2. The urbanisation of spatial inequalities and a new model of urban development

Creighton Connolly

Changing patterns of urbanisation strongly influenced the initial outbreak and severity of the COVID-19 pandemic and form the focus of my first section here. The second section outlines how the pandemic highlighted deep existing inequalities and shortfalls in governance that have been associated with the current model of global urban development. As Nixon, Surie, and McQuay (2020) have argued, the COVID-19 pandemic 'brought urban governance to a critical juncture in Asia'. Subsequently, I evaluate how East and Southeast Asian cities are being redesigned in the wake of the pandemic and the role of participatory urban governance in creating healthier and more socio-ecologically just cities.

Urbanisation and infectious disease

Previous research has shown that dramatic changes in demographic and social conditions, including an exponential increase in global transport, have been responsible for much of the global emerging infectious disease problem (Ali and Keil 2006). Diseases like SARS were associated with the rise of globalisation, as interconnected global cities like Toronto and Hong Kong were severely affected (Ali and Keil 2008). This is because decreasing travel times allowed for the quicker spread of microbes and viruses before governance and healthcare systems could identify and control them.

The COVID-19 pandemic, however, was a story of peri-urban and rural–urban connections, as seen in large industrial centres like Wuhan, northern Italy, and parts of Germany, which are connected through global and regional supply chains. We saw more peri-urban and regional connections between a larger network of cities, which make it much

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more difficult to contain disease outbreaks (Connolly, Ali, and Keil 2020). In general, cities are inherently connected with their peripheries through daily flows of people and goods. People commute into and out of the city each day for work; food and other essentials are often produced in peri-urban or rural areas and transported into the city. There are thus plenty of opportunities for the spread of microbes, bacteria, and different forms of nature through these activities and networks.

Urban density has been widely accused in popular media for the severity of the pandemic in places like New York City. Research has shown, however, that density alone cannot be a predictor of the spread of infectious diseases and depends on other factors such as the state of development, adherence to social distancing measures, and the extent of access to public health infrastructure (Florida 2020). It is also important here to distinguish between 'density' and 'overcrowding', where the former refers to high concentrations of people within an area and the latter to the lack of separation or space between people (often caused by inequality). For instance, Asian cities like Hong Kong, Seoul, and Taipei are far denser than New York City but have had far fewer cases of COVID-19 per capita.

Recent trends have suggested that the emergence of pathogenetic zoonoses in rapidly developing and urbanising regions has become a paradigmatic component of urbanisation and globalisation processes in the 21st century (Decaro and Lorusso 2020). This has been happening in tandem with the expansion of urban areas into previously uninhabited or non-urbanised peripheries, where there is more contact/interaction between humans and other animal and plant species. As I have argued previously, rapidly expanding infrastructure networks and urban landscapes can themselves play a role in the emergence of potential outbreaks (Connolly, Keil, and Ali 2021). Examples include deforestation on the edges of cities and new agro-industrial transformations of hinterlands, producing new pathways of emergent infectious disease transmission (Yong 2018).

Adler, Florida, and Hartt (2020) have thus proposed using the concept of the mega-region to understand the geography of SARS-CoV-2's spread and its economic toll. As we saw in the early stages of the COVID-19 outbreak, many initial outbreaks were in wider metropolitan regions such as Milan/Lombardy and New York/New Jersey. These regions tend to be connected through travel corridors that extend well beyond the typical daily commuting range, resulting in the potential for diseases to spread much more widely through the urban fabric. In many

cities of Asia, transit-oriented development has been an integral part of urban planning strategies that seek to develop polycentric urban regions, including high-density suburbs. This increasing connection within and between urban regions has resulted in SARS-CoV-2's trajectory of filtering down the urban hierarchy over time from mega-regions to large metropolitan regions and then to smaller towns.

As a result of increasing interconnectivity between cities and their hinterlands, travel bans have proved ineffective in containing disease because there will inevitably be some spread of the disease before they are enforced (Bajardi et al. 2011). At best, they can delay the spread of disease; at worst, they can counterintuitively increase the odds that outbreaks will spread by forcing travellers to seek alternative and even illegal transport routes. Yong (2018) has pointed out that they can also 'discourage health workers from helping to contain foreign outbreaks, for fear that they'll be denied reentry into their home country'.

The emergence of SARS-CoV-2 in Wuhan – a city of 11 million people – immediately before the Lunar New Year holiday played a large factor in the rapid spread of the virus. This was due to Wuhan's role as a major travel hub or 'thoroughfare' in central China (Ren 2020). As Ren (2020) has noted, however, the severity of the outbreak in Wuhan was magnified by the delay of officials in China in notifying the public about the novel virus and taking action to control it. As I discuss below, effective governance is crucial in responding to disease outbreaks and requires close cooperation between citizens and the state.

In contrast, cities that worked the quickest and most diligently to control local transmission through contact tracing, identifying sources of infections, quarantining affected individuals, and so on were most effective. While early lockdowns and social distancing measures helped to flatten the infection curve in some places, they were ultimately ineffective if implemented too late. Essential workers for example, were still needed to keep supermarkets, supply chains, and infrastructure running. Moreover, as Ren (2020) has noted in the case of Wuhan, lockdowns also tended to be unequal, affecting less affluent communities in the urban periphery more than those in the core. The plight of lockdowns on precarious and transient migrant workers has also been well documented, with many of these individuals out of work and with few options to travel home (Nixon, Surie, and McQuay 2020).

The lack of infrastructure in rapidly urbanising regions, including Southeast Asia, can also have severe consequences for the rise of epidemics, as rapid growth in cities and urban populations is not accompanied

by the appropriate development of transportation and other essential infrastructure (Recio, Chatterjee, and Lata 2020). This includes access to clean water supplies, which are essential for combating the spread of infectious disease but are often lacking in rapidly growing informal settlements (Wilkinson 2020). Housing is also a crucial issue. In Manila, for example, millions of the city's essential but low-paid workers live in crowded, informal (and often illegal) settlements on the periphery, where they are vulnerable to disease outbreaks.

Even in wealthy cities like Singapore, the poorest sectors of the population are often unable to self-isolate owing to dense living conditions and are thus at higher risk of contracting and spreading diseases. Singapore was initially praised for its handling of COVID-19 and even managed to avoid imposing lockdown conditions until mid-April, when a sharp increase in cases among Singapore's migrant worker population emerged (Jamieson 2020). Nine dormitories housing more than 50,000 men, mostly from Bangladesh, India, and China, were declared 'isolation areas' and effectively on lockdown, meaning that about 300,000 workers had restrictions on their movements within their complexes (Han 2020). Most of these worker dormitories were deliberately located on the peripheries of Singapore and could have 12 to 20 workers sharing a room. They were also essentially 'out of sight' (both literally and metaphorically) as a potential source of vulnerability until the issue exploded (Luger 2020). This illustrates the spatial dimension of urban infectious disease outbreaks, as both the edges of the city and those who are most marginalised in society tend to be the most vulnerable (see Connolly, Ali, and Keil 2020; Iswara 2020).

Post-COVID-19 futures of an urbanising world

There has also been significant discussion about how cities and the world are going to change after the COVID-19 pandemic, much of which also relates to density and urban mobilities. Some urban designers have been arguing for a so-called 'Goldilocks density', which refers to an urban population density that is high enough to reap the benefits of sustainability and convenience provided by cities but not so high that people must live in 30-storey apartment blocks that rely on extensive use of public spaces like elevators (Alter 2020). Singapore has been planning to continue with high-density development while using 'smart solutions' to manage crowds (Board 2020). There has also been a widely recognised need to plan cities better to support bike and

pedestrian infrastructure, which will make cities not only more carbon neutral but also less vulnerable to future disease outbreaks (Nixon, Surie, and McQuay 2020). This infrastructure, however, needs to be constructed evenly, rather than just serving wealthy or middle-class communities, which has been the case in many cities in recent decades (Madden 2020).

Indeed, as David Madden (2020) has pointed out, the global urban development model over the past few decades 'has catered to the needs of elite individuals … while allowing the deterioration of social services and public institutions and the intensification of inequality'. This is a point that has been recognised by urban designers across Southeast Asia. For example, Thai urban designer Kotchakorn Voraakhorn has asserted that: 'Bangkok should focus more on the public space and green infrastructure that make the city more liveable rather than the temporary infrastructure in the city for tourists' (quoted in Board 2020). Similarly, Malaysia's green building movement has largely focused on middle- to high-income developments targeted at foreigners and wealthy Malaysians. It has been suggested that the wake of the COVID-19 pandemic could be an ideal time to extend this type of development to the affordable market segment, which, in contrast to the glut of luxury properties nationwide, has seen very little supply (Board 2020).

Urban governance proved to be a critical element of how successful cities were in responding to the COVID-19 pandemic, particularly with regard to the role of civil society and community support. Seoul, for example, focused on an approach emphasising transparency, accountability, and solidarity instead of strict movement restrictions (Jagannathan 2020). Hong Kong is another interesting case in this regard, as the organisational capacity and the civic infrastructure established by 2019's protest movements played a central role in the city's response – and ultimate success – in containing the virus's spread (Tufekci 2020). One group set up a website to track cases of COVID-19, monitor hotspots, warn people of places selling fake PPE, and report hospital wait times and other relevant information. Such reliable information is crucial in managing epidemics within a community (Ren 2020; Yong 2018). Civilians also spontaneously adopted the wearing of masks in public, defying the government's ban on masks (in place due to the mass protests). Large groups of volunteers also distributed masks to the poor and elderly and installed hand sanitiser dispensers in crowded (low-income) tenement buildings. When the government at first refused to close the

border with mainland China, more than 7,000 medical workers went on strike, demanding border closures and PPE for hospital workers (Ip 2020). These collective actions illustrate how civil society can organise to make up for the governance failures of urban and regional governments in responding to pandemics in real time.

Conclusion

The massive expansion of the global urban fabric over the past few decades has increased exposure to infectious diseases and posed new challenges to the control of outbreaks. As Nixon, Surie, and McQuay (2020) have argued, the pandemic 'revealed the fragile interconnectedness of metropolitan, peri-urban, and rural spaces and the inequalities upon which cities are built and maintained'. Indeed, while the central business districts of Southeast Asia's largest cities are modern, highly connected spaces, the pandemic highlighted the social inequalities and underinvestment in infrastructure services that are visible in more peripheral urban areas. This has made cities and their inhabitants more vulnerable not only to SARS-CoV-2 but also to other forms of social and economic hardship. The unsustainable urban development model that had been pursued in Asia and around the world therefore not only played a role in the outbreak of the COVID-19 pandemic but also had negative consequences for quality of life and socio-ecological justice.

While urban planning and design is already being reformulated to cope better with the next pandemic, urban governance will also be crucial. Urban governments will need to collaborate more effectively, not only with regional and national levels of government but also with residents and civil society groups to make infrastructure, housing, and livelihood opportunities more equitable. Politics in municipalities, between cities and other jurisdictions, and between municipalities, civil society actors, and local communities will be crucial to understanding the role urban health governance plays in an increasingly urbanised and globalised society (Acuto 2020). To this end, the COVID-19 pandemic offered valuable lessons about the need for building socio-ecological justice by strengthening institutions to promote more socially inclusive and environmentally sustainable forms of development. Without this effort, the inequalities that the pandemic exposed will only grow worse in the years and decades to come.

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References

Acuto, Michele. (2020). 'COVID-19: Lessons for an urban(izing) world'. *One Earth*, vol. 2, no. 4, pp. 317–319. https://doi.org/10.1016/j.oneear.2020.04.004

Adler, Patrick; Florida, Richard; and Hartt, Maxwell. (2020). 'Mega regions and pandemics'. *Tijdschrift voor economische en sociale geografie*, vol. 111, no. 3, pp. 465–481. DOI: https://doi.org/10.1111/tesg.12449

Ali, S. Harris; and Keil, Roger. (2006). 'Global cities and the spread of infectious disease: The case of Severe Acute Respiratory Syndrome (SARS) in Toronto, Canada'. *Urban Studies*, vol. 43, no. 3, pp. 491–509. https://doi.org/10.1080/00420980500452458

Ali, S. Harris; and Keil, Roger. (2008). *Networked Disease: Emerging Infections in the Global City*. UK: Wiley-Blackwell.

Alter, Lloyd. (2020). 'Urban density is not the enemy, it is your friend'. *Treehugger*, 25 March. https://perma.cc/62HK-QG39 [Last accessed 22 April 2020].

Bajardi, Paolo; Poletto, Chiara; Ramasco, Jose J.; Tizzoni, Michele; Colizza, Vittoria; and Vespignani, Alessandro. (2011). 'Human mobility networks, travel restrictions, and the global spread of 2009 H1N1 pandemic'. *PLOS One*, vol. 6, no. 1, p. e16591. https://doi.org/10.1371/journal.pone.0016591

Board, Jack. (2020). 'COVID-19: Why saving our forests can help stop the next pandemic'. *CNA*, 9 May. https://perma.cc/M3T9-CRG4 [Last accessed 14 January 2021].

Connolly, Creighton; Ali, S. Harris; and Keil, Roger. (2020). 'On the relationships between COVID-19 and extended urbanization'. *Dialogues in Human Geography*, vol. 10, no. 2, pp. 213–216. https://doi.org/10.1177/2043820620934209

Connolly, Creighton; Keil, Roger; and Ali, S. Harris. (2021). 'Extended urbanisation and the spatialities of infectious disease: Demographic change,

infrastructure and governance'. *Urban Studies*, vol. 58, no. 2, pp. 245–263. https://doi.org/10.1177/0042098020910873

Decaro, Nicola; and Lorusso, Alessio. (2020). 'Novel human coronavirus (SARS-CoV-2): A lesson from animal coronaviruses'. *Veterinary Microbiology*, vol. 244, p. 108693. https://doi.org/10.1016/j.vetmic.2020.108693

Florida, Richard. (2020). 'The geography of coronavirus'. *Bloomberg CityLab*, 3 April. https://perma.cc/N7C6-4YCA [Last accessed 9 June 2020].

Han, Kirsten. (2020). 'Singapore's new Covid-19 cases reveal the country's two very different realities'. *Washington Post*, 16 April. https://perma.cc/8RF7-DVK6 [Last accessed 8 June 2020].

Ip, Regina. (2020). 'The bitter pill medical workers on strike might have to swallow'. *South China Morning Post*, 9 February. https://perma.cc/FP8Z-FRK8 [Last accessed 14 January 2021].

Iswara, M. Anthony. (2020). 'Southeast Asia needs progress as pandemic exacerbates inequality: UN'. *Jakarta Post*, 3 August. https://perma.cc/2CBS-AQMH [Last accessed 14 January 2021].

Jagannathan, Vijay. (2020). 'Learning from Seoul to control COVID-19: Transparency, accountability, solidarity'. *TheCityFix*, 18 May. https://perma.cc/B8VH-WZYS [Last accessed 14 January 2021].

Jamieson, William. (2020). 'Logistical violence and virulence: Migrant exposure and the underside of Singapore's model pandemic response'. *LSE Southeast Asia Blog*, 14 October. https://perma.cc/5LJ6-6762 [Last accessed 14 January 2021].

Luger, Jason. (2020). 'Seeing Covid-19 through workers, students, and dormitories: Singapore in comparative framing'. *LSE Southeast Asia Blog*, 16 November. https://perma.cc/3JRA-QZAJ [Last accessed 13 January 2021].

Madden, David. (2020). 'Our cities only serve the wealthy. Coronavirus could change that'. *The Guardian*, 2 June. https://perma.cc/5KLC-YEGJ [Last accessed 4 June 2020].

Nixon, Nicola; Surie, Mandakini; and McQuay, Kim. (2020). 'Covid lays bare the flaws in Asia's booming megacities'. *InAsia*, 19 August. https://perma.cc/9C4G-MP6B [Last accessed 28 September 2020].

Recio, Redento; Chatterjee, Ishita; and Lata, Lutfun Nahar. (2020). 'COVID-19 reveals unequal urban citizenship in Manila, Dhaka and Delhi'. LSE COVID-19 Blog, 5 June. https://perma.cc/Z9LA-6X6E [Last accessed 14 January 2021].

Ren, Xuefei. (2020). 'The quarantine of a megacity: China's struggle over the coronavirus epidemic'. *International Journal of Urban and Regional*

Research, 4 February. https://perma.cc/DLW5-WKM5 [Last accessed 13 April 2020].

Tufekci, Zeynep. (2020). 'How Hong Kong did it'. *The Atlantic*, 12 May. https://perma.cc/D799-64C8 [Last accessed 17 May 2021].

Wilkinson, Annie. (2020). 'The impact of Covid-19 in informal settlements – are we paying enough attention?' *Institute of Development Studies*, 10 March. https://perma.cc/2FAJ-ACS6 [Last accessed 14 January 2021].

Yong, Ed. (2018). 'The next plague is coming. Is America ready?' *The Atlantic*, July/August. https://perma.cc/8BU5-BZNL [Last accessed 17 May 2021].