Conclusion: city DNA, public health and a new urban imaginary

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In the introduction to this volume we argued that the new data-rich urban sciences generated a power to read the city differently when making sense of the interface of public health and metropolitan systems. The potential of new forms of measuring, quantifying and interrogating behaviour at scales that can move from the demos to the individual and back again is immense. But this does not imply a straightforward celebration of cities that are putatively ‘smart’ or public health systems that are straightforwardly technocratically driven. We know that powers of prediction are qualified by the (in)stability of the systems – or systems of systems – in which they are rooted. Health systems are particularly subject to rapid and disruptive technological change, contested ethical settlement and imperatives to optimise prevention and treatment of different pathologies through competing systemic measures of valuation of public goods and private rights and obligations.

We also suggested that an appeal to ‘public’ health is implicitly an invocation of the city as commons, the urban figured as a space in which public interests might trump individual rights. It is also a space in which time is embedded in geographical practice (as Schwanen and Nixon discuss in Chapter 4). Public health systems always balance what is plausible in the immediate present with what might be possible in the near and distant future. These sorts of trade-off and the instabilities of complex systems are as true in cities of the global south as they are in the global north. In this sense health features prominently in ‘development policy’ in the cities of the global south that constitute an increasingly significant proportion of planetary urban life. There is also an unpardonable neglect of the scholarship of the global south in mainstream urban
studies in social science. But there is in truth much that might be learnt between cities across both sides of the global north–south divide – but only to an extent.

In urban hierarchies that are frequently structured by past and present forms of intense polarisation and exclusion, and in countries that see massively varied levels of life expectancy within cities as much as between them, the importance of understanding context needs to be read alongside the sometimes limited potential to shape city futures differently. The path dependencies and lock-ins of different urban systems undermine a sense that there are invariably universal ‘solutions’ to generic ‘problems’. What works at one scale might not work at another. The pressing demands of the present and the imperatives to intervene in settings of gross injustice or times and places of ‘emergency’ in the present day might properly prioritise ‘clumsy’ or pragmatic solutions over elegant and systemic optima.

In framing the city through the lens of public health there is always a risk that a critique of certain universalising narratives of urban change rejects crude generalisation in a plaintive but ultimately banal appeal to the unique character of each and every different urban settlement. However, such an appeal falls into the trap of seeing both time and space as merely measurements of distance and chronology. In contrast we would prefer a sense of a more dynamic characterisation of both the historicity of the temporal and the spatiality of the geographical situated within the relational patterns of global urban transformation. We have argued in this volume that this trap can be avoided by situating the particular within a complex systems framing that both surfaces the ethical choices that have structured the inequalities of the city and makes sense of the universal in the context of the path dependencies of the active and disruptive historicities and spatialities of the metropolis. So, for example, in this volume Wenceslau and Ortega foreground the geographies of the Brazilian city in structuring the propensities of mental health (Chapter 7), and Soares its racist history (Chapter 8). And so ‘knowing the future city’ demands an ability to jump between scales and time frames; to think locally and act globally; to look backwards to make sense of what is to come.

Several of the chapters in this volume, such as those by Rose (Chapter 2), McIlwaine et al. (Chapter 3) and Schwanen and Nixon (Chapter 4) link cities of the global north and the global south – at some times through the cultural traffic of international flows of people and
ideas, and other times through a sense of the comparative. There is a long and at times problematic history of comparative studies in the social sciences, but for the purposes of this volume it is perhaps most important to emphasise how different chapters make visible similar logics in rapidly changing empirical contexts. The emergence of four decades of exponential growth in China since Deng’s ‘opening up’ qualifies any suggestion that the country’s urban transformation constitutes a form of urbanism of the global south. The ‘modernisation’ of cities in Brazil and South Africa qualifies the extent to which urban transformation can be seen straightforwardly through a lens of ‘development’. Some motifs run through the past and return in histories of the present city across the globe.

For example, in this volume’s chapter on food security, the rational push towards land-use zoning and the creative responses of the informal (Smit) are partly structured by appeals to good governance. And while effective urban planning and management undoubtedly play a central role, the appeals to rationalise the city have been problematic throughout the history of the urban. The rational city is an object that sits on the horizon of the urban, frequently just beyond the field of vision of the people who live in cities. It invokes an aspiration that is one of ‘development’ today in Lagos and London alike. The technocratic appeals to mobility and public health wellbeing seen in Rio and London today (Schwanen and Nixon in Chapter 4), food security and land-use zoning in Africa (Smit in Chapter 6), or sensible sanitation in China (Iossifova in Chapter 5) all in part share a sense of the city as a modernist mirage. The city can be rationalised ‘if only’, for as Bruno Latour famously said, ‘we have never been modern’. To steal a phrase, we might almost say that ‘we have never been urban’; the good city is an ideal type that collides with the reality of path dependency and lock-in, at times confounding the logics of technocratic solutions to independently defined problems.

So what we are arguing for in this volume is an urban imaginary that learns geographically but is sensitive historically and recognises that generalisable behavioural trends globally need to be reconciled with the logics of cities whose DNA may differ very widely. Just as the individual may respond to genetically individualised treatments to universally recognised forms of morbidity, the healthy city needs to hold in its frame of vision at one time both global advances in medical science and local formations of urban life. This is as much a disposition as an epistemological position. It runs alongside a trend, witnessed in several parts of
the world, to consider what it means to figure the urban as an ethically charged laboratory. In cities structured by particular path dependencies and lock-ins, interventions in public health demand a reflexivity mirroring unique circumstances and universal principles simultaneously. Such an approach starts with the sense that research knowledges that are sensitive to complex systems logics might prompt reconfigurations of the urban commons through interventions that share a disposition of the experimental.

*Experimentation and intervention in the twenty-first-century city*  
Globally we have seen a growing appeal to an experimental urbanism (Evans, Karvone and Raven, 2016). A proliferation of urban living laboratories and city observatories have with varying degrees of success and very different ethical, commercial and state combinations built on such approaches to link research knowledge with policy praxis (Keith and Headlam, 2017; Marvin and Silver, 2016). In principle such laboratories involve situated and engaged research in specific contexts. Their work builds on, influences and is in turn influenced by the particular articulations of urban form. They are not straightforwardly sites for randomised or systemic testing of specific procedures or infrastructures. Instead, following the logic of complex systems theory, the situational limits of scaling imply that these forms of experimentation may operate differently at different scales. As the eminent ecologist Fikrek Berkes argues, in multilevel complex systems it is not always possible simply to scale up or scale down interventions, precisely because the non-linearity of processes of emergence may generate very different consequences at different scales vertically, horizontally and across time scales (Berkes, 2017).

Living laboratories and observatories are structured differently according to interest group and geography. They range from private-sector-driven sites of market testing to third-sector drives for citizen empowerment through open data to partnership structures of city government and urban stakeholders. Geographies of different approaches reflect different national political cultures. So the Scandinavian stakeholder partnership laboratories of Helsinki and Copenhagen differ significantly from the state-driven natural experiments increasingly deployed in neoclassical economics-driven research, the randomised control tests of medical work or the attempts to harvest even the most basic data on cities dominated by multiple informalities in
many of the cities of the global south. Many of the institutions in the European Network of Living Labs look significantly different from city laboratories in Johannesburg and Mexico City, which in turn are similar in some ways to but different in many other ways from ostensibly similar institutions in Shenzhen or Singapore (Keith and Calzada, 2018).

What laboratories and observatories do share is a commitment to the practical deployment of new knowledge to locally informed city conditions. They take as a starting point the problem, particularly pronounced in public health and identified in the introduction to this volume, that devices such as randomised control trials and conventional experimental frames are ethically challenged in the twenty-first-century city. Research findings and policy interventions that flatten geographical and historical context may form a foundational form of the universal but are valid only as far as the historically particular and the geographically different are causally insignificant or irrelevant. In contrast, urban laboratories generally promote city interventions that are consciously both reflexive and tentative and potentially bridge divisions that reflect more established forms of urban expertise.

This is because alternative forms of urban expertise, different ways of ‘knowing’ the city, may each be powerful in their own hermetic context but lack incommensurable core measures of value and worth to facilitate exchange between them. For example, in the cities of industrial modernity a series of ‘urban professions’ have developed over time, dividing the governance of the city into professionally credentialised and formally recognised skillsets. Functionally powerful and technocratically effective in structuring the nineteenth-century city, they also are the source of forms of expertise that at times make the metropolis visible through lenses generating landscapes and logics that appear at times hard to reconcile. As one of the first countries to have urbanised, the United Kingdom (UK) provides a case in point. Credentialised by the crown, the Royal Institute of Chartered Surveyors, the Royal (sic) Town Planning Institute and the Royal Institute of British Architects provide powerful sources of legitimation and institutional power for their professions. They also promote sometimes rival ways of seeing the city, plural rationalities for organising the metropolis. They are powerful in promoting institutional interests and professional standards, sometimes less so in promoting crossover understandings between architects and planners, engineers, surveyors and health professionals.
In contrast, in cities that are driving the major urbanisations of the twenty-first century the professional boundaries are at times more permeable, allowing opportunities for citizens to see the city differently or even transcend systemic lock-ins. In this sense an experimental disposition is at times as significant as the nationally specific institutional forms of laboratories and observatories, particularly in a domain such as public health.

In the city of Cali in Colombia, the academic epidemiologist Rodrigo Guerrero in the first of his two periods of mayoralty in 1992 famously created an urban laboratory specifically to consider urban violence as an epidemic, synthesising social sciences and medical science when combining cartographies of pattern with social sciences of neighbourhood to shape policy interventions. And in Medellin under the mayoral regime of Sergio Fajardo from 2012 to 2016, the city developed a practice of *social urbanism*, led by the architect and planner Alejandro Echeverri, founder of the Colombian research group URBAM, which was akin in many ways to a related form of ‘urban acupuncture’. In measuring different regimes of *valuing* economic growth, rational planning or automobile mobilities, social urbanism prioritised an attempt to diminish the profoundly unequal configurations of city life that characterised the history of the city. As in many parts of the globe, the city demonstrated a stark separation of the majority populations of informal barrios from the formal city subject to cadastration, real estate markets, established infrastructure, automobile logics and enforced property rights. The addressing of the pressing demand to transcend the spatial segregation of rich from poor in informal settlements led to the imperative to subvert conventional transport studies logics of mass transit provision through the landmark construction of a cable-car system that began to bridge the separation of the formal city and the sequestered and informal barrios. Recognition of the social capital and cultural dimensions of mobility addresses specifically the social equity dimensions of integrating the city, building welfare, social and cultural facilities along the route of the cable car and reconfiguring the staging of gender relations and the calculus of safety in the city (Kaufmann, Bergman and Joye, 2004; Levy, 2013; Levy et al., 2017). Along the intersections of the cable-car network, the city focused public health, education and community engagement. Subverting an ‘either/or’ choice of either optimal transport mobility or rationally distributed public health real estate, Medellin’s social urbanism appropriated an innovative form of city mobility to
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build bridges across divided social worlds. Originally proposed as a driver of city tourism, counter-intuitively in some senses the Medellin cable cars are now regarded as an instrument of social inclusion and are recognised as one of the more successful infrastructural interventions in cities of the global south.

They are seen as working well because the metrics of their ‘success’ – how value is calculated – are measured by the imaginative leap in their design and the creative outcomes that they generated. Cable cars displaced the spatial fix, or geographical lock-in, of separation caused by social segregation through technological intervention. They revolve around a recognition that policy intervention needs to recognise what might appear to be ‘clumsy’ or sub-optimal but works with the rhythms and speed of the city itself. Medellin also highlights the different measures of value and worth that are at stake in such intervention, a phenomenon that is also identified in an intermediate technological intervention in the landscape of Kathmandu. In arguing for the importance for an imaginary of future urbanism that is geographically sensitive, Thompson and Beck (2014) make these arguments explicitly in their discussion of the plural rationalities at stake in the construction of the Kathmandu Battendra milkway when assessing the values that define an effective deployment of technological disruption. Complicating the conventional distinction between hierarchies and markets, they taxonomise a distinction between the logics of four ideal typical voices addressing emergent urbanisms, four future dispositions. The hierarchist voice of control and planning contrasts with the individualist voice of the utility-optimising individual, an egalitarian voice that they suggest places distributive goals above all others and a fatalist voice that treats the future as a hand of cards that is dealt and beyond control.

Thompson and Beck highlight how before the milkway was built villagers on the periphery of the city boiled milk down to khuwa, a longer-lasting but less valuable condensed form. Kathmandu has grown faster than Industrial Revolution Manchester, with a population of almost three million imminent in the broadly conceived metropolitan area, challenging the transport of khuwa. But the new milkway reduced a five-hour journey to twenty minutes, generating an income rise of 30 per cent. It also reduced the negative externalities of the khuwa production, the ecological damage of the wood-cutting to boil the khuwa, the opening-up of a market gardening cluster and the development of social inclusion in economic growth. And yet the milkway was what Thompson and Beck
describe as a ‘clumsy’ solution to a ‘wicked’ problem. In analytical terms they suggest it lacked elegance. Thompson and Beck (2014: 22) quote the anthropologist Madhukar Upadhya as suggesting that ‘The ropeway has thus become not only a transport system but a community-wide benefit provider, thanks to the social capital it has itself generated.’ And yet the milkway was constructed in the face of opposition from technocratically inclined European Union donors and authoritarian government alike, who had prioritised what they saw as a technologically defined crisis of land management and a conventionally described model of economic development.

The path-dependent starting point of the Kathmandu example opens up the city as a site of potential, an arena of possibility. It does not contradict the economically optimal, but it drives change through the use of different lenses to define the problem to which policy intervention is addressed. A problem of economic sustainability is redefined through a lens of public health that also addresses challenges of ecological disruption and deforestation. It is not a coincidence that both the opportunities and some of the most interesting examples of how a careful understanding of the dynamics of urban systems help to generate a cautious overcoming of path dependence emerge from the cities of what we might conventionally understand as the global south. These forms of creativity and invention litter the writing of scholars such as AbdouMaliq Simone in cities as diverse as Dhaka and Phnom Penh (Simone and Pieterse, 2017; Simone, 2019) and are at the heart of an urbanism that Ravi Sundaram (2010) has described as a form of ‘pirate modernity’ or Gautam Bhan (2019) has suggested is a distinctive form of ‘southern urbanism’.

**Pragmatic commensuration? Law, property rights, ‘mohalla’ clinics and healthy squatting in Delhi**

Bhan’s work has foregrounded not only how the practices of the informal city demonstrate similarities across the global south but also that health policy interventions demand a pragmatic understanding of location. In the example we first raised in the introduction to this volume, he considers the rapid proliferation of city health centres in contemporary Delhi. Bhan argues that ‘the squat’ in India can be understood only situationally, as a paradigmatic Indian southern practice. As a form of city practice squatting in India represents an urban intervention that invokes
a notion of legitimacy as much as one of legality, following Partha Chatterjee’s (2004) landmark framing of a ‘politics of the governed’ that appeals to the values of legal discourse rooted in the appeal to constitutional rights to challenge the legitimacy of urban exclusionary processes. In the Indian city such practice sustains poor people’s movements that create ‘rights-bearing citizens in the sense imagined by the constitution’ (Chatterjee, 2004: 38) in juxtaposition to realities confronted by excluded settlements on the margins of society with tenuous hold on a right to the city, the right to have somewhere to live.

Bhan describes how in the complex political cartography of early twenty-first-century Delhi local political control by progressive forces uses the practice of squatting to establish a plurality of new ‘mohalla’ health centres, frequently occupying sidewalk locations arbitrarily and with tendentious claims to legal tenure. Evocatively he writes:

Consider this set of practices: building a ‘temporary’ structure; using a particular set of materials and construction techniques that reflect an uncertain temporality; building knowingly in tension with regimes of law, property and planning (the health minister did not deny that one could not build on a sidewalk); proceeding without resolving these tensions or knowing if a resolution is possible; and simultaneously defending one’s occupation on moral and ethical grounds (this is, after all, a public clinic) as well as technicalities (this is a ‘temporary’ structure). This is a familiar set of claims and processes. The government of Delhi is, to put it bluntly, squatting on the land of the North Delhi Municipal Corporation. It is entirely possible, reading the health minister’s response, to argue that they know precisely that they are squatting. In responding as they did, one can argue that the AAP government is challenging the central government to demolish – in public space and public view – what is, after all, not a form of private appropriation, but by a public health centre. Legally, the municipal corporation is right. Yet the clinic draws its staying power more through a claim to legitimacy than to legality. (Bhan, 2019: 7)

While couched in the language of ‘southern urbanism’, Bhan’s analysis also points to something more simple: that interventions in urban form are always shaped by geographical and historical context; they generate mutations of the urban system that might share similar logics and conjure very different outcomes. In this context effective policy design has no choice but to work with the grain of historically and geographically specific property rights and constitutional claims, recognising the
moments of the universal alongside the power of specific in shaping the emergent. As Bhan goes on to suggest:

[my] intention here is not to debate which government is ‘right’, nor to draw a simplistic equivalence between a mohalla clinic and a pavement dwelling. It is to show that squatting as a practice has a set of logics that make it both effective and necessary for reaching certain outcomes in the specific historical and spatial contexts of Southern urbanisation. Taking Southern practice seriously means seeing squatting not just in its tensions with formal logics of law and planning, nor merely in the material forms of housing, but as mode of practice that embraces uncertainty, measures itself against limited temporalities, and operates to move forward incrementally in any way it can. This mode of practice is claimed here as an equal possibility for state action – for policies, programmes and plans – and not just for subaltern urban residents. To use Solomon Benjamin’s conceptualisation, squatting is a practice that can allow even planners within state structures to become occupancy urbanists. This results in new forms of planning practice from within the state apparatus. (Bhan, 2019: 7)

Bhan’s argument powerfully foregrounds both a critical disposition and also a sense of the propositional. The combinations of global problems shaped by local context that prefigure a politics of geographical scale also complement a logic of urban experimentation. This demands in turn an imperative of humility: cities that aspire to be truly ‘smart’ are those that recognise their own histories and understand their presents, shaping bespoke interventions that synthesise new urban science and local knowledges while acknowledging transparently what fails as well as what might succeed.

While not driven by institutional forms of city laboratories or observatories, the public health drivers of change in Kathmandu, Medellin and Delhi share a particularly experimental sensibility, one that is seen on an even grander scale in the opening-up of the cities of China in the post-1978 period. What has been described as ‘local state capitalism’ in China has also driven the cautious attempt to ‘cross the river one stone at a time’, as Deng Xiaoping carefully described the opening-up process in China from 1978 (Keith et al., 2014). In a nation like China with territorial scale and population numbers much greater than those of the whole of Europe and Northern America combined, Confucian tensions between the governance centre and dispersed geographies repeat through the centuries. In China’s devolved system, while the party does
not surrender power, the cities become real-time experiments as different ways of shaping urban futures are trialled. Some have already argued that the rhetorical commitment to design an urbanism of the paradoxical socialist marketplace that Deng espoused should be taken more seriously than Western commentators and most urbanists have suggested. Deng’s model grew from the evolution of Special Economic Zones, which trialled different forms of urban economic growth models, from the accelerated urban growth of ‘Shenzhen speed’ (Shenzhen sudu 深圳速度) of the Pearl River Delta, which grew a city of 280,000 in small villages to a metropolis of ten to fifteen million in thirty years, to the Chongqing Model of egalitarian growth attempted by the disgraced ‘princeling’ Bo Xilai, whose model of change was however celebrated by left scholars in China (Arrighi, 2007; Cui, 2011; Frenkiel, 2010) and beyond.

More significantly, the record of China’s urbanism over now more than four decades represents both the continuity of long traditions of uncertain relations between the centre of a 1.4 billion ‘civilisation state’ in Beijing and varying degrees of local autonomy. The experimental disposition of bespoke urban policy interventions at the micro-scale of acupuncture and social urbanism are seen in China at the macro-scale of whole city systems that are allowed a sense of earned autonomy to trial different policy solutions to generic urban problems. These ‘experiments’ with models of urban change that have emerged from the post-1978 processes in China may or may not survive the attempts by Xi Jinping to recentralise many of the instruments of policy control, but represent some of the more significant and less explored ways in which the city as a whole becomes a laboratory for ‘solution-oriented urbanism’.

We consequently argue that considering the global urbanisms of public health imperatives demands a way of thinking that integrates the domains of new urban sciences and historically and geographically contextual knowledges. The power of prediction (P), the non-linear logic of emergence (E) and the commensuration of new forms of adopted knowledge (A) generated by disruptive innovation structured the introduction to this volume. In the conclusion we have focused on the imperative to develop new forms of knowledge exchange (K) between citizens, cities and science that are at the heart of what might be a new urban imaginary. This imaginary we have described elsewhere as a PEAK Urban approach to the sorts of challenges presented by the
public health dilemmas addressed in the substantive chapters of this volume.¹ In essence such an imaginary might rest on a sense of the power of an interdisciplinary space that bridges natural sciences, social sciences and humanities, while also sustaining a sense of humility in respecting diverse local histories, contextual geographies and path-dependent futures that define the diversity of twenty-first-century urban life.

The chapters of this volume in very different ways share many of these approaches, understanding the importance of urban context in shaping transport interventions (Schwanen and Nixon in Chapter 4) or food systems (Smit in Chapter 6), health services in the ‘broken city’ (Ortega and Wenceslau in Chapter 7), the cultural traffic between cities of the north and south (Mcilwaine et al. in Chapter 3), and the logic of systems thinking in qualifying the capacity of straightforwardly technocratic approaches to water and sewage network development (Iossifova in Chapter 5). In very different ways the return to a form of vitalism in Nikolas Rose’s framing of urban mental health (Chapter 2) and the historical context of racialised injustice and the roots of structural violence in urban Brazil today (Soares in Chapter 8) share a sense of both path dependency and propensity in shaping the pathologies of public health. They also share a commitment to a framing of social scientific research that continues to foreground the critical dispositions that emerge from the ethical crucible of urban life alongside a facility to engage with the natural sciences in general and the logics of medicine in particular. Whether through new institutional forms such as urban laboratories or city observatories, the continental scale of governance variation between cities in twenty-first-century China or the diverse creativities of ‘social urbanism’, ‘acupuncture urbanism’ or ‘southern urban practice’, such approaches also demand that an experimental sense of city propensity demands a reconfigured relationship between ‘blue skies’ research, the ivory tower and the social context of the cities that drive human dwelling for the twenty-first century.

Note

¹ See the collaborative programme PEAK Urban linking studies of urban futures across China, Colombia, India and South Africa (www.peak-urban.org).
References


