Invisible Agents:

An Investigation on SARS Shaping
Hong Kong and Fragmenting
its Cultural, Economic, Political,
and Physical Borders

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INVISIBLE AGENTS:
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ABSTRACT

Shaped in reaction to tuberculosis and cholera, nineteenth century cities most evidently embody the coupling of urbanism and disease. Today, amidst technological advances of antibiotics and hyper connectivity, SARS (as the first global health alert of the twenty-first century) highlights how cities continue to mutate by pandemics. Originating from civet cats in the Guangdong Province of China, the epidemic spread globally through Hong Kong to more than 29 countries worldwide. Lasting only 6 months, SARS cost the world roughly $40 billion. Rather than increasing border control as a method to contain disease, this investigation argues that multi-centred cities with fragmented borders, are crucial for the formation of new pan-alliances against outbreaks. Connectivity is the *cause* of SARS, the *result* of SARS, but also the method for *controlling* SARS. Operating in a Chinese cultural context, post-SARS urbanism addresses the paradoxical benefit of connectivity as a tool to combat future epidemics.

INTRODUCTION

The revolutionary increases in today's standards of living, also produces complexly entangled relationships in twenty-first century cities of innovations. Proximity and high-density living compresses human and non-human life amongst unnatural environments, breeding new diseases as a byproduct. Arguably only possible in an age of technological advances allowing for hyper connectivity, SARS (Severe Acute Respiratory Syndrome) is perhaps the first example of a pathogen inverting the historic reactionary relationship between urbanism and disease epidemics—not only are diseases molding our cities, but vice versa as well. Using SARS and the 'ground zero' outbreak location of Hong Kong as a case study, this paper investigates the role of urban areas in controlling and causing infectious diseases in our globalized world. Regardless of its complete eradication by medical quarantine systems within six months, the SARS epidemic emphasizes global flows and possible future disjuncture, questioning the impact of disease in today's age of information. Albeit no longer a global health threat,—SARS has 'disappeared' from global memoir—its physical and psychological effects are still visible today in the landscapes of Hong Kong and its geographic neighbor, Mainland China.

The intentions of this research on SARS are twofold. The first half of the paper recounts the emphasis of health as a guiding principle in Western architectural history and city planning; origins of city formation is proven to be in service of mass health. Alongside quarantine methods and countryside sanatoriums, twentieth century urbanism was effective against illnesses such as tuberculosis and cholera, flourishing as the foundations for modern living. Positioning SARS as the twenty-first century Asiatic pathogen spreading globally through the city of Hong Kong, the SARS epidemic is an anomaly in this narrative: cities of today *encourage* the birth of diseases. The second half of the paper looks closely at how SARS has shaped Hong Kong's urbanism internally and fragmented its borders externally. Paradoxically, fragmented borders of multi-centered cities are more prepared, more resilient, and quicker to respond when fighting disease. In this new model of East-West attitudes towards health and urbanism, the city of Hong Kong uniquely emerges as the *product* of an epidemic, but also as the medium to *combat* it. Today, 17 years after SARS, the world is once again facing an epidemic outbreak. As the COVID-19 outbreak continues to cause global social, cultural, political, and economic disruptions, perhaps SARS can be an example of how relaxed borders through local and international cooperation is a valid long-term strategy against anthropogenic pathogens.

ILLNESS AND HEALTH IN THE (HISTORIC) CITY

Concerns for human health have always affected the design of cities. As early as the first century, Vitruvius' *Ten Books on Architecture* proposed the impact of natural elements, such as wind and sun on the mind and body, as the main guiding criteria for the placement of Greek *polis*. In the Medieval period, defensive walls set the boundaries between the city and the countryside as protection from external attacks. In Giotto's thirteenth century fresco *The Exorcism of Arezzo,* high walls are depicted for their metaphorical ability to ward off demons, allowing inhabitants within city walls to flourish both physically and mentally. In more recent histories, the obsession and anxiety with health is expressed most evidently in Haussmann's nineteenth century masterplan renovation of Paris—wide boulevards lined with trees and underground sewage systems—in response to the nineteenth century outbreak of cholera.[1] Despite never being realized, Le Corbusier's famous Plan Voisin of 1925 for Paris advocated for the implementation of a rational grid that was likewise reactionary to disease control. Inspired by Haussmann and the desire for mass efficiency

and mass hygiene, Corbusier stressed the limits of zoning and the creation of wide streets to maximize light, air, and sunlight in the quest for a healthy city against tuberculosis.[2] These principles had already been applied by countryside sanatoriums built to isolate the sick from the healthy, in doing so spatially disinfecting the city.[3] Yet, despite the historic relationship between concerns of mass health, architecture, and urban design, health as a social right— once promoted by welfare-state policies—has been increasingly transferred to individual responsibility. Technology and antibiotics rose the baseline health of cities and its inhabitants alongside the expansion of capitalism. As such, the commodification of healthcare in present day conditions favors revenue over investing in health for all. If at one point in time concerns of health were key agents in architecture and urban planning discourse, what is their role in contemporary societies today?

CONTEXT OF THE SARS OUTBREAK AND ITS RELEVANCE TO URBANISM TODAY

Shifting to an Asian cultural and ecological context, Hong Kong's humid subtropical climate and drastic terrain is a good case study site providing a non-western manifestation of the relationship between health and the city. During the 1840s British occupation of Hong Kong, the army based itself at one of the few flatlands on the island—Wong Hai Chung Valley (translated as 'yellow mud stream').[4] Historically a rice growing marshland with swamp-like conditions ideal for mosquito breeding, the British Army quickly lost roughly half of its enlisted men to malaria infections. Soon after, the camp closed and the area was re-designated as the Hong Kong Colonial Cemetery, the first cemetery of the city. Comparable to Vitruvius's theory on the relationship between natural elements and the body, Fung Shui is a Chinese principle of wind and sun dictating energy flow and its impacts on human anatomy. Deemed as an area with poor energy flow and superstition for being in close proximity to death, the valley naturally gained a poor reputation. In an attempt to circumvent the psychological stigma of illness, death, and bad Fung Shui associated with this plot of land, the British ironically nicknamed the area "Happy Valley", and drained the last swampy flatland in Hong Kong to convert it into a racecourse.

Not long after the Happy Valley incident, another early nineteenth century plague outbreak in colonial Hong Kong caused infections at a city scale. First discovered in Hong Kong by Alexandre Yersin of the French Colonial Health Service, the plague bacillus of 1894 paved the way for changes in land use policies, housing, and public hygiene. The British port colony, having no proper sewage systems, drainage, or water supply was swiftly sanitized after the plague, transforming itself to "the third largest port in the British Empire".[5] In these early instances, the Chinese traditional belief and emphasis on Fung Shui as a key spatial organization principle, is fused with colonial ideologies of health and pragmatism. Hong Kong thus became one of the first examples of a mixed East-West urbanism in Asia. Today, more than 150 years later, despite various 'cursed' incidents such as the 1918 Derby Day Fire and the 2007 poison darts discovery, Happy Valley remains as the most popular racecourse for locals and expats alike. However, the nineteenth century diseases marking Hong Kong's colonial origins were not the last incidents of this nature.

Fast-forward to the Spring of 2003, SARS was labelled as the first global health alert of the twenty-first century. Inflicting influenza-like symptoms such as "fever, malaise, myalgia, headache, diarrhea, and shivering (rigors)"[6], SARS had no defining cause or treatment at the time of the outbreak—thus labelled a syndrome rather than a disease. Hitting hardest in three East Asian cities, Hong Kong, Taipei, and Beijing, SARS was mainly transmitted through Hong Kong by contagious passengers on air transit to 29 countries around the world, including Singapore, Vietnam, and Canada.[7] Considered a modern day "Asiatic disease" by Westphalian public health,[8] SARS highlighted the increasing vulnerability of connected cities in a global economy and their exposure to contagious diseases. The international spread of SARS can be examined as a predictable repercussion of globalization in line with rapid changes in social, political, and ecological relationships.

01. Philippe Rahm, "How the Eruption of a Volcano Invented the Modern City" (lecture, History of Architecture: A Realist and Environmental Approach to Urban, Landscape and Architecture Design History, Cornell University, Ithaca, NY, January 29, 2019). Research paper initiated from this course, and developed independently post-graduation in December 2019.

02. Philippe Rahm, "How the Eruption of a Volcano Invented the Modern City" (lecture, History of Architecture: A Realist and Environmental Approach to Urban, Landscape and Architecture Design History, Cornell University, Ithaca, NY, January 29, 2019).

03. Beatriz Colomina, "Chapter 2: Tuberculosis," In *X-Ray Architecture*, 61-116. Zurich: Lars Müller Publishers, 2019.

04. "Why Is Happy Valley Called Happy Valley?" South China Morning Post, July 20, 2018. https://www.scmp.com/magazines/hk-magazine/article/2037666/why-happy-valley-called-happy-valley.

05. Sara Lazarus, "When Death Came Calling: How the Plague Swept through Hong Kong," South China Morning Post, February 13, 2015, , accessed April 09, 2019, https://www.scmp.com/magazines/post-magazine/article/1535499/when-death-came-calling-plague-hong-kong.

06. "SARS (Severe Acute Respiratory Syndrome)." World Health Organization. World Health Organization, April 26, 2012. https://www.who.int/ith/diseases/sars/en/.

07. "SARS (10 Years After) | Disease of the Week | CDC," Centers for Disease Control and Prevention, , accessed April 09, 2019, https://www.cdc.gov/dotw/sars/index.html.

08. David P. Fidler, *SARS: Governance and the Globalization of Disease* (New York: Palgrave Macmillan, 2004), 31.

OUTBREAK OF SARS IN RELATION TO THE GLOBAL POSITIONS OF HONG KONG AND CHINA

SARS, also known as 'atypical pneumonia', was discovered as early as November 2002 in the Guangdong Province of China.[9] To this day, the exact source of SARS is still unknown. Speculating to be an animal virus originating in natural bat reservoirs and spreading to other animals, the disease then spread from civet cats to humans in the wild animal markets of Guangdong.[10] This condition of animal-and-human close interaction is stressed by China's peculiar traditions of eating wild cats and trading exotic animals at often illegal markets, something that was—and still is—common and popular amongst locals and visiting tourists today.[11]

At the beginning, updates of SARS outbreaks were concealed and underreported by the Chinese government due to world politics, secrecy, and inaction towards the disease. Combined with a lack of proper national communication infrastructure, and a system of healthcare that mixes Western medicine and Traditional Chinese Medicine (TCM), SARS was amongst the first locally-born contagious disease of its kind in China.[12] Historically, China has been a country of third-world GDP with first-world life expectancies.[13] Paralleled with the Cultural Revolution of China under the rule of Mao Zedong, this technological delay and 'internet isolation' from the rest of the world is perhaps the contextual reason as to why Beijing initially underreported cases of SARS, and 'denied permission for World Health Organization to visit the Guangdong Province'.[14]

Hong Kong, the Special Administrative Region of China, acts under a 'one country, two systems' policy. The political and urban situation of Hong Kong in the context of the 2003 SARS outbreak is tightly related to the 1997 Hong Kong handover to China. Under the Basic Law, the city is able to operate its capitalist system for 50 years, granting the fundamental rights and freedom of speech to Hong Kong residents that are not common in Mainland China.[15] It was, in fact, media reports from Hong Kong that spread information regarding SARS to Mainland China and globally. In present day, Hong Kong, a city of almost 8 million inhabitants is perhaps most famously known for its super-high-density, close proximity housing, and convenient lifestyle.[16] In reality, Hong Kong is made up of more than 200 islands, some joint into larger masses by landfill over time. The British first settled on Hong Kong Island to harvest its port-city qualities for trade, using waterfront districts as the basis for monocentric city planning. Yet out of the 1,108 square-kilometers of land area available, roughly 75% is left in a 'natural' state as country parks, UNESCO geoparks, reservoirs, and government-protected areas. Built on the foundation of a colonial Country Park Ordinance enacted in 1976 for the sake of 'countryside preservation' and 'open air recreation', 24 country parks and 22 special areas still remain today.[17] Negotiating with the constraints produced by these untouchable areas and hilly terrains, less than 25% of Hong Kong's overall land is developed and urbanized, and only 7% is dedicated to housing. As a consequence, many of Hong Kong's residents live in high-rise, compact micro-apartments, notorious for their outrageously expensive prices. This fight for space to live hits heaviest on those least equipped to respond, resulting in many low-income families cramped into shoebox-sized public housing. The WHO declares this condition as 'traditional environmental risk (poverty and disease) exacerbated by modern environmental risks (pollution and stress). This highlights an inseparable relationship between physical environments and health hazards.[18]

In February 2003, SARS arrived in Hong Kong when an unknowingly infected 64-year-old medical doctor from Zhongshan University traveled from Guangzhou to Hong Kong for a wedding, and stayed at the Metropole Hotel in the popular peninsula district of Tsim Sha Tsui.[19] The virus travelled by air through this 'patient zero' and infected other hotel guests, dispersing SARS globally as guests continued on with their international air travels. Subsequently, the WHO placed a travel warning on the city of Hong Kong. Within the city, 286 people

09.   John Wong and Zheng Yongnian, *The SARS Epidemic: Challenges to China's Crisis Management* (Singapore: World Scientific, 2004), 99.

10.   John Wong and Zheng Yongnian, *The SARS Epidemic: Challenges to China's Crisis Management* (Singapore: World Scientific, 2004), 99.

11.   Jim Yardley, "Chinese Diners Shrug Off SARS: Bring On the Civet Cat," The New York Times, December 29, 2003, , accessed April 09, 2019, https://www.nytimes.com/2003/12/29/world/chinese-diners-shrug-off-sars-bring-on-the-civet-cat.html

12.   Deborah Davis and Helen F. Siu, *SARS: Reception and Interpretations in Three Chinese Cities* (London: Routledge, 2007), 10.

13.   Deborah Davis and Helen F. Siu, *SARS: Reception and Interpretations in Three Chinese Cities* (London: Routledge, 2007), 10.

14.   "The SARS Epidemic." IDEESE Case: SARS. Accessed May 15, 2019. http://www.umass.edu/sts/ethics/online/cases/SARS/case.html.

15.   The National Security Law passed on June 30th, 2020 heavily restricts freedoms of speech, thus in direct conflict with the Basic Law and declared by many as the end of an autonomous era.

16.   Lau, S.S.Y. *Is Our City Livable and Healthy in the Post-SARS Era? Redesigning Healthy Cities – a Lesson from Hong Kong.* Report. (Center of Architecture and Urban Design for China and Hong Kong, University of Hong Kong), 207. Accessed April 3, 2019.

17.   "Country Parks and Protected Areas in Hong Kong." Legislative Council of the Hong Kong Special Administrative Region - Country parks and protected areas in Hong Kong. Accessed November 9, 2019. https://www.legco.gov.hk/research-publications/english/essentials-1617ise06-country-parks-and-protected-areas-in-hong-kong.html.

18.   Deborah Davis and Helen F. Siu, *SARS: Reception and Interpretations in Three Chinese Cities* (London: Routledge, 2007), 208.

19.   "Update 95 - SARS: Chronology of a Serial Killer." World Health Organization. July 24, 2015. Accessed April 09, 2019. https://www.who.int/csr/don/2003_07_04/en/.

Fig. 1. *Invisible Agents* (2020) is a photographic still-life portrait of face masks as the material manifestation of SARS – a powerful disruptor and contributor to the urban development of Hong Kong. Today amidst the COVID-19 outbreak, masks are symbolic of protection for the self and the community at large. Specifically, blue masks, typically used by healthcare workers most iconically trigger health connotations. Reflecting on the visual uniformity, anonymity, and extended care that a 'masked population' suggests, the copy-and-paste of a singular subject, a mask, likewise references the polycentric city planning model of Hong Kong as a post-SARS recovery strategy.

died and whole housing estates were on lockdown under government quarantine orders.[20] Since Hong Kong was already in an economic downturn post 1997—due to local and global uncertainties in the redefinition of Hong Kong's 'nationality' and identity—, SARS further drove the economy of the city into despair. Eventually, general immune systems increased alongside the upcoming summer months and the passing of the winter season. To this day, although there is ongoing research for a vaccine, no cure for SARS exists; it has only been successfully controlled through quarantine methods and treated through supportive measures. How did a single virus, in such a short timeframe, cause so much damage in the age of modern medicine, yet disappear so quickly in the global imaginary?

IMPACT OF SARS ON HONG KONG AND MAINLAND CHINA

Naturally, in a city driven by finance, post-SARS recovery efforts in Hong Kong were heavily focused on economic regeneration. In addition to improving urban hygiene and increasing general public education on pulmonary diseases, the city of Hong Kong was reinstated to emerge in a hyper-economically driven framework.[21] A desire for long-term economic growth combined with the continual pressures for spaces of development manifested in the real estate market. With the sharp influx of investment providing supply to meet the unsatisfied demand for housing, this model seemed to be the optimal and preferred vessel to stimulate economic growth. Encouraged by the government's dependency on the real estate market, the combination of policy and investment expedited SARS's mutation of the previously monocentric city of Hong Kong. As a result, 'edge cities' were born closer to the border between Hong Kong and Mainland China. These 'edge cities', or satellite residential towns, included new shopping malls, entertainment centres, offices, housing units, etc, duplicating all the functions available in the old city centre.[22] Rather than adopting Western models of planning rooted in proportions and aesthetics, Hong Kong further developed in the interest of function and economy, pushing the boundaries of livability both at the scale of the city and the building. In other words, Hong Kong committed itself to "quick profit, proximity, convenience, and safety in uniformity."[23]

Critically, the Hong Kong government also invested heavily in the city's only mass transport railway system, the underground metro, to connect the now multi-centred city over the hilly landscape.

A phenomenal example of neoliberalism, this monopolized transit system is a 'government utilities company', effectively generating profit for the city through its sheer existence.[24] Known commonly as the MTR, or Mass Transit Railway, these edge cities were connected 'invisibly' by a 30 to 60 minutes ride on the impeccably efficient underground railway system. The popularity of the MTR can be attributed to the incorporation of 'terminal developments', in turn breeding the success of these 'edge cities'. Terminal developments, built tactically alongside the MTR, are extensive multifunctional and self-contained complexes.[25] Often at the scale of infrastructure, and marketed as destinations, the podium and underground level of terminal developments were shopping malls. These are the civic spaces connecting multiple entrances and exits to the MTR. Collected above the podium, these shopping centres mixed programmatically with housing blocks, office towers, hotels, and entertainment facilities, forming megastructures that hyper-hybridized public and private space. Very often, connections to the MTR system were made in the shape of 'interior streets' linking housing towers and shopping centres, bombarding those on the way to the public transit system with countless opportunities to consume. Hence, the proliferation of consumer culture as part of everyday life in Hong Kong can also be speculated as an effect appropriately tied to SARS.

Though Hong Kong is a curious amalgamation of Eastern and Western influences, its urban manifestations in response to SARS is inherently tied to Chinese culture and lifestyle—a strong belief that the human body should be in maximum safety both physically and psychologically for efficient production. In this context, prevention in the shape of multi-layered *degrees of care*, rather than *cure*, was the preferred approach.[26] Treating the population of Hong Kong as a 'state family', terminal developments at the heart of 'edge cities' fuse shopping and transportation as civic space. Thus, these shared spaces received intensive care, symbolizing 'communal homes' that are routinely sterilized by an army of cleaners. Alongside the Chinese emphasis of corporeal preservation and individual defense, the wearing of face masks in public space is not only accepted but encouraged.[27] No wonder Hong Kong's MTR system is one of the cleanest and most efficient transportation systems in the world. Spatially, these privately-owned-public spaces are operate in a hospital-like manner. Interior spaces are designed with maximum protection from the germs, climate, and pollution from the streets.

20. "Update 95 - SARS: Chronology of a Serial Killer." World Health Organization. July 24, 2015. Accessed April 09, 2019. https://www.who.int/csr/don/2003_07_04/en/.

21. Ali, Harris, and Roger Keil. n.d. "SARS and the Global City: Connectivity and Vulnerability in the 'New Normal.'" Working paper. *SARS and the Global City: Connectivity and Vulnerability in the "New Normal"*.

22. Deborah Davis and Helen F. Siu, *SARS: Reception and Interpretations in Three Chinese Cities* (London: Routledge, 2007), 64.

23. Li, Shiqiao. *Understanding the Chinese City* (London: Sage Publications Ltd, 2014), 32.

24. Li, Shiqiao. *Understanding the Chinese City* (London: Sage Publications Ltd, 2014), 43.

25. Li, Shiqiao. *Understanding the Chinese City* (London: Sage Publications Ltd, 2014), 39.

26. Li, Shiqiao. *Understanding the Chinese City* (London: Sage Publications Ltd, 2014), 98.

27. Li, Shiqiao. *Understanding the Chinese City* (London: Sage Publications Ltd, 2014), 107.

Visually, though influenced by the twentieth century Western obsession with antisepsis, bleaching, and disinfection, whiteness in Chinese belief symbolizes a negative state of depletion. Pale, off-white shades and schemes are thus the aesthetics of shopping malls interiors, simultaneously highlighting filth and avoiding Chinese superstition. Conjointly, the off-white shine of smooth surfaces is also a dominating indication of intensive care. A symptom of by-the-hour antiseptics and polishing, off-white shine holds little moral status, but is rather a pure environmental response to germ theory. [28]

If homes for the nuclear family were the original spaces of intensive care in Chinese culture, SARS also impacted Hong Kong at the scale of the individual building. Specifically responding to enhanced hygiene measures, newly developed housing units in these edge cities were built with improved daylight qualities, especially in the kitchen and bathroom units. According to post SARS local building code, all rooms must have access to a window.[29] Bedrooms and living rooms were to face outwards, whereas service spaces were provided with ventilation. Condensers of air conditioning units could face a light well or an open shaft (also called a 're-entrant') in efforts to condense a building footprint.[30] After all, space is precious in Hong Kong. As the spread of SARS was traced to poor sanitary conditions in these 're-entrants', the crisis triggered a reshuffling of service spaces within high-rise buildings, notably increasing the size and orientation of the kitchen, and a deeper attention to the design of the relationship between the building and the outdoor built environment. Alongside improvements in high-rise hygiene and general public health, Hong Kong's previous falling property bubble began to rise. With its increasingly complex urban system of tall skyscrapers and deep metro systems, heavily medicated by a mixture of policy and investment, Hong Kong gradually transformed into a multi-centered city of fragmented borders. In addition to welcoming both Chinese and foreign investment, the city's spatial development is somewhat analogous to the blurring of figure and ground conditions of 'x-urban cities,' as coined by Mario Gandelsonas in *X-Urbanism: Architecture and the American City*.[31] Portraying itself as a compact city with ever changing social, cultural, political, and ecological dynamics, x-urbanism allows for different conditions of density and growth to be simultaneously possible. While the term x-urbanism originally

applied to American cities, Hong Kong's post SARS recovery sets itself as a South East Asian example.

IMPACT OF SARS ON HONG KONG & MAINLAND CHINA RELATIONS

Rather than accelerating cross border control and limiting the contact between Hong Kong and Mainland China, the SARS epidemic, with its financially driven recovery, shaped an increasingly shared public culture between Hong Kong, Shenzhen, and the Guangdong nexus. Realizing that diseases disregards political boundaries, both China and Hong Kong urged for higher levels of administrative accountability and transparency. Although a porous physical border generates the spatial risk for cross-city disease contamination, it also produces an immaterial space for social, political, and economic exchange. Fully aware of the clear paradox of increased connectivity being both the cause and effect of the SARS epidemic, the two parties understood that city isolation and political secrecy would be detrimental to the global health-scape. In parallel, post SARS Hong Kong was searching for new strategies of political and economic survival to form a new identity in its post-colonial transition.

The fragmentation of Hong Kong's borders was first political and cultural. The dire need for economic revival lowered political barriers and increased entry access for Mainland Chinese to visit, live, and work in Hong Kong. In Hong Kong, these visitors gained access to information on the status and severity of SARS, previously censored in the Mainland. When the WHO labeled Hong Kong as 'SARS free', the South China Morning Post published that "Mainland tourist dollar (has) almost single handedly led to a swift recovery for the post-SARS Hong Kong economy and dwindling retail sales".[32] In 2005, more than 10 million travelers to Hong Kong were Guangdong shoppers, making up 40% of new Mainland visitors to Hong Kong.[33] Exchanging more than currency and commodity, this interaction also included investment information, middle class aspirations, and 'new' democratic modes of life previously unknown in a hybrid social-capitalist homeland. Policy and investments from both governments similarly came closer, increasing neighboring-city negotiations. Most evidently, mainlanders purchased homes as an investment in Hong Kong for a taste of 'modernity', and people from Hong Kong bought retirement homes in the Mainland with a desire

28.   Li, Shiqiao. *Understanding the Chinese City* (London: Sage Publications Ltd, 2014), 124-6.

29.   Lau, S.S.Y. *Is Our City Livable and Healthy in the Post-SARS Era? Redesigning Healthy Cities – a Lesson from Hong Kong.* Report. (Center of Architecture and Urban Design for China and Hong Kong, University of Hong Kong), 207. Accessed April 3, 2019.

30.   Lau, S.S.Y. *Is Our City Livable and Healthy in the Post-SARS Era? Redesigning Healthy Cities – a Lesson from Hong Kong.* Report. (Center of Architecture and Urban Design for China and Hong Kong, University of Hong Kong), 207. Accessed April 3, 2019.

31.   Mario Gandelsonas, *X-Urbanism: Architecture and the American City* (New York: Princeton Architectural Press, 1999).

32.   Deborah Davis and Helen F. Siu, *SARS: Reception and Interpretations in Three Chinese Cities* (London: Routledge, 2007), 47.

33.   Deborah Davis and Helen F. Siu, *SARS: Reception and Interpretations in Three Chinese Cities* (London: Routledge, 2007), 47.

for more space and lower housing prices. Real estate thus concretized as the preferred object of capital flow. Residential towers, such as those near the Kowloon Station terminal development, are now filled more with people from Mainland China than Hong Kong citizens. In 2019, the surrounding (and still developing) area of the West Kowloon Railway Station is a primary example of this new typology of large scale, mixed used complexes. In this case, the complex even includes shopping centres with direct transport service hubs to the Mainland for ease of mobility. [34] With roughly 130 trains running between Hong Kong's West Kowloon Station and mainland China per day, technology increasingly shortens distances. Accelerated fusion of the neighboring cities of Hong Kong, Shenzhen, and Guangdong, transformed their prior closed borders to new pan alliances still in continual negotiation today.[35] However, although porous borders and inter-city cooperation allow for newly configured capital structures, they also marginalize Hong Kong's labour force. With cheaper labour readily available from the Mainland, many of Hong Kong's local manufacturing companies, which were once integral to the economic development of the city, have relocated to mainland China, mutating Hong Kong's economy towards the service industry. Furthermore, as more and more Mainland Chinese residents choose to live in Hong Kong, the housing shortage and rising prices continue to proliferate—a fact that remains as one of the core instigators of the recent 2019 Hong Kong protest.

Previous relationships between Hong Kong and Shenzhen, as sister cities, were organic, mainly cultural and familiar in nature. In present day, this relationship between Hong Kong and Mainland China continues to be formalized and tested in its administration, politics, and economics. Correspondingly, cultural attitudes and national health policies have also been exchanged. Not only did the SARS epidemic transform Hong Kong into an x-urban, multi-centered city, it also shifted Mainland China's urbanism towards one driven by a steadier general investment on all regions. As Hong Kong approaches the half mark of its 50 year agreement under the Basic Law (formal renegotiations of boundaries will be acted upon in 2047), it is important to note that political dispute and negotiations on the terms of connectivity remain candent to this day. Yet, it is too early to determine and understand all the positive and negative elements of such 'open' cities. Nonetheless, it remains clear to both parties that open cities with increased communication are not only important for disease control, but also for future prevention.

SARS IN THE EVERYDAY IMAGINARY OF HONG KONG

To conclude, in contrast to the eighteenth and nineteenth century strategies of rational city planning and isolated countryside sanatoriums as responses to epidemics, the SARS outbreak generated a new model of how cities and their borders can react to the spread of disease in the information age. Technology increases the ease of travel—for bodies, information, and pathogens. In so doing, an opportunity for previously impossible overlaps of ecologies, economics, and politics have emerged. In this accelerated feedback loop, cities have become the breeding grounds for contagious diseases, which in turn will continue to shape our cities. In a Chinese context, and particularly within the tension between Hong Kong and Mainland China, the SARS outbreak manifested the inseparability of geographic neighbors and a need for the softening and fragmentation of national borders. The epidemic could have easily resulted in a hyper control of the border between Hong Kong and Mainland China. Gripped with fear of further contamination, isolation as a form of city-wide quarantine with strict entry policies was once the preferred method of resolution.

Yet, SARS proved that historical methods of separation and physical borders are ineffective in our technological scenario. What is the 'post quarantine' model in a city of maximum quantities and minimum dimensions such as Hong Kong? If hyper connectivity as a product of technology encouraged the global spread of SARS, perhaps it can likewise be used as a tool to combat future epidemics. Hong Kong specifically, with its unique history of multi-governance, is one of the most sensational examples of a productive East-West fusion with porous borders. After SARS, this city model mutated in both its urbanism and in renovated attitudes towards hygiene and medicine, becoming even more multifarious and receptive to local and global partnerships. Though fragmented physical borders justify increased mobility and risk of contagion, the soft benefits of communication, information exchange, shared ideologies, economics, capital, labour, and political partnerships outweigh such liability. Within the city, a multi-centred urban structure with individual reporting nodes can provide more accurate live updates of the epidemic status. Moreover, if one centre becomes infected, the rest of the city can simultaneously provide aid while continuing to function. This networked information system could also be scaled up and adopted by neighboring countries to create a comprehensive health surveillance system. In revisiting the Chinese emphasis on prevention, establishing emergency funds for the construction of communal hospitals, housing, and infrastructure requires

34.   Bracken, G. *Aspects of Urbanization in China: Shanghai, Hong Kong, Guangzhou* (Amsterdam: Amsterdam

University Press, 2012), 172.
35.   Bracken, G. *Aspects of Urbanization in China: Shanghai, Hong Kong,*

Guangzhou (Amsterdam: Amsterdam University Press, 2012), 172.

partnership, blurring boundaries to re-emphasize health as a public good. As governmental efforts from both sides continue to connect Hong Kong and Mainland China, this model of steady but gradual deterioration of borders, creating multi-centered cities, could become an example to combat emerging diseases around the world.

Fragmented city borders not only encourage partnership from neighboring geographies, but also internationally. Transnational training and research between hospitals and institutions can bring about productive discoveries for prevention and cure. Recalling Swiss-born French physician and bacteriologist Alexandre Yersin's discovery of the 1894 plague bacillus in Hong Kong, international support and collaboration from the medical and scientific profession is equally as crucial to ensure global health. As proven, an effective approach to infectious outbreak control from local, national, and global parties will have to be based on science and not politics. The ongoing COVID-19 virus spreading from Wuhan, China, resulting in massive global disruptions attest to all society's interdependence. Admittingly, the twentieth century quarantine system, be it at the scale of a single patient

or an entire city, can be immediately effective in containing the spread of a virus, but only temporarily. At the time of writing this article, transportation has already spread the disease globally. Moreover, in the ever-connected age, every country is tied to a global economy running on an interdependent financial market. Nowhere in the world are we truly remote or disconnected from one another. Closed borders, political secrecy, and travel bans out of fear only exasperate stigma and encourage xenophobic behavior. SARS as a case study has proven that epidemics are most quickly eradicated through local and international cooperation. Without a doubt, the urbanism of both Hong Kong and Mainland China has been drastically altered. Although a background fear of relapse has surfaced in the Chinese cultural imaginary, Hong Kong is now better prepared for epidemic re-emergences. In acknowledging diseases and viruses much like SARS as powerful but invisible agents of global change, perhaps city planning, administration, and investment policies can be reminded of its once crucial relationship with mass health—to more appropriately redistribute the issue of health from individual responsibility back to the social surroundings.

BIBLIOGRAPHY

Ali, Harris, and Roger Keil. n.d. "SARS and the Global City: Connectivity and Vulnerability in the 'New Normal.'" Working paper. *SARS and the Global City: Connectivity and Vulnerability in the "New Normal".*

Bandurski, David. 2013. "How Did SARS Change China?" China Media Project. March 5, 2013. http://chinamediaproject.org/2013/03/05/how-did-sars-change-china/.

Bracken, G. *Aspects of Urbanization in China: Shanghai, Hong Kong, Guangzhou.* Amsterdam: Amsterdam University Press, 2012.

Colomina, Beatriz. "Chapter 2: Tuberculosis." In *X-Ray Architecture*, 61-116. Zurich: Lars Müller Publishers, 2019.

"Country Parks and Protected Areas in Hong Kong." Legislative Council of the Hong Kong Special Administrative Region - Country parks and protected areas in Hong Kong. Accessed November 9, 2019. https://www.legco.gov.hk/research-publications/english/essentials-1617ise06-country-parks-and-protected-areas-in-hong-kong.htm.

Davis, Deborah, and Helen F. Siu, eds. *SARS: Reception and Interpretations in Three Chinese Cities.* London: Routledge, 2007.

Fidler, David P. SARS: *Governance and the Globalization of Disease.* New York: Palgrave Macmillan, 2004.

Fisher, Thomas. 2010. "Viral Cities." Places Journal. Princeton University Press. October 1, 2010. https://placesjournal.org/article/viral-cities/?cn-reloaded=1.

Gandelsonas, Mario. *X-Urbanism: Architecture and the American City.* New York: Princeton Architectural Press, 1999.

Institute of Medicine (US) Forum on Microbial Threats; Knobler S, Mahmoud A, Lemon S, et al., editors. *Learning from SARS: Preparing for the Next Disease Outbreak*: Workshop Summary. Washington (DC): National Academies Press (US); 2004. OVERVIEW OF THE SARS EPIDEMIC. Available from: https://www.ncbi.nlm.nih.gov/books/NBK92478/

John Nguyet Erni (2008) Almost under the same sky: reclaiming urbanity beyond an epidemic, Inter-Asia Cultural Studies https://doi.org/10.1080/14649370802386511

Lai, Larissa, and Layla McCay . n.d. "Urban Design and Mental Health in Hong Kong." Centre for Urban Design and Mental Health. Accessed March 10, 2019. https://www.urbandesignmentalhealth.com/journal4-hk-case-study.html.

Lau, S.S.Y. *Is Our City Livable and Healthy in the Post-SARS Era? Re-designing Healthy Cities – a Lesson from Hong Kong.* Report. Center of Architecture and Urban Design for China and Hong Kong, University of Hong Kong. Accessed April 3, 2019. https://www.researchgate.net/publication/267956779_Is_Our_City_Livable_and_Healthy_in_the_Post-SARS_Era_Re-designing_Healthy_Cities_-_a_Lesson_from_Is_Our_City_Livable_and_Healthy_in_the_Post-SARS_Era_Re-designing_Healthy_Cities_-_a_Lesson_from_Hong_K.

Lazarus, Sara. "When Death Came Calling: How the Plague Swept through Hong Kong." South China Morning Post. February 13, 2015. Accessed April 09, 2019. https://www.scmp.com/magazines/post-magazine/article/1535499/when-death-came-calling-plague-hong-kong.

Li, Shiqiao. *Understanding the Chinese City.* London: Sage Publications Ltd, 2014.

Mak, Liz, and Teddy Ng . 2016. "Hong Kong and Macau to Be Integrated with Nine Mainland Provinces: State Council Plan." South China Morning Post. South China Morning Post. March 16, 2016. https://www.scmp.com/business/article/1925690/hong-kong-and-macau-be-integrated-nine-mainland-provinces-state-council.

Peckham, Robert. 2016. "Where Has SARS Gone? The Strange Case of the Disappearing Coronavirus." Somatosphere. June 8, 2016. http://somatosphere.net/2016/06/where-has-sars-gone-the-strange-case-of-the-disappearing-coronavirus.html.

Rahm, Philippe. "How the Eruption of a Volcano Invented the Modern City." Lecture, History of Architecture: A Realist and Environmental Approach to Urban, Landscape and Architecture Design History, Cornell University, Ithaca, NY, January 29, 2019.

"SARS (10 Years After) | Disease of the Week | CDC." Centers for Disease Control and Prevention. Accessed April 09, 2019. https://www.cdc.gov/dotw/sars/index.html.

"SARS (Severe Acute Respiratory Syndrome)." World Health Organization. World Health Organization, April 26, 2012. https://www.who.int/ith/diseases/sars/en/.

"The SARS Epidemic." IDEESE Case: SARS. Accessed May 15, 2019. http://www.umass.edu/sts/ethics/online/cases/SARS/case.html.

"Update 95 - SARS: Chronology of a Serial Killer." World Health Organization. July 24, 2015. Accessed April 09, 2019. https://www.who.int/csr/don/2003_07_04/en/

"Why Is Happy Valley Called Happy Valley?"
South China Morning Post, July 20, 2018. https://
www.scmp.com/magazines/hk-magazine/
article/2037666/why-happy-valley-called-happy-
valley.

Wolf, M. (2016), Rethinking Urban Epidemiology:
Natures, Networks and Materialities. Int J Urban
Regional, 40: 958-982. doi:10.1111/1468-2427.12381

Wong, John, and Yongnian Zheng. *The SARS Epi-
demic: Challenges to China's Crisis Management.*
Singapore: World Scientific, 2004.

"World's Longest Sea Bridge Brings China Closer
to Hong Kong." 2018. Bloomberg.com. Bloomberg.
October 22, 2018. https://www.bloomberg.com/
news/articles/2018-10-22/world-s-longest-sea-
bridge-brings-hong-kong-closer-to-china.

Yardley, Jim. "Chinese Diners Shrug Off SARS:
Bring On the Civet Cat." The New York Times. De-
cember 29, 2003. Accessed April 09, 2019. https://
www.nytimes.com/2003/12/29/world/chinese-din-
ers-shrug-off-sars-bring-on-the-civet-cat.html.