of radically uneven and unequal provision of infrastructure that excludes the poor and disadvantaged (Wakefield, 2018)—a kind of infrastructural violence (Harris, 2013; Rogers, 2012; Rogers & O'Neill, 2012; Salamanca, 2015).

For the above researchers, infrastructure is understood as an integral part of the urban fabric. It is the background technological networks and systems that support urban life. It is technological, material, social, but also—and perhaps most crucially—political. Although often overlooked, infrastructures are a crucial part of how cities function as socio-technological systems. Further, they are entangled with how socio-economic disparities are maintained and

perpetuated. At a conceptual level, the term "infrastructure" is useful precisely because it is about the background structures and systems that allow social, economic, cultural, and political life to happen. With infrastructure, the central dynamic is around the facilitation of activity. That could well be about the facilitation of water distribution, sanitation, electrical power, or communication through hard technological systems, but it can also be about much more than that.

In fact, expanding the scope of what counts as infrastructural has been a feature of work on infrastructure within the social sciences. There is work on infrastructures of public health (Baker et al., 2005), education (Lo, Preston, Anisef, Basu, & Wang, 2015; Vincent, 2006), and even democracy (von Schnitzler, 2016). The concept of social infrastructure is part of this extension. Klinenberg (2018: 17) defines it inclusively:

> Public institutions, such as libraries, schools, playgrounds, parks, athletic fields, and swimming pools, are vital parts of the social infrastructure. So too are sidewalks, courtyards, community gardens, and other spaces that invite people into the public realm. Community organizations, including churches and civic associations, act as social infrastructures when they have an established physical space where people can assemble, as do regularly scheduled markets for food, furniture, clothing, art, and other consumer goods. Commercial establishments can also be important parts of the social infrastructure.

In many cases, what counts as social infrastructure has other primary functions other than to promote sociality; however facilitating sociality is an essential component of how they manage to provide their primary function. Moreover, social infrastructures may exist to amplify connections within groups, and they can also orientate people towards interacting across difference (Blommaert, 2014; Klinenberg, 2018). In developing the term social infrastructure, Klinenberg is building on and connecting with earlier writers such as Putnam (2000), who talked of a society's "civic infrastructure" being nurtured by informal social networks, and Oldenberg's (1989) work on "inclusively sociable" spaces like restaurants, diners, hair salons, cafes, and stores for building trust and community. This work itself connected with a long—particularly American—tradition of ethnographic work on neighbourhood and community life (Cavan, 1966; Gans, 1962; Jacobs, 1961; Liebow, 1967). In short, social infrastructure refers to the networks of spaces, facilities, institutions, and groups that create affordances for social connection.

The above gives a working definition of infrastructure and social infrastructure. However, to study infrastructures more closely, some heuristics are useful. The work of Star (1999) is a good starting point. Working within science and technology studies, Star's central insight is that infrastructures are not just material entities—they are also practiced and relational (Bateson, 1972). This means that infrastructure has a number of properties (Star, 1999; pp. 381–382). Infrastructure "is embedded"—it exists within established networks and relationships. For example, a library, as a social infrastructure, is embedded within networks of book distribution and recognisable relationships of lending and borrowing (Mattern, 2014, 2015). It "is transparent"—when being used, infrastructure is not necessarily noticed. Sticking with the example of libraries, each time you borrow a book, there is no need to renegotiate the terms of the loan. An infrastructure "has reach or scope"—in other words, it can be used repeatedly. The whole point of a library is that it—and what is being loaned—is durable over time. How to use an infrastructure is "learned as part of membership." What Star describes as the "taken-for-grantedness" (p. 381) of infrastructure involves a process of learning: It is necessary to learn how to use and behave in a library. It "links with conventions of practice"—there are all sorts of norms and routines that affect how infrastructures function and are used. As the world has become increasingly digital, libraries have had to provide new kinds of facilities for people working, studying, and reading. Infrastructures also involve the "embodiment of standards." They work because they are able to draw on existing standardised ways of carrying out functions and designing components. For example, at a very basic level, libraries are able to function because they can plug into standardised infrastructures for heating, lighting, plumbing, and telecommunications. Further, infrastructures are "built on an installed base"—they exist within the context of existing structures of provision. Libraries have inherited the function of lending books, but this is by no means all that libraries do in the contemporary world. Another property of infrastructure is that it "becomes visible upon breakdown." A lot of infrastructural work goes on in the background, and it is not necessarily noticed until it is no longer functioning. You do not notice all

of the social connections a library can help facilitate until the library has closed down. And, lastly, infrastructures are "fixed in modular increments." Because they are "big, layered and complex" (p. 382), it is not possible to change them instantly but only incrementally across the network. For example, if we wanted to change what public libraries provided and were used for, this is something that would take time to embed within the existing uses of the library.

3 | AN INFRASTRUCTURAL APPROACH TO PUBLIC LIFE

Social infrastructure involves thinking about the different kinds of facilities necessary for cities to function as social spaces. Central to this is that these facilities serve distinct functions. Libraries are places to borrow books. Lidos are for swimming outdoors. Leisure centres provide space to exercise. Markets sell produce. And schools educate children. These are all important functions that people make use of while living in cities—creating the affordances for urban inhabitation. Furthermore, they are spaces where people socialise and make connections with others. They are also—in different and varying ways—public spaces. They are spaces that are publicly accessible. Spaces where people encounter strangers. And spaces that in some cases involve forms of collective provisioning.

The term public refers to a number of qualities and dimensions of collective life. Firstly, and most intimately, it refers to the idea of being out amongst other people (Goffman, 1971; Lofland, 1973). This is important because it is about the affordances and capacities for particular individuals from different social backgrounds to go about their day-to-day activities freely and without barriers. Secondly, in a more outwardly directed kind of publicness, the term can refer to addressing an audience and participating in discussions about the concerns of a community. It is about participating in a public sphere, which may be face-to-face or mediated by communications technologies (Berman, 1999; Habermas, 1989). These first two dimensions of publicness may involve forms of claim-making, but they may equally involve the ways people come to accommodations with each other (Iveson, 2007; Koch & Latham, 2013). Thirdly, and relatedly, publicness can refer to something that is of concern to a community or society—what Marres (2012), following Dewey, calls "matters of concern." Fourthly, and finally, publicness speaks to an idea of public provisioning: the collective provision of facilities for public or private use. All of this is to recognise that the concept of the public—and publicness—is not a single thing; it is multidimensional. Nor is it simply the opposite of private. As the feminist pragmatist philosopher Elizabeth Anderson (2017; p. 44) puts it, "there is no single public sphere or a single private sphere in society. There are many spheres, and which are public or private depends on who you are." To talk about social infrastructure as public space is to talk about a whole range of spaces—many not conventionally thought of as public space—where these different ideas of publicness can be found and practiced.

The concept of social infrastructure helps us think about the public dimensions of urban life, not least in how it orientates us to how the sociality which is entwined with publicness takes place in certain places and facilities. This publicness includes ideas of encounter (Wilson, 2017), but it is also about the ways communities are built, trust developed, cooperation achieved, and friendships made. Amin (2002, 2008) has argued that these forms of urban sociality are reliant and entangled with the design and provision of material elements. Amin's thinking is useful because it highlights the way that the functioning of public and collective spaces is dependent on the production and maintenance of a sense of trust (Amin, 2006, 2012). This involves both a basic trust in others using the space, as well as a trust in the provision and maintenance of the facilities themselves—this process partly involves the rhythms of repetitive routines through which public spaces becomes "a patterned ground" (Amin, 2008; p. 12). Thinking infrastructurally then, it is important to consider the kinds and qualities of facilities that allow social life to happen, the kind of sociality that is afforded by them, and how this can be recognised as a kind of public life. This might include the design and provision of novel and exhilarating spaces like swimming pools and climbing walls but also involves thinking about the social dimensions of functional spaces such as bike lanes and sidewalks. Further, it is about questions of managing the relationships between looseness and prescription within spaces (Franck & Stevens, 2007). What is valuable in Amin's argument is that the virtues that can emerge out of this material provision has a quality of "surplus"—out of the shared use of social infrastructure, it is possible to recognise qualities of civic culture,

of tolerance, and of collective life. The idea of social surplus helps to articulate the idea that out of pragmatic, practical, social interactions in shared space can emerge a common sense of trust; a sense of the world's plurality which goes beyond the straightforward parameters of any single interaction between individuals (Amin, 2012). Through practically making use of social infrastructure, it is possible to identify an ethics of togetherness (Jacobs, 1961; Sennett, 2017).

Focusing on social infrastructure draws attention to the affordances that particular spaces or facilities offer for inhabitation and social interaction. It involves looking at the communities and networks of association generated through such spaces. It is also about paying attention to the design and provision of particular facilities and how their material qualities shape the activity that takes place within and around them—and there is a clear role for planning here in ensuring quality and diverse provisioning (Talen, 2019). This is not to deny the importance of issues of exclusion, encroachment, and claims making that define much contemporary urban geographic work on public space (Koch & Latham, 2012). This work tells us a great deal about the ways that contemporary urban environments can be grossly unequal, contain all sorts of barriers to entry, and that much commercial and political activity can close down particular kinds of public space (Coaffee, 2003; Madden, 2010; Mitchell, 2003; Németh, 2009; Zukin, 2010). However, developing the concept of social infrastructure draws attention to a whole range of often overlooked and underappreciated urban spaces—and all sorts of overlooked and underappreciated practices.

4 | THE SPACES AND SOCIALITIES OF SOCIAL INFRASTRUCTURE

Klinenberg (2018) defines social infrastructures capaciously. The defining quality is the way it affords sociality—especially across difference. Looking across the work of social and urban geographers, alongside that of sociologists, anthropologists, and planners, there is an enormous variety of research, involving a diverse range of places, that incorporates an idea of social infrastructure (see Table 1).

Public institutions that are provided publicly and designed as facilities for the general public are an important aspect of a city's social infrastructure, and, unsurprisingly, they have been the focus of much work. Most obviously, these involve places that are explicitly conceived and designed for the public to meet. As Rishbeth and Rogaly (2017) and Barron (2015) have studied, the provision of facilities as basic as street benches can function as sites of conviviality and self-care. In a study of the refashioning of Gillet Square in London, Sendra (2015) observes how the provision (and storage) of a diverse range of materials for table tennis, cinema screenings, and markets has helped facilitate conviviality. A central aspect of how this square works is the role of people: opening the storage containers, putting the materials out, working in the kiosks, and generally being present in the space as a kind of public character. This kind of work has been at the forefront of many researching in the planning tradition, identifying materials, layout, and configuration for facilitating public life (Talen, 2002; Gehl, 2010; Carmona, Tisdell, Heath, & Oc, 2010; NLA, 2015). Other public institutions like schools and libraries exist to serve specific functions and have a distinct social character. Wilson (2013), in a study of an urban multicultural primary school, found that playgrounds can be places where parents meet and socialise in ways that they might not do so in other social settings (see also Carol, Neal, & Iqbal, 2018). Robinson and Sheldon (2019) have documented the social value of a library under threat of closure, whilst Mattern (2007a, 2012, 2014) has documented the multiple forms and ideas of what a library can be, from small microlibraries through to libraries becoming sites that might lend all sorts of things other than books. The importance of a library as a public facility raises questions around who should be involved in the design process and, just how public a library actually is, along with how libraries are valued and evaluated by those who fund them (Mattern, 2007b; Mickiewicz, 2016; Leorke, Wyatt, & McQuire, 2018). What is striking is how dynamic the social space of libraries can be. Far from being settled institutions viewed from a social infrastructural perspective, libraries are remarkably innovative.

Alongside these facilities that are publicly provided, there are social infrastructures that operate commercially but nonetheless have a public character (Bell, 2007). Watson (2006, 2009, 2015) has traced how spaces as diverse as covered markets, bath houses, and laundrettes offer sites of interaction with familiar and unknown others. The urban

TABLE 1 Spaces of social infrastructure

Type[a]	Description	Examples[b]	References[c]
Public institutions	Places or facilities that are provided publicly and intended for public use.	Libraries, museums, art galleries, universities, schools, memorials, squares, plazas, parks.	Wilson (2013), Mattern (2014), Neal, Bennett, Jones, Cochrane, and Mohan (2015), Sendra (2015), Jones (2014), Latham and Layton (2019a).
Commerce	Spaces that involve commercial transactions. Payment might be required for entrance or to buy goods or services in the space.	Markets, shops, laundrettes, cafes, bars, barbers, hair salons, nail bars, restaurants, hardware stores, street vendors.	Jones et al. (2015), Laurier and Philo (2006a), Anderson (2004), Watson (2006, 2009, 2015), Koch and Latham (2012).
Recreational activities	Places or facilities that are designed to facilitate a particular kind of activity that someone would do for recreation or leisure.	Gyms, sports fields, basketball courts, swimming pools, allotments, cinemas, theatres, bowling alleys, skate parks.	DeLand (2012), Crossley (2004), Wilste (2007), Tonkiss (2013), Hitchings and Latham (2017a), Jackson (2019).
Religion	Spaces designed for religion. Places of worship.	Churches, church halls, mosques, synagogues, gurdwaras, temples, stupas.	(Dwyer, Gilbert, & Shah, 2013), Gilbert, Dwyer, Ahmed, Graces, & Hyacinth, 2019), (Ehrkamp & Nagel, 2014), (Levitt, 2008).
Transit	The spaces and infrastructures of mobility.	Buses, bus stops, bike lanes, trams, subways, sidewalks, train stations, walking trails.	Middleton (2018), Brömmelstroet, Nikolaeva, Glaser, Nicolaisen, and Chan (2017) Bissell (2018), Wilson (2011).

[a]This is by no means a comprehensive typology, but rather a suggestive grouping of different kinds of social infrastructure. Nor are the groups mutually exclusive, there will be overlap and blurring of boundaries between different types.

[b]This is not an exhaustive list of examples, but a set of illustrative examples. An example included in one category, may well also qualify for a different category — or not qualify depending on geographical context.

[c]This is not a complete list of work done on these topics, but a set of references that are useful in understanding the different types of social infrastructure identified in the table.

sociologist Elijah Anderson (2011), in his ongoing ethnography of racial segregation in Philadelphia, has examined the way certain commercial spaces become havens of trust and agreeable sociality for working-class black men. This is similar to the kind of sociality that can be found in spaces such as barber shops (Mills, 2013), where something as functional as getting your hair cut takes on new social significance for different communities. Mattern (2018; np) has written about the unique functionality of hardware stores and how they can serve as a site of "competence, intention, utility, care, repair, and maintenance." These are all kinds of commercial outlets that a well-stocked and vibrant high street might provide. Hall (2012) and Hall, King, and Finlay (2017) have studied the way that a successful high street can serve as a vital function and foothold for migrant communities in cities like London. There is an important role for planners here in ensuring a diverse range of stores and land uses (Jacobs, 1961; Talen, 2019). In many of the examples mentioned above, social infrastructure can be an important resource for the economically or socially marginalised. This relates to the work that recognises the ways the liveliness of certain streets and sidewalks connects with shops and similar commercial activity (Hubbard & Lyon, 2018; Klinenberg, 2002). There is also value to be found in the light sociality that can be found in other commercial settings: places like cafes and coffee houses (Henriksen & Tjora, 2018; Latham, 2003; Laurier & Philo, 2006a, 2006b; Puel & Fernandez, 2012), restaurants both fast and slow (Jones et al., 2015; Kärrholm, 2008), bars (Latham, 2005; Lugosi, Bell, & Lugosi, 2010), and social clubs (Conradson, 2003). Commercial spaces designed for particular social groups (such as the LGBTQ+ community) have been important locations for "community life, welfare and wellbeing" (Campkin & Marshall, 2017; p. 4; Taylor & Falconer, 2015; Chauncey, 1994).

Turning away from social infrastructures that are either publicly or commercially provided, it is worth thinking about the social infrastructures that facilitate particular kinds of activities and practices. One important but easily overlooked set of practices are those of amateur sport and fitness (Hitchings and Latham, 2017b; Latham & Layton, 2019b). Parks and playing fields are perhaps the most obvious examples here—and attending closely to the activities that are going on in them reveals distinct kinds of social life. Krenichyn (2004, 2006) has studied how there is an ethics of care at work in the context of women exercising in Prospect Park, Brooklyn. Neal et al. (2015) highlights the way yoga in a well-stocked public park can facilitate encounter across difference, and Burdsey (2009) examines amateur football as a site to negotiate racism and multiculturalism. Developing this theme further, studies of basketball (DeLand, 2012; Woodbine, 2016) and boxing gyms (Wacquant, 2004) have shown how particular sporting practices can become important opportunities for male public blackness, allowing expressions of joy, celebration, self-confidence, and community life to happen in the context of courts and gyms. Facilities for swimming, in many cases, map onto a more fraught relationship between strangers' bodies. Wilste (2007) examines the conflicts that accompanied attempts to racially desegregate public swimming facilities in American cities. Iveson (2003) reconstructs a debate about the value of women's-only bathing facilities in Sydney, Australia. Amidst this conflict, the sociality of swimming with others should not be forgotten (Adiv, 2015; Ward, 2017; Worpole, 2000). These issues are also entangled with issues of ownership and provision. Privately provided commercial facilities may well be vulnerable to closure as Jackson (2019) highlights with a bowling alley. However, in economically marginalised neighbourhoods, it is precisely through private provisioning of spaces like dance studios and fitness classes that a practice like Zumba has become a site of public sociality for Latino American women in Los Angeles (Petrzela, 2018; Scott, 2015). Amateur sport and fitness are just one kind of recreation. Other examples might include facilities for community gardening (Barron, 2017; Follmann & Viehoff, 2019; Tonkiss, 2013), amateur theatre (Becker, McCall, Morris, & Meshejian, 1989), or book clubs (Long, 2003).

Depending on the kinds of social infrastructures that are studied, all sorts of communities, social networks, and experiences can be found. For example, cities are full of places of worship. Alongside the rituals of worship, places such as synagogues, mosques, gurdwaras, churches, and temples also facilitate community and social connection (Dwyer et al., 2013; Gilbert et al., 2019). These connections can have social significance for undocumented migrants (Ehrkamp & Nagel, 2014) and even function as a route to civic participation (Levitt, 2008), whilst the physical spaces themselves (much like other social infrastructural spaces like schools and libraries) can double as venues for all sorts of other activity like community meetings, local theatre, fitness classes, and music concerts. In contrast and turning to

a different example, thinking with transit in terms of social infrastructure draws attention to a whole set of fleeting but no less significant sites of daily social interaction (Bissel, 2018). Activities as diverse as walking, cycling, and bus passengering have an observable social dimension (Middleton, 2018; Brömmelstroet, et al. 2017; Wilson, 2011). The overarching point is that thinking with social infrastructure broadens and deepens understandings of the kinds and qualities of social life that exists in cities.

5 | TOWARDS A POLITICS OF PROVISION

The argument this paper has been making is that social infrastructure is an important way that social connection and public life happens in cities. Attending to the diverse spaces, facilities, institutions, and groups that create affordances for social connection can highlight overlooked and undervalued aspects of collective urban life. Central to this is an infrastructural approach: an approach that is sensitive to the way spaces and facilities are designed, maintained, and planned, but also how spaces are practiced and come to be used (Star, 1999). The social connections and socialities that are built and maintained through accessing social infrastructure have real material benefits and consequences; they generate a "social surplus"—encouraging trust, civility, encounter, and common purpose (Amin, 2008). They are in all sorts of subtle ways entangled with maintaining people's physical and mental health (Umberson & Montez, 2010). And as Klinenberg (2002, 2018) has studied, social infrastructure can even affect who lives and dies during times of environmental disaster and can be a crucial way to counter political polarisation. This is to make an argument for the provision of social infrastructure and to make an argument for the need to study the politics involved with the provision of social infrastructure.

There are a number of dimensions to the provision of social infrastructure that can make it more or less successful. One, the *abundance* of provision is important. When social infrastructures are difficult to find or only convey a sense of functionality and nothing more, it does not convey a social surplus. A good example is the Palmerston North public library in New Zealand; calling itself "the city's living room," its playful architecture embodies a generous public hospitality that goes beyond simply lending books (Palmerston North City Library, 2012; Stanley & Emberton, 2005). Two, the *diversity* of social infrastructure matters. People seek out a range of activities and communities and therefore require a range of facilities and spaces. Thinking in terms of recreational social infrastructure, it would be important to provide a diverse range of facilities that included all sorts of places such as swimming pools, climbing walls, and basketball courts, not only mile after mile of football pitches. Three, how social infrastructures are *maintained* affects how the provisioning is experienced and how trust is developed. This maintenance is physical; it is about repairing the materials and surfaces as they deteriorate. But it is also social; spaces and facilities need to feel cared for and safe. Four, provision and *accessibility* go hand-in-hand. The accessibility of social infrastructure to people across society, regardless of age, race, class, sexuality, or gender, is an important component of how public the infrastructure is. Five, the provision should be *responsive* to peoples' wants and needs. Tracing the way infrastructures are practiced illustrate the idea that a facility's use and purpose may shift and evolve over time. Think of the ways that many museums and art galleries now provide activities for children and infants. Six, the provision of social infrastructure can capture an ethos of *democratic* living. In the best examples of social infrastructure, there is an ethos of citizens as equals in shared space. What we are presenting here has a strong normative dimension. The role of social researchers is twofold: (a) It is to identify and build a case for the times and places where things work well and understand how that happens, and (b) it is about researching how different groups of people in different locations would want this provisioning to happen.

For social scientists, working with social infrastructure opens up a number of avenues of critical inquiry. Perhaps the most obvious is studying the spatial distribution of the provision of facilities. If social infrastructure is an integral part of any good city, the concentration of social infrastructure in affluent neighbourhoods becomes a question of social justice (Capps, 2019; Nethercote, 2017). Likewise, if access to social infrastructure is excessively restrictive, it would be necessary to question how successful it is (Fullagar, O'Brien, & Lloyd, 2019; Wilste, 2007; Zukin,

2010). Similarly, if infrastructure is designed, built, and maintained with only a narrow demographic in mind, this may undermine its function as social infrastructure. It would also be important to consider the way social infrastructures vary around the world and the different kinds of sociality it facilitates (Anguelovski, Irazábal-Zurita, & Connolly, 2019; Chen, 2010; Simone, 2006; Stillerman & Salcedo, 2012; Teo & Neo, 2017). Here, it is important to recognise the role of planning in the design and provision of social infrastructure—researchers might look for exemplary cases of infrastructural provision for otherwise overlooked and underserviced communities (Berney, 2017; Damyanovic, Reinwald, & Weikmann, 2013; Talen, 2019). They might also examine disputes surrounding the planning and provision of social infrastructures to explore how competing claims on social infrastructure unfold and are resolved (Latham & Layton, 2019a).

However, studying social infrastructure is also about studying how they get practiced. This means locating and understanding the spaces and facilities that are facilitating sociality and social connection—making sense of how the spaces and facilities work and exploring the social surplus that might be found in them. This involves recognising the specific value that can be found in spaces and facilities, understanding how and why they matter to the communities that use the space, and how we might understand them as social infrastructures. The mattering that can be found in social infrastructure would include the value of encounter but is also in many instances about being able to go out, use facilities as free citizens, and get on (Klinenberg, 2018). Studying social infrastructure can document what should be protected, curated, and encouraged in urban environments. This is a task of critical importance, considering the context of austerity in many cities—at least in parts of Europe and the United States—where social infrastructures are under stress and risk of closure (Hitchen & Shaw, 2019). Here, as Simone and Pieterse (2017) would recognise, it is important to document and redescribe the conditions that encourage urban life to flourish.

6 | CONCLUSIONS

Cities need social infrastructure. Cities need places like libraries, parks, schools, playgrounds, high streets, sidewalks, swimming pools, religious spaces, community halls, markets, and plazas not only because of their practical utility but also because they are spaces where people can socialise and connect with others. These spaces matter. They matter not least because they are in all sorts of ways *public* spaces. They are spaces that create affordances for people to be out amongst other people. They are spaces that are central to what people become concerned with in urban environments. These spaces are also provided—even if by commercial entities—to facilitate shared use and collective experience. Thinking about these kinds of spaces as social infrastructure highlights a range of often underappreciated and overlooked spaces not often thought of as public but which nonetheless have distinct public dimensions. Studying these spaces as social infrastructure—as spaces that facilitate social connection—directs attention to the breadth, depth, and texture of social life that can be facilitated in the urban environment. To go back to Klinenberg (2002, 2018), these kinds of spaces matter because of their consequences for society, politics, health, and well-being. Throughout this paper, we have been making a normative argument for the importance of these spaces. As Klinenberg argues, articulating that these kinds of places matter is an important task—and we would add that as geographers and social researchers, there is a role for us to play in exploring and explaining *how* these kinds of places matter in multiple and at times unpredictable ways. Their success and proliferation is by no means guaranteed and should be researched further, but reflecting on the times and places where social infrastructure is working can help to build a case for their protection and provisioning.

Thinking infrastructurally draws attention to the ways all of the above places and facilities are provisioned and practiced. Infrastructure is about the facilitation of activity. The material qualities of social infrastructure is central —the way it is embedded within networks, has a modularity, exists within conventions of practice, and affords certain kinds of activity and use. The design, maintenance, distribution, and qualities of what is provided affects how social infrastructures function. There is a clear role for social scientists in making sense of—and articulating—how these infrastructures come to be practiced, and why they matter. The value of social infrastructure is often not immediately

visible. Its absence is often only noticed when something goes wrong or when it has been taken away. For these reasons, it is important to remind ourselves why social infrastructure matters. Advocating for these spaces is helped by documenting how social infrastructures function and how they can be experienced as democratic and fulfilling. To study social infrastructures is to study one way that the good city might be realised.

ORCID

Alan Latham 🄳 https://orcid.org/0000-0002-6826-8906
Jack Layton 🄳 https://orcid.org/0000-0002-9673-6797

REFERENCES

Adiv, N. (2015). *Paida* meets *Ludus*: New York City municipal pools and the infrastructure of play. *Social Science History*, *39*, 431–452. https://doi.org/10.1017/ssh.2015.64

Amin, A. (2002). Ethnicity and the multicultural city: Living with diversity. *Environment and Planning A*, *34*, 959–980. https://doi.org/10.1068%2Fa3537

Amin, A. (2006). The good city. *Urban Studies*, *43*, 1009–1023. https://doi.org/10.1080/00420980600676717

Amin, A. (2008). Collective culture and urban public space. *City*, *12*, 5–24. https://doi.org/10.1080/13604810801933495

Amin, A. (2012). *Land of strangers*. Cambridge: Polity.

Amin, A. (2014). Lively infrastructure. *Theory, Culture & Society*, *31*, 137–161. https://doi.org/10.1177/0263276414548490

Anderson, E. (2004). The cosmopolitan canopy. *The Annals of the American Academy of Political and Social Science*, *595*, 14–31. https://doi.org/10.1177/0002716204266833

Anderson, E. (2011). *The cosmopolitan canopy: Race and civility in everyday life*. New York: W. W. Norton & Company.

Anderson, E. (2017). *Private government: How employers rule our lives (and why we don't talk about it)*. Princeton: Princeton University Press.

Anguelovski, I., Irazábal-Zurita, C., & Connolly, J. J. T. (2019). Grabbed urban landscapes: Socio-spatial tensions in green infrastructure planning in Medellín. *IJURR*, *43*, 133–156. https://doi.org/10.1111/1468-2427.12725

New London Architecture (2015). *Public London: Ten years of transforming spaces*. London: New London Architecture.

Baker, E. L., Potter, M. A., Jones, D. L., Mercer, S. L., Cioffi, J. P., Green, L. W., … Fleming, D. W. (2005). The public health infrastructure and our nation's health. *Annual Review of Public Health*, *26*, 303–318. https://doi.org/10.1146/annurev.publhealth.26.021304.144647

Barron, A. (2015). *Age-friendly seating & sense of place*. Manchester: Manchester City Council.

Barron, J. (2017). Community gardening: Cultivating subjectivities, space and justice. *The International Journal of Justice and Sustainability*, *22*, 1142–1158. https://doi.org/10.1080/13549839.2016.1169518

Bateson, G. (1972). *Steps to an ecology of mind*. Chicago: University of Chicago Press.

Becker, H. S., McCall, M. M., Morris, L. V., & Meshejian, P. (1989). Theatres and communities: Three scenes. *Social Problems*, *36*, 93–116. https://www.jstor.org/stable/800802

Bell, D. (2007). The hospitable city: Social relations in commercial spaces. *Progress in Human Geography*, *31*, 7–22. https://doi.org/10.1177/0309132507073526

Berman, M. (1999). *Adventures in Marxism*. London: Verso.

Berney, R. (2017). *Learning from Bogotá: Pedagogical urbanism and the reshaping of public space*. Austin: University of Texas Press.

Bijker, W. E. (1993). Do not despair: There is life after constructivism. *Science, Technology, & Human Values*, *18*, 113–138. http://www.jstor.org/stable/689703

Birkenholtz, T. (2010). 'Full cost recovery': Producing differentiated water collection practices and responses to centralized water networks in Jaipur, India. *Environment and Planning A*, *42*, 2238–2253. https://doi.org/10.1068/a4366

Bissel, D. (2018). *Transit life: How commuting is transforming our cities*. Cambridge: The MIT Press. https://doi.org/10.7551/mitpress/11399.001.0001

Blommaert, J. (2014). Infrastructures of superdiversity: Conviviality and language in an Antwerp neighbourhood. *European Journal of Cultural Studies*, *17*, 431–451. https://doi.org/10.1177/1367549413510421

Brömmelstroet, M. t., Nikolaeva, A., Glaser, M., Nicolaisen, M. S., & Chan, C. (2017). Travelling together alone and alone together: Mobility and potential exposure to diversity. *Applied Mobilities*, *2*, 1–15. https://doi.org/10.1080/23800127.2017.1283122

Burdsey, D. (2009). Forgotten fields? Centralizing the experiences of minority ethnic men's football clubs in England. *Soccer & Society*, *10*, 704–721. https://doi.org/10.1080/14660970903239925

Button, C. (2017). Domesticating water supplies through rainwater harvesting in Mumbai. *Gender and Development*, *25*, 269–282. https://doi.org/10.1080/13552074.2017.1339949

Campkin, B., & Marshall, L. (2017). *LGBTQ+ cultural infrastructure in London: Night venues, 2006-present*. London: Urban Lab.

Capps, K. (2019) Are dog parks exclusionary? City lab, February 2019, https://www.citylab.com/equity/2019/02/chicago-dog-park-lincoln-yards-gentrification-racial-divide/581086/

Carmona, M., Tisdell, S., Heath, T., & Oc, T. (2010). *Public places–urban spaces: The dimensions of urban design* (2nd ed.). London: Architectural Press.

Carol, V., Neal, S., & Iqbal, H. (2018). *Friendship and diversity: Class, ethnicity and social relationships in the city*. London: Palgrave Macmillan.

Cavan, S. (1966). *Liquor license: An ethnography of bar behaviour*. Chicago: Aldine Publishing.

Cesafasky, L. (2017). How to mend a fragmented city: A critique of 'infrastructural solidarity'. *IJURR*, *41*, 145–161. https://doi.org/10.1111/1468-2427.12447

Chauncey, G. (1994). *Gay New York: Gender, urban culture, and the making of the gay male world 1890–1940*. New York: BasicBooks.

Chelcea, L., & Pulay, G. (2015). Networked infrastructures and the 'local': Flows and connectivity in a postsocialist city. *City*, *19*, 344–355. https://doi.org/10.1080/13604813.2015.1019231

Chen, C. (2010). Dancing in the streets of Beijing: Improvised uses within the urban system. In J. Hou (Ed.), *Insurgent public space: Guerilla urbanism and the remaking of contemporary cities*. London: Routledge.

Coaffee, J. (2003). *Terrorism, risk and the city: The making of a contemporary urban landscape*. London: Routledge.

Conradson, D. (2003). Spaces of care in the city: The place of a community drop-in centre. *Social & Cultural Geography*, *4*, 507–525. https://doi.org/10.1080/1464936032000137939

Crossley, N. (2004). The circuit trainer's habitus: Reflexive body techniques and the sociality of the workout. *Body & Society*, *10*, 37–69. https://doi.org/10.1177/1357034X04041760

Damyanovic, D., Reinwald, F., & Weikmann, A. (2013). *Gender mainstreaming in urban planning and urban development*. Vienna: Urban Development and Planning.

DeLand, M. F. (2012). Suspending narrative engagements: The case of pick-up basketball. *Annals of the American Academy of Political and Social Science*, *642*, 96–108. https://doi.org/10.1177/0002716212438201

Dwyer, C., Gilbert, D., & Shah, B. (2013). Faith and suburbia: Secularisation, modernity and the changing geographies of religion in London's suburbs. *Transactions of the Institute of British Geographers*, *38*, 403–419. https://doi.org/10.1111/j.1475-5661.2012.00521.x

Ehrkamp, P., & Nagel, C. (2014). "Under the radar": Undocumented immigrants Christian faith communities, and the precarious spaces of welcome in the U.S. South. *Annals of the Association of American Geographers*, *104*, 319–328. https://doi.org/10.1080/00045608.2013.858573

Follmann, A., & Viehoff, V. (2019). Public-access community gardens: A new forms of urban commons? Imagining new socio-ecological futures in an urban gardening project in Cologne, Germany. In C. Tornaghi, & C. Certomà (Eds.), *Urban gardening as politics*. London: Routledge.

Franck, K. A., & Stevens, Q. (2007). *Loose space: Possibility and diversity in urban life*. London: Routledge.

Fullagar, S., O'Brien, W., & Lloyd, K. (2019). Feminist perspectives on third places. In J. Dolley, & C. Bosnan (Eds.), *Rethinking third places: Informal public spaces and community building*. Cheltenham: Edward Elgar.

Gandy, M. (1999). The Paris sewers and the rationalization of urban space. *Transactions of the Institute of British Geographers*, *24*, 23–44. https://doi.org/10.1111/j.0020-2754.1999.00023.x

Gandy, M. (2005). Cyborg urbanization: Complexity and monstrosity in the contemporary city. *IJURR*, *29*, 26–49. https://doi.org/10.1111/j.1468-2427.2005.00568.x

Gandy, M. (2014). *The fabric of space: Water, modernity, and the urban imagination*. Cambridge: MIT. https://doi.org/10.7551/mitpress/8313.001.0001

Gans, H. J. (1962). *The urban villagers: Group and class in the life of Italian Americans*. New York: The Free Press of Glencoe.

Gehl, J. (2010). *Cities for people*. London: Island Press.

Gilbert, D., Dwyer, C., Ahmed, N., Graces, L. C., & Hyacinth, N. (2019). The hidden geographies of religious creativity: Place-making and material culture in West London faith communities. *Cultural Geographies*, *26*, 23–41. https://doi.org/10.1177/1474474018787278

Goffman, E. (1971). *Relations in public: Microstudies of the public order*. New York: Basic Books.

Graham, S., & Marvin, S. (1995). *Telecommunications and the city: Electronic spaces, urban places*. London: Routledge.

Graham, S., & Marvin, S. (2001). *Splintering urbanism: Networked infrastructures, technological mobilities and the urban condition*. London: Routledge.

Graham, S., & McFarlane, C. (2015). *Infrastructural lives: Urban infrastructure in context*. London: Routledge.

Habermas, J. (1989). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society*. Cambridge: MIT Press.

Hall, S. (2012). *City, street and citizen: The measure of the ordinary*. London: Routledge. https://doi.org/10.4324/9780203118597

Hall, S., King, J., & Finlay, R. (2017). Migrant infrastructure: Transaction economies in Birmingham and Leicester, UK. *Urban Studies*, *54*, 1311–1327. https://doi.org/10.1177/0042098016634586

Harris, A. (2013). Mumbai's underworld: Life beneath transport infrastructure. *Moving Worlds*, *13*, 151–160.

Henriksen, I. M., & Tjora, A. (2018). Situational domestication and the origin of the cafe worker species. *Sociology*, *52*, 351–366. https://doi.org/10.1177/0038038516674663

Heynen, N., Kaika, M., & Swyngedouw, E. (2006). *In the nature of cities: Urban political ecology and the politics of urban metabolism*. London: Routledge.

Hitchen, E. , & Shaw, I. (2019). Intervention—Shrinking worlds: Austerity and depression. Antipode, March 2019, https://wp.me/p16RPC-1Un

Hitchings, R., & Latham, A. (2017a). How 'social' is recreational running? Findings from a qualitative study in London and implications for public health promotion. *Health & Place*, *46*, 337–343. https://doi.org/10.1016/j.healthplace.2016.10.003

Hitchings, R., & Latham, A. (2017b). Exercise and environment: New qualitative work to link popular practice and public health. *Health & Place*, *46*, 300–306. https://doi.org/10.1016/j.healthplace.2017.04.009

Hubbard, P., & Lyon, D. (2018). Introduction: Streetlife—The shifting sociologies of the street. *The Sociological Review*, *66*, 937–951. https://doi.org/10.1177/0038026118771281

Ioris, A. A. R. (2012). The neoliberalization of water in Lima, Peru. *Political Geography*, *31*, 266–278. https://doi.org/10.1016/j.polgeo.2012.03.001

Iveson, K. (2003). Justifying exclusion: The politics of public space and the dispute over access to McIvers ladies' baths, Sydney. *Gender, Place & Culture*, *10*, 215–228. https://doi.org/10.1080/0966369032000113993

Iveson, K. (2007). *Publics and the city*. Malden, MA: Blackwell Pub. https://doi.org/10.1002/9780470761748

Jackson, E. (2019). Valuing the bowling alley: Contestations over the preservation of spaces of everyday urban multiculture. *The Sociological Review*, *67*, 79–94. https://doi.org/10.1177/0038026118772784

Jacobs, J. (1961). *The death and life of great American cities*. New York: Random House.

Jones, A. (2014). *On South Bank: The production of public space*. Farnham: Ashgate.

Jones, H., Neal, S., Mohan, G., Connell, K., Cochrane, A., & Bennett, K. (2015). Urban multiculture and everyday encounters in semi-public, franchised cafe spaces. *The Sociological Review*, *63*, 644–661. https://doi.org/10.1111/1467-954X.12311

Kaika, M. (2004). Interrogating the geographies of the familiar: Domesticating nature and constructing the autonomy of the modern home. *IJURR*, *28*, 265–286. https://doi.org/10.1111/j.0309-1317.2004.00519.x

Kärrholm, M. (2008). The territorialisation of a pedestrian precinct in Malmö: Materialities in the commercialisation of public space. *Urban Studies*, *45*, 1903–1924. https://doi.org/10.1177/0042098008093383

Klinenberg, E. (2002). *Heat wave: A social autopsy of disaster in Chicago*. Chicago: University of Chicago Press. https://doi.org/10.7208/chicago/9780226026718.001.0001

Klinenberg, E. (2018). *Palaces for the people: How social infrastructure can help fight inequality, polarization, and the decline of civic life*. London: Penguin.

Koch, R., & Latham, A. (2012). Rethinking urban public space: Accounts from a junction in West London. *Transactions of the Institute of British Geographers*, *37*, 515–529. https://doi.org/10.1111/j.1475-5661.2011.00489.x

Koch, R., & Latham, A. (2013). On the hard work of domesticating a public space. *Urban Studies*, *50*, 6–21. https://doi.org/10.1177/0042098012447001

Krenichyn, K. (2004). Women and physical activity in an urban park: Enrichment and support through an ethic of care. *Journal of Environmental Psychology*, *24*, 117–130. https://doi.org/10.1016/S0272-4944(03)00053-7

Krenichyn, K. (2006). 'The only place to go and be in the city': Women talk about exercise, being outdoors, and the meanings of a large urban park. *Health & Place*, *12*, 631–643. https://doi.org/10.1016/j.healthplace.2005.08.015

Latham, A. (2003). Urbanity, lifestyle and making sense of the new urban cultural economy: Notes from Auckland, New Zealand. *Urban Studies*, *40*, 1699–1724. https://doi.org/10.1080/0042098032000106564

Latham, A. (2005). Sociality and the cosmopolitan imagination: National cosmopolitan and local imaginaries in Auckland, New Zealand. In J. Binne, J. Holloway, S. Millington, & C. Young (Eds.), *Cosmopolitan Urbanism*. London: Routledge.

Latham, A., & Layton, J. (2019a). *Publics and their problems—Notes on the remaking of the South Bank*. London: International Journal of Urban and Regional Research.

Latham, A., & Layton, J. (2019b). Kinaesthetic cities: Studying the worlds of amateur sport and fitness in contemporary urban environments. *Progress in Human Geography*, *xx*, xx–yy.

Laurier, E., & Philo, C. (2006a). Cold shoulders and napkins handed: Gestures of responsibility. *Transactions of the Institute of British Geographers*, *31*, 193–207. https://doi.org/10.1111/j.1475-5661.2006.00205.x

Laurier, E., & Philo, C. (2006b). Possible geographies: A passing encounter in a café. *Area*, *38*, 353–363. https://doi.org/10.1111/j.1475-4762.2006.00712.x

Leorke, D., Wyatt, D., & McQuire, S. (2018). "More than just a library": Public libraries in the 'smart city'. *City, Culture and Society*, *15*, 37–44. https://doi.org/10.1016/j.ccs.2018.05.002

Levitt, P. (2008). Religion as a path to civic engagement. *Ethnic and Racial Studies*, *31*, 766–791. https://doi.org/10.1080/01419870701784489

Palmerston North City Library (2012). Palmerston North City Library [Video file]. Retrieved from https://www.youtube.com/watch?v=GCPbqkkty10

Liebow, E. (1967). *Tally's corner: A study of Negro streetcorner men*. Boston: Little, Brown & Co.

Lo, L., Preston, V., Anisef, P., Basu, R., & Wang, S. (2015). *Social infrastructure and vulnerability in the suburbs*. Toronto: University of Toronto Press.

Lofland, L. H. (1973). *A world of strangers: Order and action in urban public space*. New York: Basic Books.

Long, E. (2003). *Book clubs: Women and the uses of reading in everyday life*. Chicago: University of Chicago Press.

Lugosi, P., Bell, D., & Lugosi, K. (2010). Hospitality, culture and regeneration: Urban decay, entrepreneurship and the 'ruin' bars of Budapest. *Urban Studies*, *47*, 3079–3101. https://doi.org/10.1177/0042098009360236

Madden, D. J. (2010). Revisiting the end of public space: Assembling the public in an urban park. *City & Community*, *9*, 187–207. https://doi.org/10.1111/j.1540-6040.2010.01321.x

Marres, N. (2012). *Material participation: Technology, the environment and everyday publics*. London: Palgrave Macmillan. https://doi.org/10.1057/9781137029669

Mattern, S. (2007a). Resonant texts: Sounds of the American public library. *The Senses and Society*, *2*, 277–302. https://doi.org/10.2752/174589307X233521

Mattern, S. (2007b). *The new downtown library: Designing with communities*. Minneapolis: University of Minnesota Press.

Mattern, S. (2012). Marginalia: Little libraries in the urban margins. *Places Journal*, *xx*, xx–yy. https://doi.org/10.22269/120522

Mattern, S. (2014). Library as infrastructure. *Places Journal*, *xx*, xx–yy. https://doi.org/10.22269/140609

Mattern, S. (2015). Middlewhere: Landscapes of library logistics. Urban Omnibus, June 24, https://urbanomnibus.net/2015/06/middlewhere-landscapes-of-library-logistics/

Mattern, S. (2018). Community plumbing. *Places Journal*, *xx*, xx–yy. https://doi.org/10.22269/180717

McFarlane, C., & Silver, J. (2017). Navigating the city: Dialectics of everyday urbanism. *Transactions of the Institute of British Geographers*, *42*, 458–471. https://doi.org/10.1111/tran.12175

Mickewicz, P. (2016). Access and its limits: The contemporary library as a public space. *Space and Culutre*, *19*, 237–250. https://doi.org/10.1177/1206331215596478

Middleton, J. (2018). The socialities of everyday urban walking and the 'right to the city'. *Urban Studies*, *55*, 296–315. https://doi.org/10.1177/0042098016649325

Mills, Q. T. (2013). *Cutting along the color line: Black barbers and barber ships in America*. Philadelphia: University of Pennsylvania Press.

Mitchell, D. (2003). *The right to the city*. New York: Guilford Press.

Neal, S., Bennett, K., Jones, H., Cochrane, A., & Mohan, G. (2015). Multiculture and public parks: Researching super-diversity and attachment in public green space. *Population, Space and Place*, *21*, 462–475. https://doi.org/10.1002/psp.1910

Németh, J. (2009). Defining a public: The management of privately owned public space. *Urban Studies*, *46*, 2463–2490. https://doi.org/10.1177/0042098009342903

Nethercote, M. (2017). When social infrastructure deficits create displacement pressures. Inner city schools and the suburbanization of families in Melbourne. *IJURR*, *41*, 443–463. https://doi.org/10.1111/1468-2427.12509

Oldenberg, R. (1989). *The great good place: Cafes, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. Boston: Da Capo Press.

Petrzela, N. (2018). Thanks, gender! An intellectual history of the gym). In A. Hartman, & R. Haberski (Eds.), *American labyrinth: An intellectual history for complicated times*. Ithaca: Cornell University Press.

Puel, G., & Fernandez, V. (2012). Socio-technical systems, public space and urban fragmentation: The case of 'cybercafés' in China. *Urban Studies*, *49*, 1297–1313. https://doi.org/10.1177/0042098011410333

Putnam, R. (2000). *Bowling alone: The collapse and revival of American community*. New York: Simon & Schuster.

Rishbeth, C., & Rogaly, B. (2017). Sitting outside: Conviviality, self-care and the design of benches in urban public space. *Transactions of the Institute of British Geographers*, *43*, 284–298. https://doi.org/10.1111/tran.12212

Robinson, K., & Sheldon, R. (2019). Witnessing loss in the everyday: Community buildings in austerity Britain. *The Sociological Review*, *67*, 111–125. https://doi.org/10.1177/0038026118797828

Rogers, D. (2012). Haussmannization in the tropics: Abject urbanism and infrastructural violence in Nicaragua. *Ethnography*, *13*, 413–438. https://doi.org/10.1177/1466138111435740

Rogers, D., & O'Neill, B. (2012). Infrastructural violence: Introduction to the special issue. *Ethnography*, *13*, 401–412. https://doi.org/10.1177/1466138111435738

Salamanca, O. J. (2015). Road 443: Cementing dispossession, normalizing segregation and disrupting everyday life in Palestine. In S. Graham, & C. McFarlane (Eds.), *Infrastructural lives: Urban infrastructure in context*. London: Routledge.

von Schnitzler, A. (2016). *Democracy's infrastructure: Techno-politics and protest after apartheid*. Princeton: Princeton University Press. https://doi.org/10.23943/princeton/9780691170770.001.0001

Scott, A. (2015). Zumba, a cardio workout set to a Latin beat, grows in appeal in L.A. *Los Angeles Times*, 3 April 2015, available from: www.latimes.com/health/la-he-zumba-20150404-story.html (accessed 31 May 2018).

Sendra, P. (2015). Rethinking urban public space. *City*, *19*, 820–836. https://doi.org/10.1080/13604813.2015.1090184

Sennett, R. (2017). *Building and dwelling: Ethics for the city*. London: Penguin.

Silver, J. (2016). Disrupted infrastructures: An urban political ecology of interrupted electricity in Accra. *IJURR*, *39*, 984–1003. https://doi.org/10.1111/1468-2427.12317

Simone, A. M. (2004). People as infrastructure: Intersecting fragments in Johannesburg. *Public Culture*, *16*, 407–429. https://doi.org/10.1215/08992363-16-3-407

Simone, A. M. (2006). Pirate towns: Reworking social and symbolic infrastructures in Johannesburg and Doula. *Urban Studies*, *43*, 357–370. https://doi.org/10.1080/00420980500146974

Simone, A. M. (2010). *City life from Jakarta to Dakar: Movements at the crossroads*. London: Routledge.

Simone, A. M., & Pieterse, S. (2017). *New urban worlds: Inhabiting dissonant times*. Cambridge: Polity.

Stanley, J., & Emberton, F. (2005). Studying progressive libraries: An adventure in New Zealand. *Marketing Library Services*, *19*, 7–9.

Star, S. L. (1999). The ethnography of infrastructure. *American Behavioral Scientist*, *43*, 377–391. https://doi.org/10.1177/00027649921955326

Stillerman, J., & Salcedo, R. (2012). Transposing the urban to the mall: Routes, relationships, and resistance in two, Santiago, Chile, shopping centres. *Journal of Contemporary Ethnography*, *41*, 309–336. https://doi.org/10.1177/0891241611434551

Swyngedouw, E. (2009). The political economy and political ecology of the hydro-social cycle. *Journal of Contemporary Water Research & Education*, *142*, 56–60. https://doi.org/10.1111/j.1936-704X.2009.00054.x

Talen, E. (2002). The social goals of new urbanism. *Housing Policy Debate*, *31*, 165–188. https://doi.org/10.1080/10511482.2002.9521438

Talen, E. (2019). *Neighbourhoods*. Oxford: Oxford University Press.

Taylor, Y., & Falconer, E. (2015). 'Seedy bars and grotty pints': Close encounters in queer leisure spaces. *Social & Cultural Geography*, *16*, 43–57. https://doi.org/10.1080/14649365.2014.939708

Teo, S. S. K., & Neo, H. (2017). Encountering enchantment: Stories from the street football court in Singapore. *Social & Cultural Geography*, *18*, 1106–1128. https://doi.org/10.1080/14649365.2016.1240225

Tonkiss, F. (2013). Austerity urbanism and the makeshift city. *City*, *17*, 312–324. https://doi.org/10.1080/13604813.2013.795332

Truelove, Y. (2011). (Re-)Conceptualizing water inequality in Delhi, India through a feminist political ecology framework. *Geoforum*, *42*, 143–152. https://doi.org/10.1016/j.geoforum.2011.01.004

Umberson, D., & Montez, J. K. (2010). Social relationships and health: A flashpoint for health policy. *Journal of Health and Social Behaviour*, *51*, S54–S66. https://doi.org/10.1177/0022146510383501

Vincent, J. M. (2006). Public schools as public infrastructure: Roles for planning researchers. *Journal of Planning Education and Research*, *25*, 433–437. https://doi.org/10.1177/0739456X06288092

Wacquant, L. (2004). *Body & soul: Notebooks of an apprentice boxer*. Oxford: Oxford University Press.

Wakefield, S. (2018). Infrastructures of liberal life: From modernity and progress to resilience and ruins. *Geography Compass*, *12*. https://doi.org/10.1111/gec3.12377

Ward, M. (2017). Swimming in a contained space: Understanding the experience of indoor lap swimmers. *Health & Place*, *46*, 315–321. https://doi.org/10.1016/j.healthplace.2016.09.006

Watson, S. (2006). *City publics: The (dis)enchantments of encounters in public space*. London: Routledge.

Watson, S. (2009). The magic of the marketplace: Sociality in a neglected public space. *Urban Studies*, *46*, 1577–1591. https://doi.org/10.1177/0042098009105506

Watson, S. (2015). Mundane objects in the city: Laundry practices and the making and remaking of public/private sociality and space in London and New York. *Urban Studies*, *52*, 876–890. https://doi.org/10.1177/0042098014531630

Wilson, H. F. (2011). Passing propinquities in the multicultural city: The everyday encounters of bus passengering. *Environment and Planning a*, *43*, 634–649. https://doi.org/10.1068/a43354

Wilson, H. F. (2013). Collective life: Parents, playground encounters and the multicultural city. *Social and Cultural Geography*, *14*, 625–648. https://doi.org/10.1080/14649365.2013.800220

Wilson, H. F. (2017). On geography and encounter: Bodies, borders, and difference. *Progress in Human Geography*, *41*, 451–471. https://doi.org/10.1177/0309132516645958

Wilste, J. (2007). *Contested waters: A social history of swimming pools in America*. Chapel Hill: The University of North Carolina Press.

Woodbine, O. X. O. (2016). *Black gods of the asphalt: Religion, hip-hop, and street basketball*. New York: Columbia University Press. https://doi.org/10.7312/wood17728

Worpole, K. (2000). *Here comes the sun: Architecture and public space in twentieth century European culture*. London: Reaktion Books.

Zukin, S. (2010). *Naked city: The death and life of authentic urban places*. Oxford: Oxford University Press.

AUTHOR BIOGRAPHIES

Alan Latham works at University College London. His research focuses on issues around sociality, mobility, materiality, and public life within cities.

Jack Layton is a researcher at University College London interested in urban public space. His research focuses on urban public sports facilities and the contribution they make to the collective public life of cities.