Introduction: urban transformation and public health in future cities

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The air we breathe, the climate we share with others and the streets we walk down in the city where we might work and live are all just some of the many forms of urban commons. Like all commons they foreground the tensions between social demands that are shared by large numbers and particular rights that might be exercised by individuals, minorities and majorities. Conceptually, the notion of the city commons spans scholarly traditions. They range from empirically oriented political science to strands of critical urban studies informed by Deleuzian and autonomist philosophical and political traditions (compare Berge, Cole and Ostrom, 2012; Hardt and Negri, 2009: 252–6; Amin and Thrift, 2017). How we make sense of what I might do and what we should do has always been at the heart of the urban condition. But how we sustain the long-term future of economy, ecology and social life in a city that is shared by contemporary demographics and future generations defines the instrumental imperatives of a twenty-first-century planet shaped by urban growth. And for the interests of this volume they particularly shape the chances of living a life that is healthy in the cities of the contemporary moment and the immediate future.1 The city is both a frame and a container of determinants of public health. The conditioning context of natural and built environments, collective access to food, water and air and diverse regimes of socio-economics and governance define the material framing and distal determinants of public health, while it is in the spaces of the urban that the aggregations of individual behaviours, genetic and epigenetic configurations, nutrition and living mediate more proximal determinants of longevity and morbidity. Both are addressed by public health systems that in the main try to optimise
the wellbeing of the maximum number of individuals in the name of a public good. So as cities increasingly define the human condition, how this public good is realised (or not) through different city forms becomes an issue of expanding scientific enquiry and urgent policy formation.

The dilemmas of city commons form a sub-set of what is known in economics, politics and social policy as ‘common pool resource problems’ (Olson, 1965), a generic challenge to the normative settlement of urban life. Common pool resource problems address what Hardin (1968) classically identified pessimistically as the ‘tragedy of the commons’, invoking the possibility of humanity’s potential to exhaust and destroy sensitive ecosystems. They also exemplify what the Nobel Prize winner Elinor Ostrom more optimistically identified as the sorts of problems confronted, managed and overcome by humanity in many different moments in time and place across the globe. Ostrom amassed an abundance of empirical exemplifications of common pool resource situations and systems to inform her optimism (Ostrom et al., 2002). And for some, because of the density of multiple forms of use and plural public interests, cities are spaces saturated with people, conflicting uses and private investment that define the urban as a constitutively generic form of commons that can be successfully managed only under appropriate institutional forms of law and governance (Huron, 2015: 977; Foster and Iaione, 2016).

But we also know that city systems are not singular or simple: they are complex and open, social and ecological, systems of systems where urban metabolism, economic dynamics, transport networks and demographic change all reshape one another recursively. And as several scholars have pointed out, there is a literature that tries to combine complex systems theory and common pool resource solutions to the tragedy of the commons, but it is not a literature that is either particularly well developed or invariably optimistic. Indeed it has been argued that common pool resource problems and complex systems thinking have too often been considered apart from one another (Wilson, 2012) and are even more rarely reconciled when the most appropriate structures of governance are considered (Berkes, 2017; Colding and Barthel, 2019). Moreover, it is the combinations of medical aetiologies, normative systems of resource allocation, political systems of governance and social systems of behaviour that structure the living city. Both existing patterns and future determinants of public health thus demand a conversation
between social sciences and medical and natural sciences. That conversation is the central concern of this volume.

In this volume we have drawn together a series of contributions that address pressing issues of urban public health. Our starting points are twofold. The first is the recognition that in the twenty-first century the majority of the globe’s urban populations will live in cities. The cities of continents that are at the heart of this volume in Latin America, Europe, Africa and Asia demonstrate different trajectories of historical and contemporary urbanisation and futures of urban growth. The examples we have brought together from cities in Brazil, UK, China and Africa are distinguished by different histories of colonial power and economic development; different traditions of political systems, ethical settlements and contested urban pasts and presents. These differences of geography and history matter. So while the challenges of urban public health are shared and there is extraordinary potential for cities to learn from each other, the implications of technological change, the capacity to manage mass concentrations of people and the lessons from different experiences of public health interventions are shaped by very different histories and geographies. At any one time the working of the metropolis may privilege particular drivers; the logic of markets, automobile mobilities, public interests defined by the party or a dominant social group, structuring present-day formations that create what complex systems theorists describe as path-dependent historical patterns. Consequently, cities are shaped by particular regimes of property ownership, modes of transport or distributions of power and privilege that generate structural obstacles to optimal health interventions alongside technocratic deployment of new technologies and medical expertise.

We need always to remember the importance of this diversity. In this volume, as our second starting point, we argue that this geographical and historical variation is central to both a plausible sense of policy engagement with urban context and a conceptual framing of how diversity structures the complex systems that link city life to urban health. Cities invariably bring together different systems of resource allocation and culture: economic logics, transport systems, ecological dynamics, normative measures of value and intergenerational obligation. These ‘systems of systems’ create ‘interfaces’ between them, demands that can run up against each other, for example in tensions between individuals to exert personal freedoms to maximise the size and shape of their own homes and exercise private property rights versus the logic
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of city densification that many argue optimises ecological metabolism. Linking public health imperatives to the multiple drivers of city form consequently demands a connection between the understandings of the dilemmas of city commons, the pitfalls and possibilities of intervention, and a conceptual framing of how the city works as an aggregated ‘system of systems’.

Empirically, the city is a self-evident form with a complicated, contradictory and sometimes illusory definition. Some urban scholars have spent considerable time theorising the urban. Whether reading the city as a palimpsest, a person or an organism, the subject of the metropolis is itself a chimera (de Souza Santos, 2019). In one reading the globe is overtaken by ‘planetary urbanism’ (Brenner and Schmid, 2012); in another modernity and the city become indistinguishable (Saunders, 1978). Likewise public health is a self-evident subject with a complex and sometimes contradictory definition. The focus on defining the public domain means that a seemingly simple prefix can expand to cross a spectrum of pathologies from forms of collectively measured communicable diseases to multiple aggregated individual acts of knife crime. In this context the attempts to understand how the city itself can be understood as pathogenic has evolved through time.

The global urban turn of the twenty-first century has also increasingly focused interest on the global south, with a proliferation of megacities developing alongside rapid demographic concentration across the urban hierarchy that has resulted in a growing profile of urban public health in development policy internationally. In the mainstream medical domain for the prestige journal *The Lancet* public health is defined by the four elements of decision-making processes based on data, a focus on populations rather than individuals, a goal of social justice and equity, and an emphasis on prevention rather than curative care (Koplan et al., 2009). Each of these four elements is in practice contested across time and between different places globally.

Historically, the legitimacy of city governments in the wake of the industrial revolution was largely rooted in the imperative to create a healthy – or at least inhabitable – city. The interaction of many different systems, networks and forms of organisation that affect the health of residential populations frames the city as an arena in which public health becomes a subject of official concern and a defining logic of governmental intervention. Circulations of air, water, food and energy, the nexus between them and their consolidation in carbon footprint, city
metabolism, built environment and lifestyle dispositions have an impact on the longevity and quality of life of urban populations. The industrial cities of nineteenth-century Europe and North America inspired a public concern with the interaction of communicable diseases with sewage and water quality, and provided in some ways both a justification and a defining logic of the modern state rooted in the nineteenth-century metropolis. Imperatives of city governance rationalised a new geography of interventions through state-regulated and frequently state-provided public works in the emergent urban system, defining workplace, home place and the spaces between the two (Osborne and Rose, 1999). The links between the circulations of people and the circulations of the healthy body have likewise structured macro-changes as major as the move to the suburbs and the early garden city planning logics of Ebenezer Howard (Sennett, 1994).

More recently, from the mid-1980s in the north and across the southern urban globe from the 1990s, the growing recognition of the significance of urban context in shaping the effectiveness of medical interventions has been at the heart of the Healthy Cities programmes of the World Health Organization (WHO). The obesity crisis of recent decades prompts debates about the interaction of urban design, personal exercise regimes and public health (Berke et al., 2007). But the connections that join the industrial past and the urban present have constructed both the city itself and the goal of public health in very different ways. The contemporary city context is shaped by the changing economic systems of the last fifty or so years; regimes of economic governance commonly characterised as neoliberal in the global north and its spheres of global influence, the dramatic rise of some middle-income countries in the late twentieth century, particularly in south-east Asia, and the distinctive China model of economic growth and social governance in the twenty-first century. All create contested urban development landscapes in which the logics of public health initiatives must intervene. In an urbanised and connected world, how to design spaces conducive to health gains precedence over what health means across different life prisms, which include culture, gender, class and age.

In this introduction we not only introduce the volume as a whole but also argue that a synthesis of complex systems theory and analysis of common pool resource problems at the heart of urban public health initiatives demands a reconfigured interdisciplinary coalition of scholarship and praxis to think about the interface of the new urban science and
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the citizens, communities and governments of everyday cities globally. We identify three aspects of this new configuration that structure this introduction:

1. The potential of new sources of real-time ‘big data’ that grows exponentially our ability to read urban pattern but also qualifies the power of prediction, enhancing massively a facility to read pattern at scale and individually in the short term while recognizing logically the limits of extrapolating from revealed trends over the longer term.

2. The drivers of emergence and recombination in complex systems that generate non-linearity in the urban system and create new urban combinations of culture and nature, infrastructure and humanity, material and behaviour that reconfigure the architecture of public health systems repeatedly disrupted by technological innovations and scientific advances.

3. The imperative to consider how different registers of value and worth challenge the commensuration of different forms of expertise and adopted knowledge in the city. How we reconcile the expertise of social science and natural science surfaces trade-offs between the logics of competing priorities at the heart of different regimes of urban public health.

In the concluding chapter of the volume we go on to consider a fourth dimension of this new configuration. The implications of new urban sciences that engage social scientific and medical knowledges simultaneously demand a new urban imaginary. To consider how they collectively open up different scenarios of the healthy city implies thinking experimentally about optimising public health interventions in global processes of urban transformation. Such a disposition consequently also implies a newly engaged form of urban scholarship.

Uncertain futures and complex systems: the value and the limits of prediction

In the nineteenth and twentieth centuries, the escalation of mapping, representations and measurements of the pathologies of city life pluralised understanding of both the numbers of structures that interacted in shaping the health of city residents and the numbers of distal sources of ill health (Olson, 1996). From early studies of inadequate sanitation
and poor air quality to the links between the metropolis and mental life and vulnerabilities to communicable diseases, all were rooted back to configurations of urban form. Numerous studies of urban health have followed this tradition over the last century and proliferated in recent decades, cataloguing the determinants of urban health, and at times making a linear and commonly causal connection between urban sites and healthy (or unhealthy) consequences. Much of this scholarship is descriptively powerful, but it too often falls prey to what the literary critic Northrop Frye once described as the fallacy of the scholar ‘putting his [sic] favourite study into a causal relationship with whatever interests him less’ (Frye, 1957, 6).

Commonly such work identifies patterns that emerge at the interface of two or more urban systems where description becomes powerful but both the aetiology of health outcomes and the causal significance of specific variables become less easily captured in analysis. For example, both historically and intuitively urban housing conditions have been seen as a social cause for concern and are assumed, alleged and in some ways proved to be a cause of major public health challenges. Respiratory diseases, communicable diseases and illnesses of various kinds attributed to poor environment were all clustered in conditions of poor housing, and so across the globe the industrial concentrations of residential poverty in the nineteenth, twentieth and twenty-first centuries have defined sites for public health intervention through housing improvement schemes. But as one historical survey suggests, the causal chains associated with poor housing have become so complex that empirical research generating data informed interventions is constrained because, while some of the first interventions of public health saw the improvement of housing as a fundamental element of tackling poverty, ‘the link between housing and the health of the public has become less direct, it has also become more wide-ranging; housing remains a key social determinant of health and (also) a central component of the relationship between poverty and health’ (Shaw, 2004: 413).

To exemplify, in East London in the 1990s it was possible to identify houses with large Bangladeshi families living in overcrowded conditions in poor-quality housing stock suffering disproportionate respiratory and communicable disease burden with significant earlier mortality for Bangladeshi men. But precise causally hypothecated and proportionate models were less easily proved. How much of the early mortality rate for Bangladeshi first-generation migrants was attributable to specific...
housing stock conditions (such as damp, poor insulation and water penetration) and dwelling patterns (such as considerable overcrowding of commonly ten to fifteen people living in two-bedroom flats) as opposed to complex earlier lifestyles in Bangladesh, food poverty, dietary choice, work patterns and expectations and a diverse range of poverty indicators was far less clear. The policy imperative to improve housing conditions was generically self-evident. The extent to which housing policies might be justified on public health grounds, ethical imperatives, political priorities or rational real estate investment, in contrast, was as irrelevant as deciding whether to blame two parts of hydrogen or one part of oxygen in addressing the symptoms of getting wet and catching pneumonia by falling into an East End dock. Equally housing upgrade alone, however, does not change racial or religious prejudices, or unemployment and poverty, which may be determinants of housing choices and ultimately affect access to health systems (Slater, 2013; Gazard et al., 2018). Policy imperatives in this sense may be indifferent to precise and calculable attributions of relative causal significance. But as contemporary data science provides increasingly powerful descriptions of data patterns, there is room to question whether the search for the most powerful or effective public health interventions in emergent cities will return to some core questions about how we make sense of the fundamental notion of causality itself.

In this context, relations in cities between public health and factors as diverse as open space (Brawner et al., 2017; Kondo et al., 2018), exercise (Daumann et al., 2014), police violence (Cooper and Fullilove, 2016), neighbourhood effects and spatial logics (Kwarteng et al., 2017), libraries (Morgan et al., 2017), pest infestation (Shah et al., 2018), food supply (Tach and Amorim, 2015) or race (Tung et al., 2017; Vaughan, Cohen and Han, 2018; Young and Pebley, 2018) are all assiduously mapped, indexed and located in a city space that is pathogenic in a growing science of urban public health. Such research is sophisticated and powerful. But while the data analysis becomes more sophisticated and such scholarship is important, it still at times engages much less with the interdependency of different systems than descriptively with an implicit linearity of singular facets of public health determination.

However, the vast expansion of data generation and the analytical power of data analytics has made it increasingly plausible to analyse in real time the patterns that emerge from a proliferation of sources generated by the contemporary urban environment. Biobank data generating
longitudinal measures of sometimes very large numbers of individuals, tracking of behaviours through virtual traces, large-scale experimental data, online footprints of many millions that are frequently geolocated through mobile phone records, consumer expenditure and transaction data, and mobility patterns individualised through identity or travel cards, Google Earth and satellite data can all be subjected to ‘big data’ analytical tools such as machine learning, image scraping and computational linguistics for the treatment of massive stores of text, video and audio material, producing powerful tools to describe contemporary city life in real time. As much as 95 per cent of such big data is unstructured, leading to an imperative to recognise that the ‘heterogeneity, noise, and the massive size of structured big data calls for developing computationally efficient algorithms that may avoid big data pitfalls, such as spurious correlation’ (Gandomi and Haider, 2015: 137).

Digital shadows can increasingly be translated into powerful descriptive analysis of public health patterns. The relationship between such patterns and notions of causality is, however, more complicated when confronted by the foundational logic of complex systems theory that starts with the analytical definition of the city as a system of systems driving form and function in the contemporary metropolis. It demands a profoundly important synthesis of both the power of data modelling and the half-life limits of our ability to predict. Pete Allen, a theoretical physicist by background but also one of the most creative thinkers of the way in which such complex systems thinking might unlock the working of cities, has argued that for this reason it is essential to distinguish between the degree to which it is possible to project trend into the future on the basis of modelling and rely on certain forms of system prediction (Allen, 2016). He has made the argument that in complex systems the value of such material diminishes according to the time scales of systemic evolution that form the basis of probabilistic system dynamics. While models may be used to generalise rank size rules and power laws and even do planning experiments, the innate determinism is qualified by systemic evolution and disruption. Because complex systems are open and not closed they are never stable in the long run. Equilibrium is rarely found in the short run, and never present in the long run. For Allen, forecasting may be valuable in the short run, diminishingly so as systems evolve, simultaneously both valorising and qualifying the quantitative modelling of urban form and pattern. Depending on the pace of systemic evolution, the ‘short run’ may describe a period of time vulnerable to
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intervention which may be measured in years, days or hours, and varies enormously between systems. So while it is possible to harness data analytics, model changing urban reality and reveal possible emergent configurations of current structures, Allen argues that models or interpretative frameworks do not make formal predictions as such. For him they are instruments of reflection precisely because the mutable form of complex systems makes the inference and attributions of causality ever more challenging. This is particularly important when focusing on bespoke and generalised interventions in urban public health, where the consequences of intervention are always both most immediate in saving lives and most challenging for their (multi-generational) longer-term ethical and legal setting.

Much literature in public health readily acknowledges precisely this challenge (Galea, Riddle and Kaplan, 2010; Diez Roux, 2011; Hammond, 2009). Glass et al (2013) have argued that the problem is particularly pronounced in public health literatures because the inference of causal determinants is rarely straightforward, because the attribution of causality in public health settings is particularly implicated in legal consequences and potential litigation, and because causes are in this sense only those things that could, in principle, be ‘treatments’ in experiments that may be ethically impossible in real-life settings. They suggest that ‘since 1970, the frequency and intensity of formal discourse on causation and causal inference have increased, and the field has progressed toward what we term the modern approach, based on the counterfactual or potential outcomes framework’, and so in public policy terms ‘the guidelines used to evaluate evidence have not changed for decades, even as the causal questions have become more complex’. As a result they argue that public health policy discussion moves more clearly to a ‘potential outcomes framework’ because while experimentation city by city might be ideal and randomised control trials would equally provide ideal experimental framing of public health interventions, ‘unfortunately, such randomised experiments are often unethical, impractical, or simply too lengthy for timely decision making. As a result, causal inferences for public health are usually derived from observational studies, buttressed by other lines of evidence if available.’ They further argue that in public health the connection between spatial pattern and health outcomes constitutes a generic problem in defining causal inference and that ‘the utility of long-used, familiar approaches for statistical analysis and causal inference to interpret the broad sweep
of evidence on the causal determinants of human health is diminishing’ (Glass et al., 2013: 67, 71).

One alternative route out of this dilemma that challenges the configurations of complex systems, policy interventions and public health can also be derived from rethinking the interplay of the biological and the social through a framing that foregrounds public health more in terms of a sense of propensity or *emergence* of patterns in specific contexts. For example, the study of urban mental health has prompted Nikolas Rose and colleagues to return to the theoretical foundations of social science in analysis of the relationship between the metropolis and mental health. In his chapter in this volume, Rose returns to Simmel’s foundational framing of the challenge of the modern metropolis and mental health, using contemporary neurological consideration of the location of new epigenetics’ recognition of the influence of context in structuring the constitutive transformations between ‘the biological’ and ‘the sociocultural’ across the ‘life course’. Drawing on the theoretical work of Kurt Goldstein and Georges Canguilhem in a revised vocabulary of vitalism, Nikolas Rose has stressed the imperative of ‘seeking to reframe sociological theory to recognise the significance of the biological, and challenging the illusory boundary between the organism and its milieu’ (Rose, this volume). In this context, although the city is commonly seen as pathogenic – and at times the chapter treads close to a search for pathological framing – it is also important to recognise that the milieu of the urban, while generating disproportionate challenges of mental health, is also a site of care and sustenance for individuals with severe mental illness.

Rose’s contribution forms part of a wider rediscovery of ‘vitalism’ in the social sciences more generally (e.g. Osborne, 2016; Meloni, Williams and Martin, 2017; Stengers, 2014) as well as bridging social and natural science. Following Canguilhem’s injunction that ‘A philosophy which looks to science for the clarification of concepts cannot disregard the construction of science’, we might, however, take from science studies and the turn to the biosocial in the relatively new academic discipline of Science and Technology Studies (STS) that there may be worries of displacing an old and slightly anachronistic debate between causal notions of mechanism contrasted with sociocultural explanations with a new juxtaposition of mechanism set against a vitalism revivified (Wolfe and Wong, 2014). But perhaps more powerfully, the sense of the vitalists that atmosphere, context and the sociocultural steer away from a simplistic
conceptualisation of determinism resonates in a number of philosophical and analytical trends across the boundary territory between social and natural sciences. In part it echoes the realist philosophical distinction that the former professor of the philosophy of science Rom Harré argued for when advocating a stress on the Aristotelian dimensions of the causal; where Aristotle’s framing of the material causality of the stone that shaped the formulation of the statue was constitutive of what the statue might become, its sense of possibility was as significant as the formal, efficient and final interventions of the intervention of the sculptor, the axe that shaped the stone and the template against which the statue was modelled. Such a sense of *becoming* is found in much of the more contemporary and in many ways very different genres of social science literature that draws on Deleuzian philosophy, a Latourian notion of the assemblage, and that focuses on the agency of infrastructures and what the China studies expert Francois Jullien references as the Mandarin notion of *shi* or ‘the propensity of things’ (Jullien, 1995).

This sense of propensity is helpful in considering the historical legacies of city formation, particularly when distinguishing between the time scales of interventions in public health. In this spirit the chapter in this volume by the former deputy mayor of Rio de Janeiro Luiz Eduardo Soares argues that the deep-rooted historical damages of slavery are central to the DNA of the contemporary Brazilian city: they are effectively constitutive of how we make sense of the mental health of the city and can be comprehended only on a long historical canvas. Understanding propensity also dovetails with the sense in which complex systems theory stresses the importance of both the path dependencies of system change and the lock-ins of specific configurations of infrastructure when coming to terms with cities as sociotechnical systems where interfaces within the system between, for example, food systems, water systems and energy systems may change at variable speeds. So the consideration of *speed* as a variable of sociotechnical systems becomes particularly germane when considering the future of the cities that will structure the nature of global urbanism. The divergent patterns in the cities of China, India and Africa in particular and the global south in general will account for the major part of future urban growth, but their speed of growth will inevitably condition the most appropriate public health interventions, potentially raising trade-offs between what is *possible* in the specific geographical and historical contexts of rapid urban growth and what is *ideal* in terms of twenty-first-century sustainable urban form. Urban
public health analysis, diagnostic scholarship and optimal policy interventions will consequently need to reflect this diversity, acknowledging challenges that are shared but also how combinations of infrastructure, law, economy, culture and built environment structure urban form distinctively in each emergent metropolis across the global south and north alike. The rhythm and the speed of the possibilities of urban change in different contexts are a constitutive feature of any public policy calculus as much as the propensities of particular combinations of governance, social and material urban forms.

The propensity of infrastructure: city path dependencies, timing, speed and the power of emergence

Technological change recalibrates the optimal spatial configuration of any health system. In the nineteenth century and for much of the twentieth communicable disease was a major killer in the city, optimal primary health care demanded a network of centralised hospitals and dispersed health professionals. And as health research progressed throughout the twentieth century the speed with which it was possible to access particular medical treatments was recognised as key to addressing particular forms of morbidity. This might be measured in terms of geographical distance to primary care hospitals. It might be more immediate and measured in minutes and hours, as with access to public-access defibrillators in the 1990s and early 2000s increasingly deployed in locations with large numbers of people to be used by the general public. It might be measured in days and weeks, as with diagnostic treatment of cancers. So in health terms, speed and space are mutually realised, generating an optimal distribution through space of health resources at any one moment in time. But as technology changes optimal geographical distribution of health infrastructures change likewise.

And the configuration of the built environment is rarely able to change as fast as the optimal distribution of health resources. Like all open systems, cities have path dependencies where the history of urban form inhibits some kinds of change and promotes others. Just as technological change restructures the optimal distribution of public health resources, such changes do not take place on a geographical tabula rasa but follow on from pre-existing configurations of city life. It is consequently essential to understand the history and context of these path dependencies, the ethnography of technological change, the normative
compromises and the trade-offs surfaced by emergent city forms and the institutional logics of city governance through which such change is mediated. ‘Seeing like a city’ demands a sensibility informed by modelling and analysis generated in the natural sciences, and engagement of the social sciences embedded in particular histories and contingent cultures. It also demands that we find ways of making commensurable the forms of research knowledge generated by different academic disciplinary traditions.

In the United Kingdom (UK) in the late ‘noughties’ (2000s), much institutional effort and public debate concerned the putative advantages of polyclinics and polysystems, general-practitioner-led health centres that were much promoted in the review of UK National Health Service (NHS) resources (Hutt et al., 2010; NHS, 2008; NHS London, 2010). One of the barely hidden secrets of city life in contemporary Britain has been for some time that a generic model of the ‘hospital’ inadequately captures the plural forms of primary care and the differentiated optimal accessibilities and centralisations of different medical specialisms. For some medical specialisms it makes sense to centralise regionally, while for others rapid access is more appropriate. The optimal distribution of accident and emergency facilities is different from the optimal distribution of stroke or cancer care. And so the nineteenth-century roots of public health care in the UK and the twenty-first-century imagination of the NHS map uneasily onto this diversity, structured simultaneously by the propensities of both technological advances and built environment infrastructure lock-ins.

In contrast, defibrillators were first invented in the late nineteenth century by the Geneva-based doctors Jean-Louis Prevost and Frederic Batelli, and various medical advances realised their value in situations of cardiac arrest. For many decades defibrillation was used only in hospital, and while some mobile devices were trialled as early as the 1960s in Belfast, it was only in the 1990s in the more affluent parts of the globe that defibrillators were installed in ambulances. And only in the last decade has technological innovation created devices that are cheap enough to be considered for wider use and rapidly proliferated across multiple locations in cities of much of the globe. The reason for this was the combination and trade-offs of city speeds: the speed at which it was possible for the sick to move across the city, the speed that was needed to address cardiac arrest and the speed that it might take to provide public health response to individual cases dispersed across the urban landscape.
According to the British Heart Foundation, the emergency services’ average response time to a cardiac-event-related incident in an urban area in the UK is eleven minutes. For every minute that goes by where a victim of sudden cardiac arrest does not receive treatment, their chance of survival decreases by 10 per cent. If defibrillation through a defibrillator occurs within one minute of the victim collapsing, the victim’s survival rate increases to 90 per cent. As a result the last decade and a half have seen a massive increase in the deployment of defibrillators in urban settings. Researchers estimated that between 2005 and 2013, the number of defibrillators in Japan went up from just below 11,000 to over 400,000 (Kitamura et al., 2016). Similar exponential growth patterns were found in most cities in Europe and North America.

As a piece of technology the defibrillator reconfigures the optimal provision of public health. As a piece of infrastructure it invokes city speeds. It has certain propensities which interact with systems of both public health and urban mobility. The speed of access to a defibrillator is subject to the mobility patterns of transport in the city. The imperative to access a defibrillator offsets the distance of primary care, but as the city slows down because of congestion the imperative to make low tech-cheap devices available at even more sites grows. And while there are challenges in terms of people’s ability or inclination to use the technology when the city is seen as public space, a commons of sorts, such ready access moves the dial of public health and saves lives (Deakin, Anfield and Hodgetts, 2018).

The materiality of infrastructure possesses a propensity of speed which nuances the changing technologies of other aspects of public health. In contrast to the quick-access, quick-turnaround treatments of cardiac arrest, longer term conditions may invoke very different imperatives for intervention, different technologies, different capital values and consequently a different interface between the urban systems, infrastructure and public health. A material object such as a magnetic resonance imaging (MRI) scanner is a highly effective three-dimensional imaging device and demands massive capital investment but is particularly effective in long-term conditions such as cancers or skeletal conditions where the clustering of medical expertise may generate economies of scale and medical knowledge. For the MRI a different trade-off exists between potentially longer distances to travel to the technology and different propensities of speed in the infrastructure itself in terms of the relationship between diagnostic power, positive externalities of clustered medical
expertise and considered medical intervention. Such differences vary significantly across national boundaries. In 2017 the UK had the twentieth lowest per capita distribution of MRI scanners in the OECD (Clinical Imaging Board, 2017). And so while such variation points to different priorities and quality of public health care, they also imply a logic that points to an optimal distribution of public health resources across an urban hierarchy which is significantly structured by the propensities and the speeds of infrastructure technologies interfacing with the rationing of finite resources and the logic of expertise clustering within the city.

And yet.

The distribution of health service real estate ‘locks in’ the distribution of health resources to a pattern that reflects the most recent configuration of bricks and mortar. Changes in real estate generally move at a slower speed than changes in technology. A consensus might be easily reached that a city such as London has too many generic hospitals, but to ‘close’ a local hospital is politically fissile in a liberal democracy and is invariably subject to grassroots protest. Similarly, shrinking cities across the world suffer with hospitals that are too large for a decreasing population and may lack both doctors and patients, but they linger unchanged because of their political role. Buying and selling health real estate to match any new optimal distribution demands a temporality structured by the speed of systems of land-use planning, development control, commissioning and construction. In a very real sense the speed of technological change commonly runs ahead of the speed of even the most mutable built environment; generating a public health debate that is never perfectly informed and public health policy making that is invariably fighting the last war, configuring for a ‘just past’ optimal distribution rather than the unforeseeable emergent distribution real estate optimum. In this context, in public policy terms it is in principle possible to model across a number of determining variables at any one moment in time, to analyse the propensities of time and space to reconfigure public resources and to generate both models of the ideal and the trade-offs necessary to settle on calculations of the plausible.

In a growing field of interdisciplinary urban studies, infrastructure in this sense is characterised as possessing agency (Larkin, 2013; Amin and Thrift, 2017), a capacity to shape the emergent city but also to both constrain and facilitate different consequences of identical technological innovations. This cautions against simplistic technocratic understandings of the potential of technological change to shift public health
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outcomes, implying a recognition of different traditions of governance, geography and history in shaping optimal intervention designs dependent on diverse urban systems. Such diversity also foregrounds both existing settlements of the city and emerging challenges that surface the normative domain on which public health systems are based and into which public health reforms are insinuated.

The right not to have rights? Health systems and valuing the urban commons: commensuration and ethical dilemmas

Healthcare systems normally combine in different configurations of collective demand, state provision, public interests and private behaviours. Their design consequently inevitably invokes normative categories of eligibility, cultural definitions of individualised, familial and neighbourhood responsibility, institutional regimes of welfare and insurance, and public and private fiscal restraints. These categories frame both the rational structuring of city public health systems and infrastructure and the urban domains through which both the systemic inequalities of health outcomes and the registers through which the right to public health in the city are mediated and contested.

Classically, public goods implicitly or explicitly invoke and define the capacity and appropriate times and places when collective needs trump individual liberties. New technologies and emergent city forms continually and iteratively make visible the tensions in such trade-offs. Historical and geographical variations in the regulation of the rights to liberty also highlight the regimes of expertise by which such trade-offs are articulated: specifically the domains of law, politics, economics and constitutional settlement through which value is measured differently and configurations of the public good are determined in relation to property rights, individual freedoms and collective interests. Critical urban studies in general (and some institutions such as UN-Habitat in particular) have drawn on the ‘right to the city’ as a powerful framework to inform city policy design. But the challenges of metropolitan public health at moments of urban transformation also invoke the critiques in contemporary political theory from both progressive (Douzinas, 2000) and more conservative (Sumption, 2019) positions of rights discourse and highlight the limits of such framing. Indeed in the European Convention on Human Rights most convention rights are qualified and can be suspended when it is necessary in a democratic society for a
legitimate purpose such as the prevention of crime, the economic well-being of society or – not insignificantly – the protection of public health. The boundaries of rights discourse, when there might be a ‘right not to have rights’ through such trade-offs between societal imperatives and human rights, can be seen as powerfully articulated in global north and global south alike, reflecting different development ideologies of individual freedoms and very different trajectories of political settlement internationally.

Self-monitoring, individual rights, nudging and actuarial risk
Wearable devices now offer the opportunity to self-monitor quite detailed measures of health: exercise, diet, heartbeat and so on. But what happens when these devices feed through to third parties – either states or corporates managing the health sector? Looking benevolently both the individual and the state can use such data to ‘nudge’ individuals towards a healthier lifestyle: exercising more, improving diet and thinking more carefully about the appropriate lifestyle choices. But even an ostensibly benign welfare state system may either obscure or make visible the implications of this fine-scale individualised data when aggregated by geographical scale or through the lens of the city or a nation state. To what extent do individuals become responsible for their own conditions of morbidity related to eating, drinking and exercising? How do publicly funded systems prioritise related conditions such as diabetes or obesity? How do locally financed health systems give preference to one patient’s needs over others’ in systems rationing finite public resources?

But it is also already the case that private insurance companies incentivise self-monitoring through such devices. In the UK one insurance company offers to pay for a £350 Apple iWatch as part of a deal that pays for private insurance and then registers activity data with the company. This may appear innocent until the data collected by the insurance company aggregates data upwards but also personalises such data downwards and translates it into measures of actuarial risk and premium payment levels for the insurance company. In this context actuarial risk becomes not only a rational data form for private insurance but also simultaneously a public concern for regulation of corporate involvement in public health in Rio or Delhi as easily as London or New York.

These are inevitable normative questions generated by technological changes. They are also innately ‘city’ questions as social and political worlds reorganise themselves around urban form.
such data is increasingly easy to harvest, and the ethical dilemmas are no less problematic to resolve.

In part such ethically contested urban transformations follow choreographies that map the limits of liberal thought. When should individual freedoms be constrained by collective obligations, and when should states, corporates or communities have the right to know about, to incentivise, to legislate, to nudge and to rule? The public policy dilemmas of liberal democratic logics have long been subject to both communitarian and radical critique. When the logics of liberal freedoms start to dovetail with neoliberal reforms this can become particularly contentious. Michael Sandel (2012) has in this vein famously critiqued when and where price signalling is and is not acceptable. Is it acceptable to fine parents for being late to pick up their children from school, to incentivise walking to schools by pricing proximate parking or to financially penalise workers who are deemed not to be looking as hard for employment or looking after themselves as well as the state believes they should do? How do we measure value in this context, not least when designing systems of public health in emergent cities? Sandel (2012) argues that market logics crowd out alternative measures of value when market-oriented thinking permeates aspects of life traditionally governed by non-market norms; generating new structures of inequality (for those who cannot pay) but also contaminating, devaluing and corrupting alternative registers of value and worth. Institutional legitimacy is hard won and may be subject to devaluation and challenge.

In a public health context it is rarely straightforward ethically to judge when it is acceptable to use techniques of behavioural ‘nudging’ and when not. A literature exists that considers when and where it is acceptable for nation states to nudge – with or without transparency – free citizens by building on behavioural scholarship that might originate in forms of subtle marketing, whether this involves the NHS in the UK sending reminder mobile phone texts to limit costly ‘no shows’ in hospital or making ‘free riders’ feel guilty, or health agencies in ‘socialist’ and ‘capitalist’ states alike promoting ‘educational’ interference in advertising harmful consumer products such as cigarettes or alcohol or introducing pricing or rationing techniques for harmful commodities such as sugar or salt. Hansen, Skov and Skov (2016) argue that in judging these moral questions a ‘Rawlsian’ publicity principle should apply where the state is allowed a high level of determination of these ethical dilemmas but must be prepared to defend any policy in public. But they also caution
that ‘relying on Rawls’ publicity principle may seem to be an ethically insufficient safeguard. Governments may, and have been willing to, defend many policies publicly that did not hold up to ethical scrutiny’ (Hansen, Skov and Skov, 2016: 247). Specifically, liberal freedoms elide with neoliberal reforms when pricing mechanisms regulate values. One British Medical Association (BMA) report highlights the classic study of Richard Titmuss in 1970, which asserts, in invoking the gift relationship, that blood donation prompted by notions of solidarity, community and moral obligation were both more efficient and morally superior to systems that paid for blood donation (BMA, 2017: 14).

But making price commensurable with a moral calculus is not the only challenge generated by the combination of public health dilemmas, urban transformation and city emergence. The development of artificial intelligence and the growing sophistication of automated domestic and urban systems generates new configurations of old philosophical dilemmas. The undergraduate philosophy trolley problem of whether it is morally acceptable to divert an uncontrolled train to run down a single person deliberately rather than two or three people accidentally standing in its immediate path acquires new dimensions as automated vehicles become more common features of urban mobility. Massachusetts Institute of Technology (MIT) in 2019 hosted a ‘moral machine’ where visitors to its website were encouraged to submit judgements on generically similar ethical dilemmas of smart and emergent cities. Should automated vehicles run down the wobbling bicycle that may or may not be out of control or the innocent bystander who may have more of a chance of taking evasive action? The permutations are numerous.

In this context the liberal conceit of rights-based languages and the intuitively progressive urban studies invocations of Lefebvre’s ‘right to the city’ find their limits. As with rights discourse more generally we may readily identify with Hannah Arendt’s invocation of the right to have rights. However, we also tacitly or at times explicitly acknowledge – though sometimes with less candour – the right not to have rights, in even the most liberal democratic urban formations, when the imperatives of public goods trump individual or collective freedoms. But the ethical dilemmas of exactly when and where this is and is not acceptable are sometimes slightly more challenging than we might think. In the global north attempts to create individual ‘autonomy’ as the states divest themselves of responsibility for providential futures has grown apace while at the same time, in countries such as South Africa, James
Ferguson (2015) has argued that nascent welfare states emerge through a new progressive politics of distribution that through cash payments and basic income reforms can impact public health issues such as basic food supply and challenge conventional understandings of neoliberal reforms. In other contexts nascent welfare institutionalisation may appear more as an attempt to ‘civilise’ and ‘tame’ urban life in cities such as Dar es Salaam, as Joelsson’s work demonstrates (2020). The argument here is not to advocate simple answers to complex questions but to highlight the trade-offs and uncertain futures that may inform attempts to reshape the domain of public health in emergent urban configurations which have to deal with a history of the present and a geography of colonial and other legacies that structure the DNA of some of the most rapidly growing cities in the world, as examples from both China and India can be seen to exemplify.

Trade-offs between economy, rights, freedoms and health provision in the cities of China

Urban health systems are mediated by the twenty-first-century scale of planetary urbanisation that is witnessed globally and commonly narrated through a universal vocabulary. But it is in China and India where the speed and scale of this urban transformation are most pronounced. These two nations alone will account for a significant proportion of global urban growth, and it in this context that the particular trajectories of public health changes in the two countries are of particular interest.

In China in the Mao era regime, legitimacy and public trust focused in part on mass provision of generic hospitals rather than local health clinics, and was also tied historically and logically to post-1948 state provision defining geographically restricted local *hukou* registration. One consequence of the rural bias of Mao’s development model, the *hukou* served as a form of ‘local citizenship’, prescribing access to welfare provision, including health care tied to the combination of home place and workplace in the city *danwei*. In the booming cities of late twentieth-century China in the reform processes triggered by the Deng regime and running from the early 1980s to the present day, the *hukou* system created cities with ‘floating populations’ who may live in Shanghai, Beijing or Shenzhen but whose health access is determined by hometown *hukou* and hometown local health welfare systems in Szechuan or Xinjiang. And as the economy ‘opened up’ in the 1980s and public expenditure on health care diminished, individual
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‘freedoms’ ‘allowed’ people in China increasingly to spend more on their own health care. They consequently saved more providentially, in anticipation of ill fortune. By 1988 individual expenditure on health care exceeded state expenditure, and this trend and the consequent differential between the condition of the welfare net and the imperative to increase personal savings accelerated over the following decade. But when people save more they spend less and local demand is reduced, with direct consequences for economic growth. One standard argument based on economic ‘values’ suggests that ‘pooled risk’ through strong welfare provision is more likely to enhance consumer demand because families will save less for their own health provision. So while urban welfare provision may appear self-evidently both a normative problem and a social and political challenge, it undoubtedly has strong economic implications. The capacity of urban China to develop beyond the impressive data, moving from low-income to middle-income status for large numbers, may be limited by the consequent lower levels of private expenditure and domestic demand for goods and services and the commensurately higher levels of personal savings that anticipate personal provision for the misfortunes of ill health and unemployment.

In part, following a logic that in this sense is both economic and ethical, this trend was reversed in China from 2001 until by 2014 state expenditure on health care had again overtaken private expenditure (Liu, Vortherms and Hong, 2017: 433; Figure 1.1). More recently still, Xi Jinping has accelerated reforms of the hukou system to rationalise urban welfare regimes and reduce the gap between those who hold ‘urban citizenship rights’ through city-based hukou and migrants to the city, although the pace of migration to the cities generally exceeds the pace of hukou reform, generating ongoing distinctions between rural to urban migrants and urban ‘citizens’ (Wu, 2016). But the logic driving the changes was not economic alone. When development reached the point where the health burden switched from communicable to chronic diseases – in China as elsewhere – the logics of the health infrastructure changed likewise, and the need for a dominant network of primary care hospitals was reshaped by imperatives that were no different from those in the liberal democratic global north.

Three kinds of health insurance were introduced by Xi. One was for rural residents, and two were for urban residents: one for those with city hukou and one for those without. The former was much better funded
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than the latter. A massive increase in insurance coverage nationally went from below 10 per cent of the population in 1992 to 95 per cent by 2017 (Yue et al, 2017). Yet as a result of the last decade of reform a demographic divide is built into the DNA of the city. For Liu, Vortherms and Hong (2017: 435–6) ‘while poorer and more rural areas saw significant improvements in medical insurance coverage, urban areas and wealthier families continue to benefit disproportionately from insurance subsidies because urban insurance plans provide substantively more coverage’.

Wicked problems and ‘southern urbanism’

A World Bank water and sanitation project report in 2011 estimated the economic impact of poor water sanitation in India to be equivalent to 6.4 per cent of GDP (World Bank, 2011: 9). With problems worse in the smaller cities than in the larger cities, there are both dire consequences of such patterns in direct impact and the opportunity to leapfrog the particular lock-ins and failures of many northern systems where high-quality sanitised water is piped to houses that do not separate ‘brown’ from other water and waste; this is significant when in India in 2015 only 35 per cent of human waste was disposed of through piped sewer systems (Jana et al., 2015). But this potential also needs to be set in the context of what Bhan (2019) has described as the constitutive southern urban
practices that emerge from the particular emergent urbanisms of India’s colonial legacies, constitutional formation and specific forms of inequality, exclusion and consequent social movements. In the conclusion of this volume we draw in more detail on Bhan’s exemplification of speedily constructed health centres in Delhi that exploit the ambiguities of Delhi property rights to ‘squat’ on pavements.

In this context Bhan (2019), in his work addressing the emergent urbanisms of contemporary India, has argued persuasively that an understanding of the DNA of urban life in Delhi depends on decoding the path dependencies and lock-ins that distinguish the practices of ‘southern urbanism’ as foundational in this regard. He describes the pragmatically successful ‘mohalla’ health clinics in Delhi. Many of these have transgressed state laws and conventional property rights but are in their own terms a major success. They are in many ways ecologically suboptimal but situationally transformative examples of public health intervention, placing the right to public health over alternative demands on land use within the city, a pragmatism we return to in this volume.

And so when we begin to understand propensity as a framing of causality in terms of both capacities and temporalities, then material infrastructure exhibits not only a ‘social life of things’ but, as we see with defibrillators in the global north, also an agency of its own. Material configurations affect the evolution of urban systems through their innate properties, their relational setting and their implicit relationship to cartographies and temporalities of the city. In this sense infrastructures assume both a politics and a poetics as well as having the power to generate urban change, a sense of the agency of infrastructure (Appadurai, 1988; Gartner, 2014; Larkin, 2013; Simone, 2019).

In this sense we are arguing gently – and perhaps paradoxically – in the volume that the distinction between an urban studies of the global north and the global south is powerful in some contexts but also can limit understanding of the dynamics of city life globally. Cultural traffic now flows across new geographies and geometries, and city learning might do so likewise, challenging the routed historical export of technocratic solutions from corporates and scholars, primarily in the global north, to cities and communities where problems defined and preferred futures might draw on different shorter- and longer-term answers to urban transformation. In this context, chapters of this volume draw on examples across these cartographies.
In Chapter 2 ('Mental health, stress and the contemporary metropolis'), Nikolas Rose returns to one of the founding questions in Simmel's urban studies when considering the interplay of the metropolis and mental health. Rose argues for a recombination of natural sciences and social science expertise in making sense of public health in the city. After initial case studies in Rio, London and São Paulo, he offers a fine-grained analysis of mental health in the contemporary metropolis. While it is hardly surprising that urban life is connected to mental disorder in a context of racism (Chapter 8), gendered violence (Chapter 3) or poor mobility (Chapter 4), there remains the paradox of improved access to better-paid jobs in cities and the presence of community-led initiatives in those areas. Aware of such caveats, Rose also discusses urban perils and their buffers. The key question is how to create mechanisms that understand socially and biomedically how the experience of poverty, inequality, racism or gender discrimination may lead to mental distress. Such a mechanism, Rose sustains, is key to avoiding misidentification of key roots in the provision of wellbeing. In a society yearning for life quality, all too often simplified explanations may create short-lived solutions, such as when simply changing housing conditions is expected to improve mental health. However, a more holistic mechanism of analysis would look at remaining mental distress from past experiences and consider the causes that led people to live in poor housing conditions in the first place (Slater, 2013). Thus, the creation of healthy, safe or sustainable cities may include discussing a new biopolitics that uses both ethnography and urban studies to address spatial, sensorial and temporal characteristics of stress. While geomapping apps may already link distress with particular areas of the city, what such apps cannot see is how people search for help, often outside official medical services. With a normative conclusion, Rose epitomises the need to understand ‘capabilities that are required to lead a fulfilled life’, which will require restructuring mental health services, looking especially at the viewpoint of those who are users and not providers of health services.

In the last decade the World Health Organization has suggested that violence against women is a major global health priority, and McIlwaine et al. in Chapter 3 ('Feminised urban futures, healthy cities and violence against women and girls: transnational reflections from
Brazilians in London and Maré, Rio de Janeiro’) draw on this expanded consideration of public health to discuss the incidence of transnational violence against women and girls. Looking at cities as places where violence against women occurs in the public and private realms, as well as places where women can access better-paid jobs, potentially leading to self-development, the authors discuss the urban paradox regarding women’s health and wellbeing, focusing on Rio de Janeiro and London. This chapter is linked to other work on Brazil in this volume by addressing domestic violence and gender-based violence, both often overlooked in places such as Rio, which, as Luiz Eduardo Soares explains, have high incidences of male homicide rates. How do women navigate the city? How does gender-based violence affect health? How is income obstructed by events of violence? Finally, how do women perceive events of physical, psychological and financial violence, and which mechanisms do they have to respond? The authors answer those questions, combining theories on gendered cities and urban violence with life stories. In Rio, the research took place in Maré, a favela complex in the north of the city where public spaces can be a site of violence. In London, working and domestic spaces are key risky environments. A central discussion in the chapter shows how violence travels by epitomising the stories of migrant women trying to escape violence and yet being victims once again. Patriarchal structures are indeed entrenched in Brazil and the UK, even if they are manifested differently. By finishing with a discussion of what safety is and what it entails in the city, with a focus on livelihoods access and the ability to participate in every aspect of public life, the chapter contributes to a broader discussion of how we can understand the urban in its private and public realms and gendered perspectives, as well as how language and access to support networks impact wellbeing and urban health.

Adding to this complex discussion of how a city can be experienced differently according to race (Soares) or gender (Mcllawaine et al.), Schwanen and Nixon in Chapter 4 (‘Understanding the relationships between wellbeing and mobility in the unequal city: the case of community initiatives promoting cycling and walking in São Paulo and London’) discuss the intersectional spaces between domestic and public spheres, looking at spaces of mobility. They identify our lack of standardised measures of wellbeing, arguing for the importance of the link between urbanisation and a more nuanced definition of wellbeing. The authors put everyday mobility at the centre of their analysis, because for
them wellbeing and mobility are concepts situated in time-spaces and therefore ‘always differentiated and differentiating’. When exploring the wellbeing-mobility nexus in London and São Paulo, the authors demonstrate that in both cities navigating urban spaces can be a barrier to experiencing happiness. Interviews with cyclists in these two cities show how community-led initiatives are filling gaps left by the state in the provision of transport. In São Paulo, for example, while public transport may be available, there are spaces that are considered unsafe and out of reach despite existing routes. Thus integrating spaces is also about providing safety in those areas. Group walks, by diminishing fear of crime, may also reduce journey distances by opening up more direct routes through areas previously regarded as unsafe. Equally, bicycle repair shops may be gender- and class-biased territories, and community-led initiatives have addressed the problem by making bicycle repairs available to disadvantaged groups. Citizen-led initiatives show how cycling and walking can affect wellbeing.

Chapter 5, ‘Urban (sanitation) transformation in China: a Toilet Revolution and its socio-eco-technical entanglements’, also advocates a systemic approach (socio-eco-technical) to address sanitation in its social, material, economic and cultural interfaces, because ‘Sanitation is shaped by and shapes culture, identity and representation; equally, it is interlinked with economic processes across a multitude of scales’. Regarding toilets as a lens through which to discuss the fast-paced urbanisation of China and its multidimensional consequences, Deljana Iossifova stresses the importance of combining economic and cultural processes to address and theorise cities. She does so by discussing the use of flushing toilets in China as a symbol of development and simultaneously as an instrument of intergenerational distancing and a medium to enhance existing economic difference. A response to the provision of sanitation in cities thus needs to address ecological, material, economic, cultural and political aspects, without running the risk of a one-size-fits-all idea that flushing toilets can be a preferred solution in all contexts. Instead, the author favours provincialised responses to sanitation demands as a way to tackle culture, identity and representation, and not only economical and ecological processes.

Ecological, material, economic and political aspects of sanitation also feature in Warren Smit’s discussion of the food environment and health in African cities in Chapter 6, ‘The food environment and health in African cities: analysing the linkages and exploring possibilities for...
improving health and wellbeing’. Food environments are discussed, considering factors that have an impact on the production, retail and consumption of food in cities. Looking at African cities, where food insecurity is high, Smit discusses food outlets in cities – most of them ‘at the informal end of the formality–informality continuum’, where infrastructure, shelter and transport, as well as urban agriculture, address both the availability and the affordability of food. Poor transport, for example, might make local products more expensive than imported goods, and thus to understand food security, it is fundamental to illuminate the nexus connecting infrastructure and governance with the ability to store, prepare, transport and consume food as well as dispose of its waste. The author argues that environments that are conducive to food security are those that allow for land-use zoning, the provision of infrastructure (water, sanitation, energy, transport) and the improvement of governance of food systems. On the aspect of governance, agreeing with Iossifova, he upholds that decentralised governance is helpful for addressing infrastructure challenges. Finally, Smit supports transdisciplinary research on food environments as a way forward to see the food environment as a complex system that crosses disciplines as well as government sectors.

After a succession of chapters that have discussed cities around the globe, Chapter 7 addresses different neighbourhoods within the same city. In ‘Urban mental health and the moral economies of suffering in a “broken city”: reinventing depression among Rio de Janeiro urban dwellers’, Leandro David Wenceslau and Francisco Ortega discuss urban mental health through the perspective of both health practitioners and health users in Rio’s affluent (‘asphalt’) and poor (‘hill’) locations. This chapter shows that while wealthy residents are more likely to look for and access official mental health services, the poor, when they search for mental health services, do so in more critical situations. When addressing social, cultural, moral and material conditions that influence the search for mental health professionals and the interactions between medical doctor and patient, the authors also offer a reading of Rio’s recent context of economic decline, which has led to a fall in life quality among middle-class residents. Those residents who used to have access to private health facilities, well-paid jobs and other conveniences in the city are likely to search for mental health support when facing unemployment or worse employment situations, while the poor may be more used to intense and continuous disruption in housing or
employment situations, which the authors discuss as a form of mental health resilience in times of economic decline.

The final chapter is prefaced by a short introduction of the author – Luiz Eduardo Soares – an academic anthropologist who also played a senior mayoral role in the metropolis of Rio de Janeiro during the Lula regime and then also served as the National Secretary of Public Security. He characterises Rio de Janeiro as an exaggerated version of Brazil and, for that reason, an ideal place to observe the causes and effects of violence in everyday life. To begin, the author alerts any hasty scholar that the exaggerated rates of violence in the city should not give the false impression that the problem is ubiquitous. Soares explains the prevalence of violence among young, black and poor favela residents. Looking at wellbeing in the city of Rio thus requires understanding historical socio-spatial segregations. From slavery to drug policies, this chapter explains how historical political decisions have scarred a society over time. Fighting clichés of Brazil as a place of indiscriminate violence and impunity, the chapter addresses the predominance of incarceration among those who are also more likely to be victims of violence. The poor in Rio as victims of all sorts of violence are a prism through which one can see racism as the predominant imperative that formed Brazilian society, with violence as the language that maintains such order.

In what follows, the chapters explore health and mental health across different cities in Brazil, China, the UK and South Africa, demonstrating that to understand wellbeing in cities entails a fundamental conversation about race, gender, mobility, food systems and economic systems, and that we need to expand how we measure wellbeing. A focus on users of health systems and ethnographic approaches drawn from the social sciences gain centrality in a new biopolitics of the emerging city alongside the powerful analytical domains of the new urban sciences.

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Notes

1 The final drafts of this volume were completed just before the COVID-19 pandemic first became visible in Wuhan in China in late 2019. While the pandemic is not addressed at all in the collection, we believe the issues it addresses are of pressing concern, not least how we consider the city as both a commons and a complex system at a time of public health crisis.


References


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