

POST-PANDEMIA
AT THE
POISSONERIE SHANAHAN

AN ACCOUNT OF SICK CITIES AND THEIR REMEDIES

by

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for the degree of

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in

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Shannon Clark

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ACKNOWLEDGMENTS

I would like to dedicate this thesis to my family (and bubble): mam, dad and grandma. No one imagined I would be finishing up my architectural education from my hometown, but the three of you have given me so much love (chocolate), support (spellcheck) and comic relief. Three generations of Clarks have proven that the cap sure does not fall far from the bottle.

A huge thank you to Professor Ozayr Saloojee for riding shotgun this past year. There are not enough words to praise your vast knowledge, empathetic wisdom and cheerleading skills. You are truly an advisor (and human being!) like no other.

To my pals at ASAU: from every sunrise in studio to the Great Garbage Debate of 2016 to soirées at the Barn and the slow death of Kosmic. To every lasercutter fire (sorry Steve) and piggy-of-the-week in woodshop (likewise Mark and Rob). From the Taj Mahal, the Galata Tower, the Barcelona Pavillion and back: thank you. It's been one heck of a ride.

And lastly (and most dearly), to my sister who is here and my sister who is not. I would unashamedly not be the person I am today if it were not for the two of you. I love you both.

Clichés aside, it truly takes a village.

Cheers.



PROLOGUE
pre-pandemia

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Pathogens R Us

URBAN
APOTHECARY

+

PRESCRIPTION

PESTILENCE

O R G A N I C	Nº	
	000	
	FOR: ALL	
	EXP: N/A <small>(dd.mm.yy)</small>	
ALL OF OUR MICROBES ARE UNSUSTAINABLY SOURCED		

INGREDIENTS: miasma, germs, mass fear and panic, finger-pointing, hypochondria, anxiety, existential numbing, boredom, new hobbies, poor coping mechanisms, (un)seen conditions, illness metaphors, new meanings, pathological cartographies, geurilla urbanism, new architectures, new spaces, sanitary reform, quarantine.

ABSTRACT

An epidemic is not simply biological, but rather a spatial phenomenon that mutates sociopolitical constructions. The mysteries and fears associated with the lurid metaphors of disease have landscaped the city – the typical setting for those thought most susceptible to illness – as though we are looking at “the section of a fibrous tumor.”¹

This thesis speculates on the transformations of space and human relation through epidemic scales. Set in the fictional Poissonerie Shanahan in Montreal’s Jean Talon Market as envisioned by the Quebecois novel, *Nikolski*, this research draws parallels between the tools of past urban epidemics and current morphologies as a result of COVID-19. By using fiction as a template to understand the intersections of architecture, urbanism and public health, the thesis chronicles an epidemic representation in order to exercise our empathetic intelligence in the face of a global crisis that has rapidly spatialized blame.



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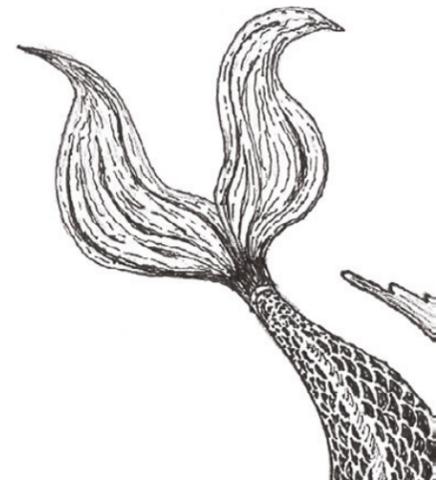
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PREFACE

epidemic fictions

“To have compassion for those who suffer is a human quality which everyone should possess, especially those who have required comfort themselves in the past and have managed to find it in others.” – Giovanni Boccaccio, The Decameron

[1] After our initial stage of fear and panic, we have emerged from our toilet-paper-hoarding ways and sunk into the media-termed “new normal.” As fear melted into hypochondriacal anxiety and that into boredom, our daily ritual scrutiny of COVID case curves has slowly diminished into an existential numbing backed only by hollow comforts of world leaders. What grounds this research, however, is the rejection of, as the World Health Organization (**WHO**) put it, “The understandable desire to return to normal.”¹ While our pandemic-verse has been uncomfortable, painful, scary and raw, it has also forced us to stop, listen and grow.

[2] This disruption from what we consider “normal” is a rare opportunity in time to demand change for the illness in our body politic. For “The changes we have seen in our sick cities in an extremely short period of time suggests that many of the barriers to better cities are not technical or financial, but rather political in nature. That is why it is critical that we do not allow a desire for normalcy to head to a rushed return to normal, and the failure of the status quo.”² An idea at the heart

of this thesis is that a sick city is a reflection, however eerie, of our present lives and not only an exotic relic of past narratives, or a destined future of a 1984-esque, bio-surveilled world.

The drawings of this architectural thesis are informed [3] simultaneously by non-fiction, the imperial languages of law and policy, and most importantly, by fictions of various epidemics. Fiction often follows after fact, written years after an event – particularly with the media moving as fast as it does. Something that stays constant in fiction, however, is its ability to build our empathetic intelligence. Getting to know a character through their thoughts and choices helps us understand context. We need more nuance when we think of others, especially so in divisive times where rifts in understanding seems so jarringly vast. How did we come to a reality where our fellow humans seem so far from each other as to seem like different species? Fiction can help us better understand our humanity in ways the media cannot. Therefore this thesis relies heavily on fiction as medium for a more stable, human and empathetic ground.

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anthropocene (n) = the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment

+

microbe (n) = a microorganism; especially a bacterium causing disease

+

patient zero (n) = used to refer to the person identified as the first carrier of a communicable disease in an outbreak of related cases

+

wet market (n) = an affordable market selling fresh meat, fish and produce

fifty-four percent of whom live in densely-populated cities, which are all linked by rapid air travel.³ This is the perfect ecology for a communicable disease (see PROSTHETIC 01). The **Anthropocene**, and particularly urbanization, has led to the invasion and destruction of habitats that have fostered dormant **microbes** for millennia. The plague came from fleas nestled on the backs of rats that circled the world via merchant ships.⁴ Cholera emerged from the monsoon-flooded rice fields in India's Ganges Delta,⁵ and African emigration some 70 000 years ago has been found to be the origin of tuberculosis.⁶ Today increasing encroachment into China's Yunnan province cave systems is theorized to be the cause of the current pandemic. "**Patient Zero**" was likely a daily customer to Wuhan's **wet market**, who browsed closely-packed stalls brimming with various species of caged animals – including bats.⁷

[3] The Huanan Seafood Wholesale Market was not the first theorized site of the pandemic. Rumours of biowarfare and bat soup made their rounds. Racist terms such as the "kung flu" and "Chinese virus" surfaced in the media or were repeated by

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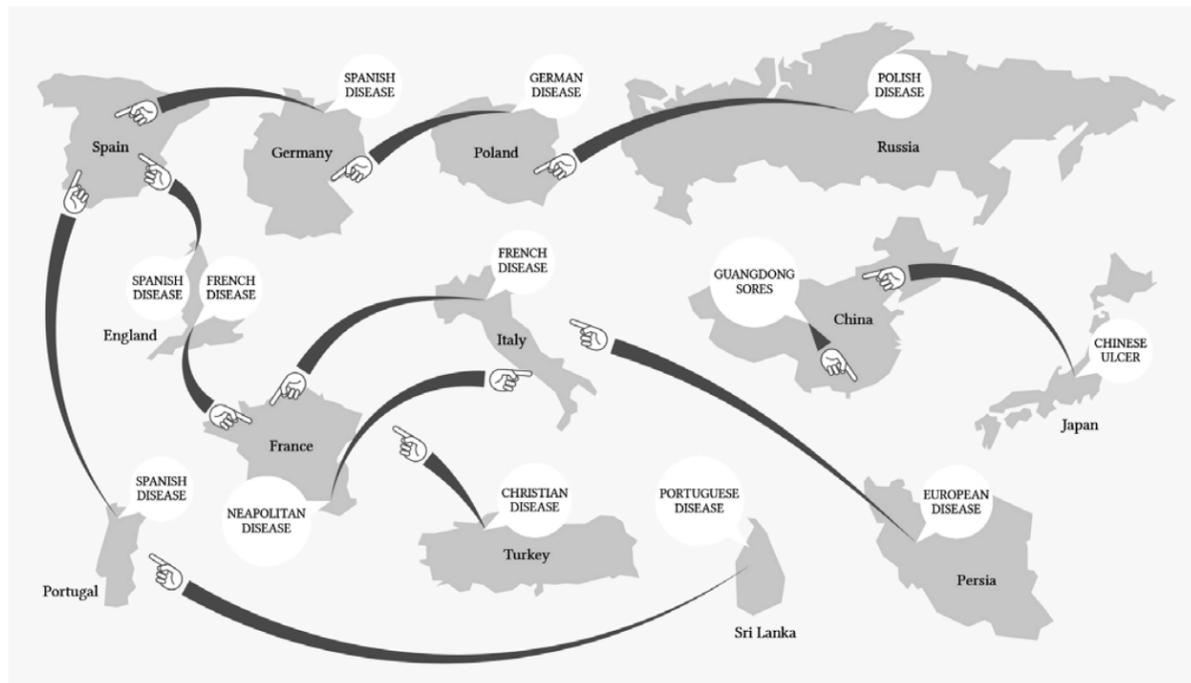
world leaders. Throughout lockdown in spring 2020, politicians played up the uncertainties of scientific research to jump to blameful conclusions. This, sadly, is not new either. Spanish Flu originated at a Kansas army base. Syphilis is another example; its symptomology caused a lot of finger-pointing (Figure 9). Time and time again, pandemics are weaponized and politicized. Blame, in turn is spatialized.

The emergence of epidemiology cemented this finger-pointing [4] through John Snow's cholera mappings of London (Figure 6). These pathological cartographies spatialized blame by finally answering not just *who* was falling ill, but *where* they were falling ill. A big part of eradicating cholera was due to these maps, but they also localized blame – namely the poorer, dense neighbourhoods of the city as the cause for disease. In this way, maps have ruined many great neighborhoods.

0.8.2 ILLNESS AS METAPHOR

In an era of advanced medicine, where all disease is thought [5]





+
prev page = huanan seafood wholesale market in wuhan is thought to have hosted "patient zero" of the coronavirus pandemic

above = Lapham Quarterly's name blame map for syphilis

as curable, a new epidemic is mysterious and fearful. Ancient beliefs held that disease was profoundly linked to the divine forces that governed existence. Angry gods or evil spirits would unleash pestilence when they were displeased or spiteful. *The Iliad* begins by recounting Apollo shooting pestilent arrows at the Trojan army for the mistreatment of his priest. *The Decameron's* ten storytellers escape plague-ridden Florence, wondering which of them had upset the heavens. Shakespeare

lived in the shadow of the plague and it helped fuel the tragedy of *Romeo and Juliet* (the plague blockade of Verona prevents Romeo's letter from delivery). As long as a proper cure was inconceivable, an epidemic disease such as plague was thought to be purposefully, literally, and morally contagious.

It was not until the emergence of epidemiology that **contagion** [6] was fully understood, although Hippocrates (ca 460-380 BCE) and Galen (ca 129-210 AD) were close to understanding the transmission of disease. Hippocrates understood there were "bad airs" (**miasma**) that made one sick.⁸ Yet it was not until the end of the nineteenth century, with the development of the microscope and John Snow's cholera maps, that germ theory was generally accepted.⁹ Urban sanitation and housing reform were marshalled in broad efforts against often anthropomorphize to help keep people – and cities – clean, healthy and ordered.

Susan Sontag's *Illness as Metaphor* is an anchor for this thesis – [7] in particular about the language tools of disease. Sontag believes

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contagion (n) = the communication of disease from one person to another by close contact

+
miasma (n) = a highly unpleasant or unhealthy smell or vapour; pollution



A DROP OF LONDON WATER.

that all forms of social deviation can be considered an illness.¹⁰ The theory provides a powerful means of placing the blame on the ill, and has a long history of glib interchangeabilities between disease and evil. Diseases as metaphors for evil were/are: syphilis, tuberculosis, and cancer – all imagined to be the diseases of particular individuals.¹¹ Plague was used often in political rhetoric to identify societal faults. From the bubonic plague came “**pestilent**,” whose figurative meaning, according to the *Oxford English Dictionary*, is “injurious to religion, morals, or public peace – 1513”; and “pestilential,” meaning “morally baneful or pernicious – 1531.”¹² Feelings about evil are projected onto a disease and the disease is projected onto the world.¹³ Sontag states:

First, the subjects of deepest dread (corruption, decay, pollution, anomie, weakness) are identified with the disease. The disease itself becomes a metaphor. Then, in the name of the disease (that is, using it as a metaphor), that horror is imposed on other things. The disease becomes adjectival. Something is said to be disease-like, meaning that it is disgusting or ugly.¹⁴

+ **note** - in French, a moldering stone façade is still a *lépreuse*

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Another example of illness as a metaphor is found in Albert Camus' *The Plague*, written in occupied France during the Second World War. Rats and their "parasitic cargo of fleas," were the vectors normally responsible for the **etiology** of the disease.¹⁵ When the rat, with infected fleas in its fur, sickens and dies, surviving fleas leap to the next warm body – which, in urban settings, usually meant the nearest human. Rats arrived by ship and, unsurprisingly, the first indication of plague was a dramatic die-off of rats in the streets. This is how *The Plague* begins: "On the morning of April 16, Dr Bernard Rieux emerged from his consulting-room and **came across a dead rat** in the middle of the landing."¹⁶ The death of rats in the homes and streets of fictitious Oran is the foreshadowing of an epidemic disaster, which serves as a metaphor for evil as embodied in the rise of fascism.¹⁷

+

etiology (n) = the cause, set of causes, or manner of causation of a disease or condition

+

fish as metaphor - Similar to Camus' rat, fish are a cautionary tale in this thesis to represent the metaphors of an epidemic. Wet markets, poissoneries and other spaces of fish trade and consumption have always been highly regulated because of short shelf life and miasmatic theory. Another reason for the focus on fish: the setting for a section of the thesis drawings is the Poissonerie Shanahan in Montreal as portrayed in the Nicholas Dickner's 2005 novel *Nikolski*. *Nikolski* is the fictive engine that anchors this thesis

0.8.3 OTHER LANGUAGE TOOLS

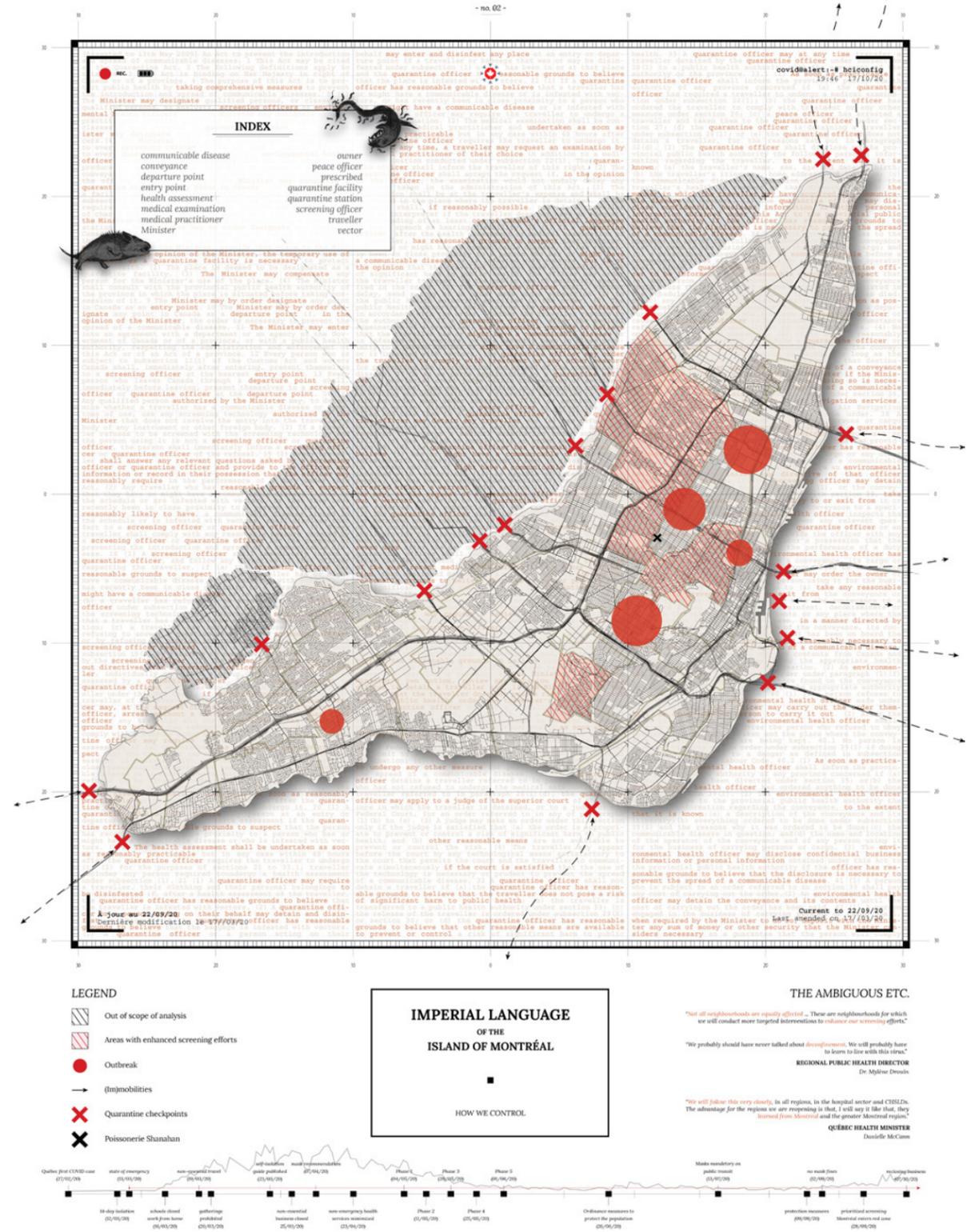
[8] Sontag led to questions of metaphor and other language tools.

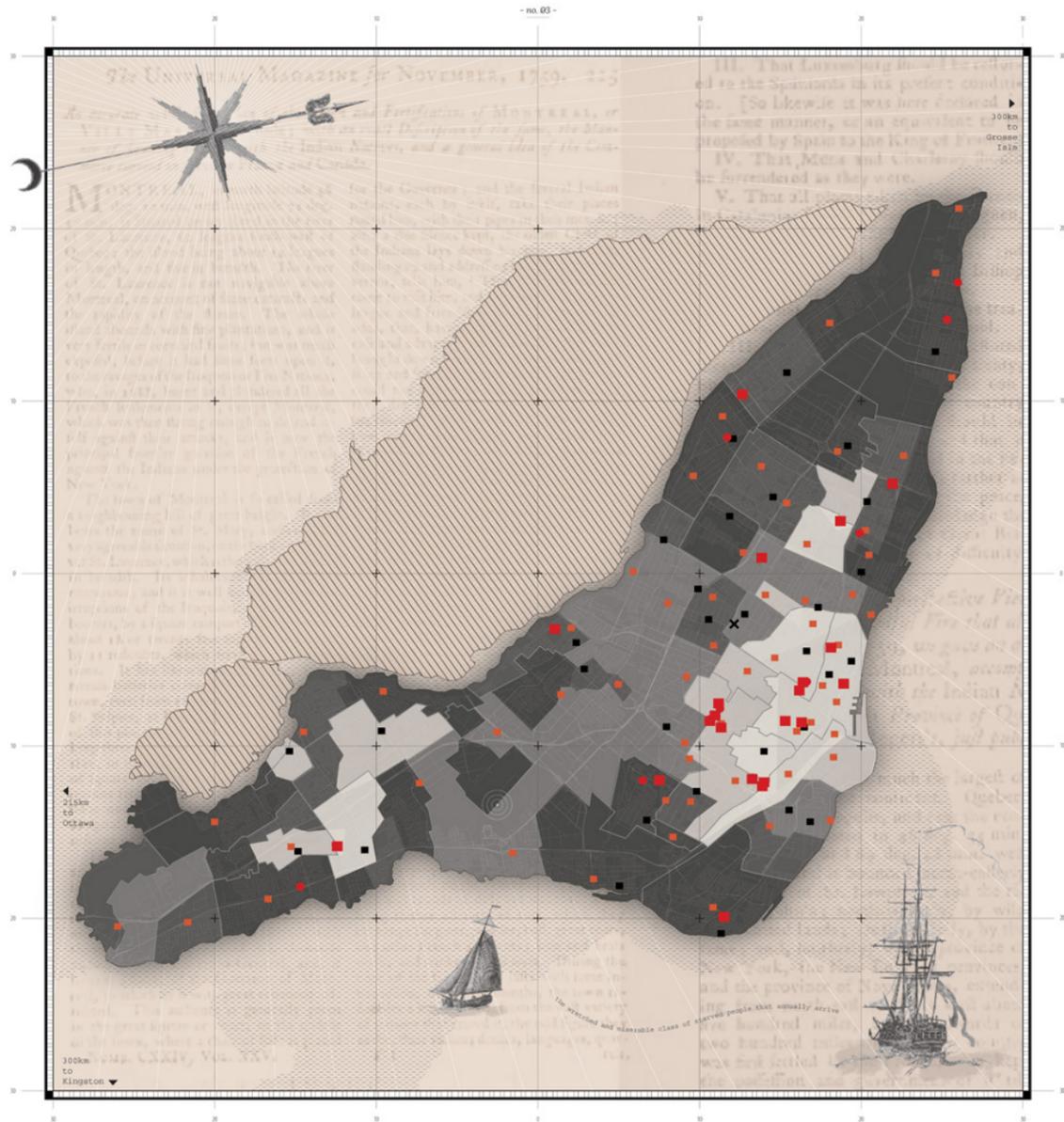
What could be read between the lines when one investigates

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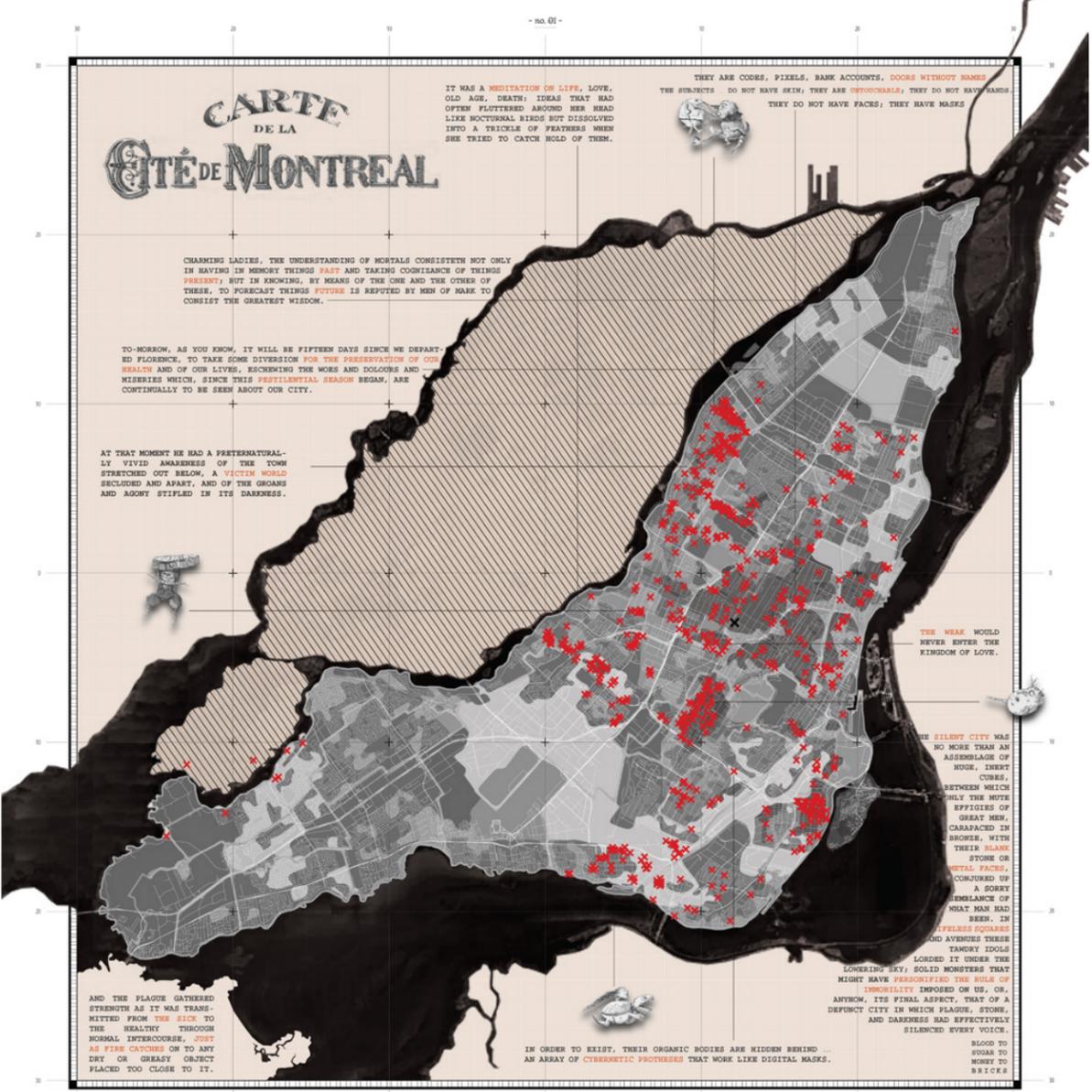
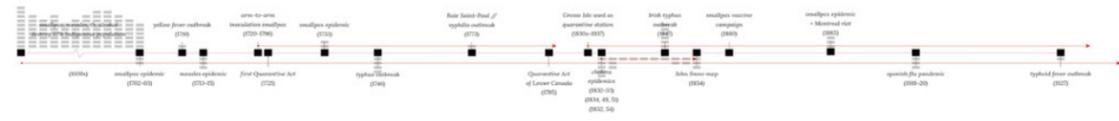
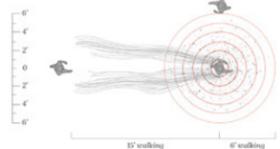


- LEGEND**
- Low Accessibility to Public Health Services (Based on Physician per 1000 population ratio)
 - High Accessibility to Public Health Services
 - Out of scope of analysis
 - Hospital
 - CCD testing clinic
 - Fire station
 - Police station

NON-FICTITIOUS LANGUAGE OF THE ISLAND OF MONTRÉAL

HOW WE KNOW

SAFE DIM SPECIFICATIONS



- LEGEND**
- ZONE C: vulnerable areas with weak services + high POP density
 - ZONE A: vulnerable areas with senior citizens + high POP density
 - ZONE B: vulnerable areas with weak services + low POP density
 - ZONE D: vulnerable areas with elderly people + low POP density
 - Out of scope of analysis
 - Sanitary inspection conducted in 2020
 - Poissonerie Shanahan

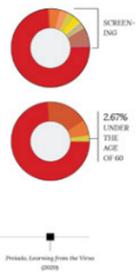
FICTITIOUS LANGUAGE OF THE ISLAND OF MONTRÉAL

HOW WE UNDERSTAND

Vulnerable POP:
POP TOTALE: 1 942 039
NOT A VISIBLE MINORITY: 74.5%

Vulnerable POP:
POP ÂNÉES: 323 680
% CONTRIBUTE TO COVID CASES: 23.58
% COVID DEATHS: 73.61

THE STORYTELLERS



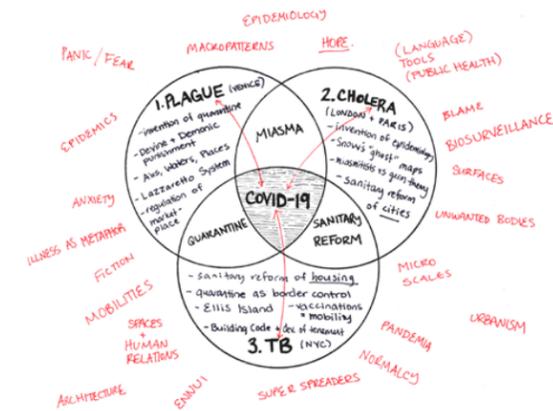
the language of the COVID-19 pandemic in Montreal? The first investigation was a triptych mapping exercise (Figures 11-3) through three mediums: Imperial Language (*how we control, and are controlled, through Canada's Quarantine Act*), Non-Fictitious Language (*how we know through the history of Canada's public health*) and Fictitious Language (*how we understand these traumatic events*).

[9] The Imperial map dissected Canada's Quarantine Act of 2005 and highlighted ambiguous language. The map outlines points of supervised entry and exit onto the island and neighbourhoods that will include "enhanced screening efforts" by Montreal's Public Health Director.¹⁸ The bottom section outlines the policy implementation on the island in comparison to the case-curve. The Non-Fictitious map outlines public health infrastructure in comparison to service accessibility. The bottom below outlines the history of epidemics through the country's colonization. Lastly, the Fictitious language map employs quotes from selected fictions (as part of the thesis research) that are encircled by personified germs emerging

+
opposite - Venn diagram showing parallels and connections between the selected epidemics studied for this thesis

out of the St. Lawrence River. The map indicates the location of vulnerable populations in comparison to conducted sanitary inspection sites during 2020. The bottom of this map relates demographic context and a timeline of the featured epidemic fictions.

Mapping the epidemic language in Montreal revealed a sizeable [10] amount of public health inequity in terms of accessibility, vulnerability, and unnecessary surveillance. The triptych helped reinforce questions and ideas about historical repetition and parallels. What can be learned from the poor, infrastructural responses (physical and social) of past epidemics and how are we still seeing them today?

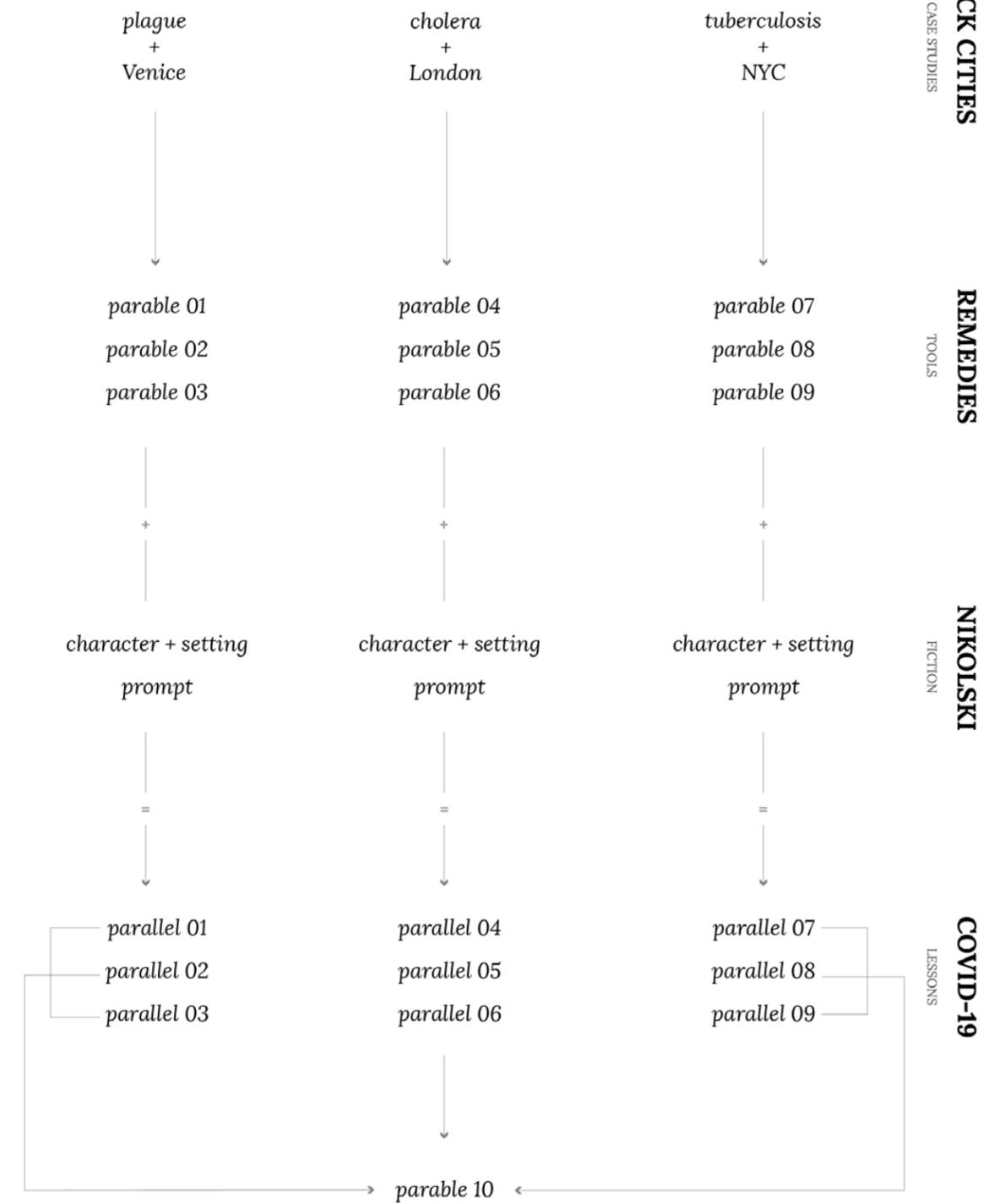


0.8.4 STRUCTURE

[11] *Sick Cities* explores these questions through a fictional, urban version of Montreal. It questions notions around a post-pandemic future, and is set in and around Nicholas Dickner's fictional Poissonerie Shanahan in Montreal's famous Jean Talon Market. Dickner's novel, *Nikolski*, follows the narratives of three intertwined characters – Noah, Joyce and the Narrator – and their dualities of mobility and home – a correspondence with the new worlds of inside and outside as enforced by the legal languages of COVID-19.

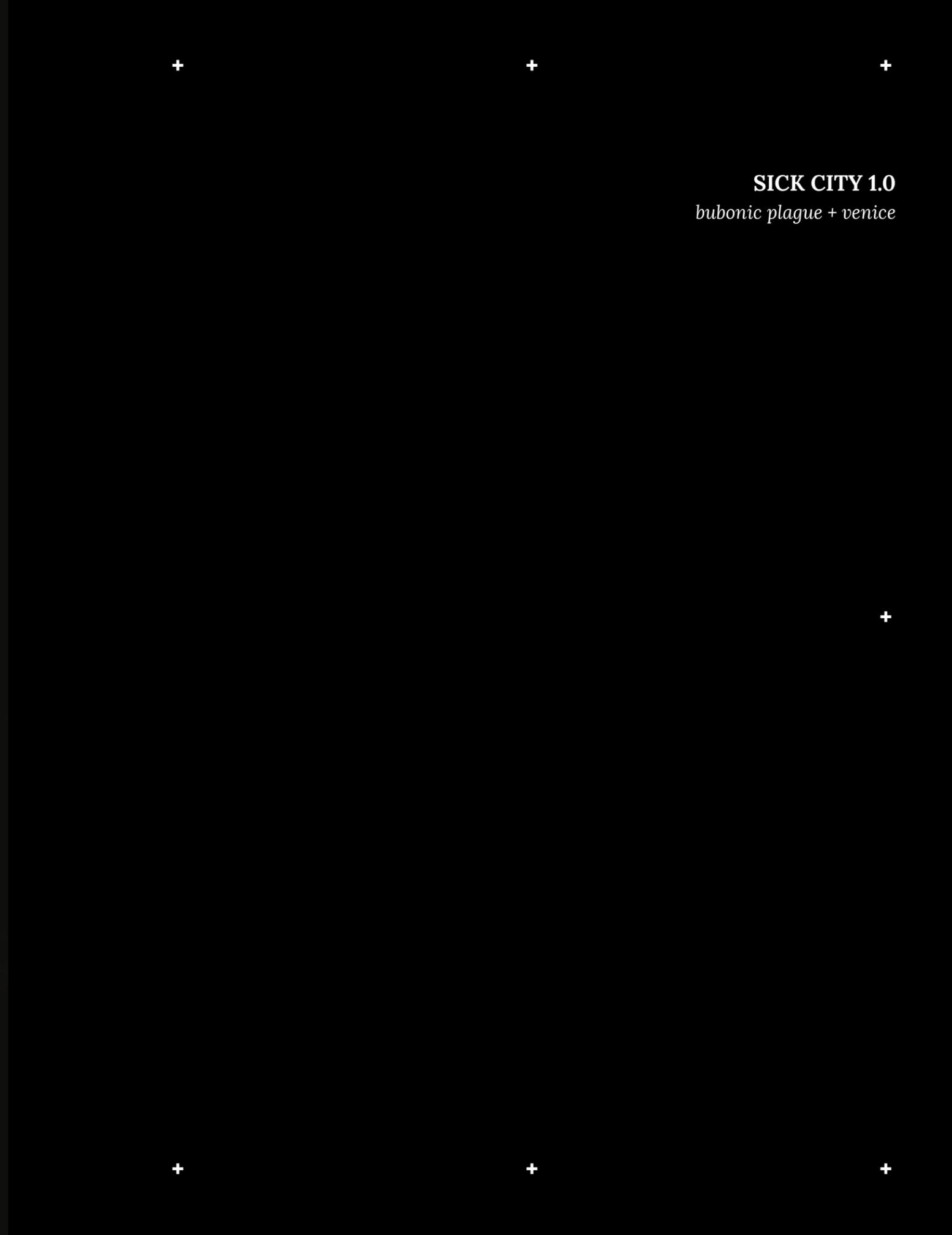
[12] The thesis investigates three case studies and derive three “parables” from each. These three sick city precedents investigate the spatial contexts and responses of past epidemics and how public health tools used then are parallel to today's pandemic response. Eighteen drawings have been generated to cut through stories of urban contagion, to reveal the forces of the microbe, and how they are mutually constitutive with public health tools and their metaphors.

+ **opposite** - thesis drawing formula





SICK CITY 1.0
bubonic plague + venice



+

+

+

Pathogens R Us

URBAN
APOTHECARY

+

PRESCRIPTION

BUBONIC PLAGUE

O
R
G
A
N
I
C

Nº

001

FOR: VENICE

EXP: 1630

(dd.mm.yy)



ALL OF OUR MICROBES ARE UNSUSTAINABLY SOURCED

INGREDIENTS: buboes in the groin, armpit or neck, swollen lymph nodes, fever, headache, chills, weakness, muscle pains, blackening of the skin, mass fear and panic. **MAY CONTAIN:** killing of the rat population, death of an entire village, scapegoating, centuries of political rhetoric, metaphors that ossify into policy and shapes world order in ways that are "scientifically, analytically, and morally incoherent."¹

1.1 PLAGUE
cognitive framework

“He came down furious from the summits of Olympus, with his bow and his quiver upon his shoulder, and the arrows rattled on his back with the rage that trembled within him.”
- Homer, *The Iliad*

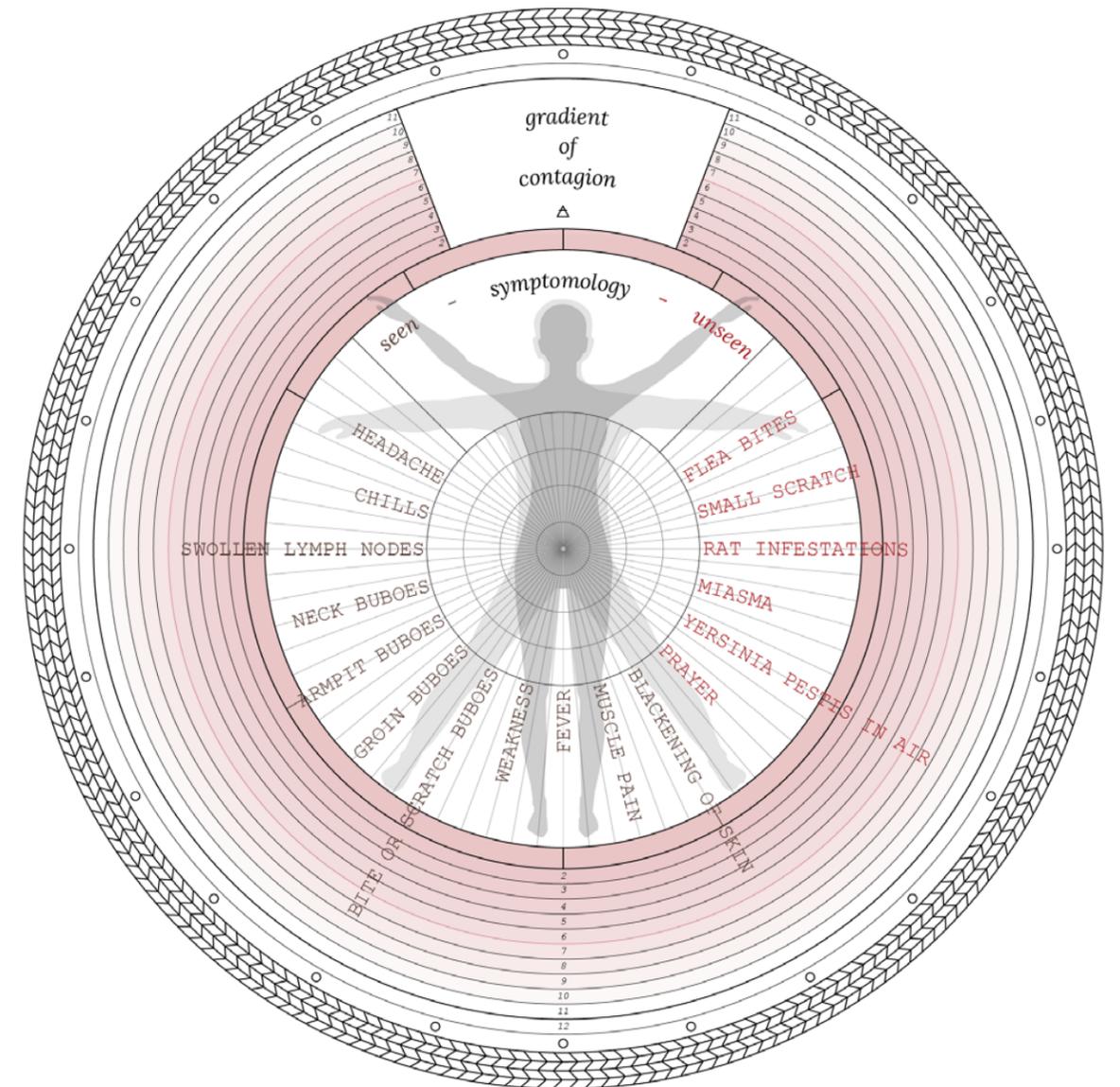
[1] The first sick city begins with understanding of the birth of public health. Societies afflicted by plague understood their worlds through the terms of the diseases that ravaged them. They understood this through stories – oral and written histories. The infrastructural epidemic responses in fourteenth-century Venice provide a framework to help us understand this.

1.1.1 THE SUPERNATURALISTS VS THE NATURALISTS

[2] The “worst disaster that has ever hit Europe,” was the first wave of the Black Death.¹ Between 1347 and 1353, it killed approximately half the population of the continent.² In approximately 1352, Giovanni Boccaccio (1313-75) recounts the foul sweep of bubonic plague in *The Decameron*. A Florentine himself, he tells the story of ten characters fleeing the city, “Either because of the influence of heavenly bodies or because of God’s just wrath as a punishment to mortals for our wicked deeds.”³ The ten characters, all of noble birth, were able to escape Florence where, as Pampinea foretells, “we shall be able

+
opposite - cavity sam, bubonic plague

+
black death (n) = disease circulating mainly in fleas on small rodents. Without treatment, the bacterial infection kills about two thirds of infected humans within four days



to see the heavens more clearly, the heavens which, though they still may be cruel, nonetheless will not deny us their eternal beauties and which are much more pleasing to look at than the deserted walls of our city.”⁴ While the noble could escape to their country homes, the poor were held within their city’s walls, dying by the thousands with no one to help or heal them.

[3] In Boccaccio’s time, the belief was that disease – or pestilence – was caused by an angry god.⁵ This was the divine theory of disease and its supernaturalist counterpart, the demonic theory of disease suggests that disease is caused by evil,



+
right = Triumph of Death (1562) depicting the horrors of the Black Death; skeletons collecting lives (“*danse macabre*”) was common symbology used to depict the mass killings of plague

mischievous spirits. The Sanskrit texts of the *Atharvaveda* and *Rigveda* (ca 1000 BCE) attributed disease to the actions of deities or demons such as **takmán**.⁶ Christians prayed to saints Cosmas, Damian, Sebastian and Roch in times of plague. Pagans visited **asclepieia**,⁷ which were temples devoted to the Greek god of healing. The cult of Asclepius was in fact a major competitor with Christianity for several centuries.⁸

Hippocrates (460-375 BCE) through his theory of the humors [4] asserted that illness was a natural event, as rather than an exclusively divine or celestial act. Naturalists took the macrocosm of the universe and the microcosm of the body into consideration; that good health was a matter of equilibrium and balance. The *Hippocratic Corpus* believed in “bad airs,” which translated to miasmatic theory – a belief system that still to this day shapes our cities. One of the books in the corpus, *Airs, Waters, Places* was used as a public health guide and planning tool for Ancient Greece.⁹ This was the cognitive foundation on which a scientific basis for medicine was established, and that helped shape the cities of the Greek Empire.

+
takmán (n) = devine figure conceived in terms of thunder and lightning that brought fever along with the monsoon rains

+
asclepieia (n pl) = a Asclepeion Temple was a precursor to health spas, sanatoria, and hospitals. They provided care for the poor and the seriously ill. Patients entered the temple precincts after a period of preparation in which they bathed, fasted, prayed, and offered sacrifice. They would then sleep in the temple, and Asclepius would appear to them in a dream and disclose the appropriate therapeutic regimen⁷

1.2 PLAGUE public health tools

“From the early modern period, a global archipelago of quarantine stations came to connect the world’s oceans.”

- Linking Old World and New World Histories

[1] This section investigates the public health tools used as a response to bubonic plague. Figure 20 depicts late sixteenth century, plague-riddled Milan. At the center of the image is St Carlo Borromeo (1538-84) – accompanied by a Divine caravan – risking his own life in an attempt to care for the poor and sick. The image evokes a new sentiment – that which regarded the prevention of disease as a civic duty.¹⁰ It was the head of the church – a figure of authority during the Italian Renaissance – who protected the city from disease. Precautions against the risk of contagion were embedded with both a religious and secular purpose.

[2] The Venetian response to the plague was the development of a religious as well as a public health system. The city was renowned for its effective governance for its time, and developed notable lines of defense against contagion which include the inspection of ships on arrival, burial and crowd regulations, **recording causes of death**, and establishing health passes in order to enter the city (Figure 21). These small interventions contributed to the larger line of defense.

+ This is a glimpse at modern epidemiology: generating data and beginning to look for patterns



+

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1.2.1 RELIGIOUS INFRASTRUCTURES



+

above = seventeenth century health pass that gave the holder the privilege to move in and out of an infected zone in a city

opposite = poster issued by Italian states in an attempt to prevent the spread of plague by restricting trade

[3] The Church followed suit, in terms of religious responses to the plague, and their response was architectural. Andrea Palladio's (1508-80) Redentore Church (*Il Redentore*), was built as a votive church following the 1575-6 plague. This particular epidemic struck Venice and its population with particular ferocity, as one in every three people died.¹¹ *Il Redentore* served as a votive church to give thanks for the end of the epidemic. Today the *Festa del Redentore* is still annually celebrated on the third Sunday of every July.

1.2.2 PUBLIC HEALTH INFRASTRUCTURES

[4] Thanks to its geographic location, and its history as a seafaring and naval power, Venice had unique experience trading with both the West and the East. It established itself among the significant European powers in the Mediterranean thanks, in large part, to its trade with Egypt's sultan in the outlandishly lucrative pepper business as well as its infamous

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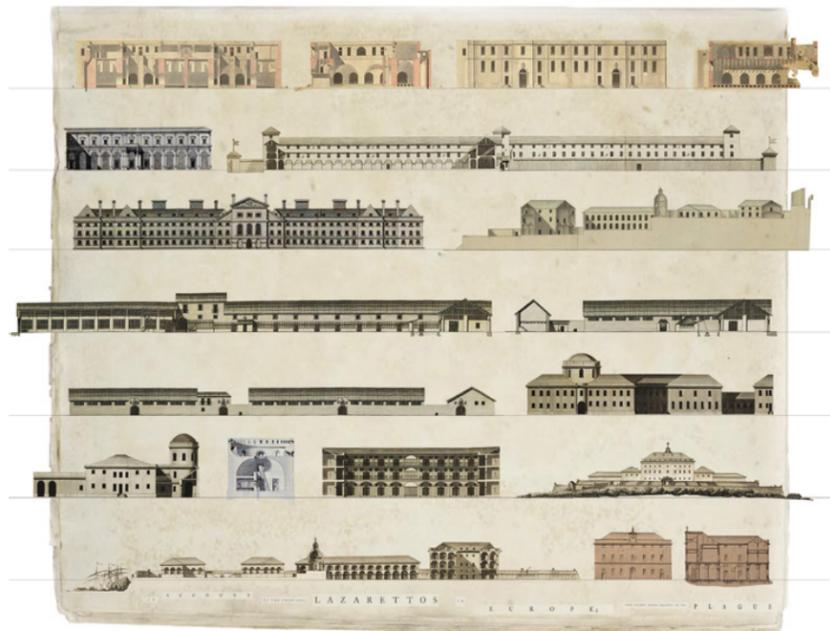
plundering of Constantinople and Alexandria. Since it was understood that disease arrived in the cargo holds of ships,¹² city officials needed to guarantee health or risk the city's lucrative commerce and trade. Venice's location, though economically strategic, was also problematic – resting as it did on a miasmatic lagoon. The implementation of a public health infrastructure had to be strategic and demonstrate that it was more than mere medicine: the response to disease was also about politics and economics, and its societal benefits, not the least of which was to make people feel safe.

The **quarantine** system in Venice was invented to make the [5] port seem safer and more trustworthy. The city-state needed to demonstrate responsibility. A *lazaretto* was a quarantine island where cargo and crew members were isolated. Lazaretto Vecchio was built in 1423, converting a medieval monastery into a plague hospital. Lazaretto Nuovo was built later in 1468 as a way station for incoming ships and cargo, where thorough searches for sickness were conducted. Lazarettos have a history of exercising “state power over



+

quarantine (n) (v) = Italian translation meaning “40 days,” which was a culturally significant timeframe



+
right = catalogue of John Howard's principle lazaretti of Europe

opposite below = Procession in St. Mark's Square, Gentile Bellini, 1496

human freedoms.”¹³ It was a power easily abused to achieve economic advantage over rival nations or expediently turn passengers into prisoners of war. International diplomacy itself had a major origin in negotiations over disease, quarantine and commerce between European and Ottoman empires.

[6] The city of Venice made several improvements to its sanitation during times of plague indicating that *La Serenissima* knew

+
la serenissima (trans) = the Byzantine title given to Venice meaning “most serene”

that epidemics were more than simply “bad airs.”¹⁴ This extended to monitoring – and regulating – large assemblies of people. Religious processions, especially at St Mark's basilica for example, needed a license. The large space of the city's main piazza was evenly distributed to accommodate large crowds (Figure 24). A **zona rossa** was implemented in the worst affected areas and everyone was forced to isolate in their homes (sound familiar?).¹⁵ Public drinking houses as well as the annual celebration of *Carnevale* were shut down and food handling was heavily supervised.

The marketplace, too, was heavily regulated. Smell, sight [7] and texture were the only indicators of potential disease in spoiled food, but no one could tell why. Fish, in particular, were considered likely vectors of disease and, if not sold, had to be disposed of at the end of each. Hygiene practices were strictly enforced. Stalls and communal spaces were cleaned nightly and most importantly, one could not litter “within a thousand paces of the marketplace.”¹⁶ Wuhan is, in a way, a kind of 21st century analogue to 14th century Venice.

+
zona rossa (trans) = red zone; Areas under quarantine with severe limitations of movement with barricades and roadblocks





+

figure 25 = sick city 01
venice + bubonic plague

background = map of the principle lazaretti of Europe as according to John Howard's nineteenth century book

above left = plan of lazaretto nuovo

far left = lazaretto nuovo

center = chiesa del santissimo redentore; the 10 characters from the decameron

above right = typical 15th century merchant ships; most common vector of disease

right = lazaretto vecchio

below grade = figureground of venice (il redentore in red), the epidemic curves of the 1528-9 and 1575-6 plagues; one is inverted to represent the "lasagna-like" graves dug on each of the lazaretto islands

1.3 Parable 01 angry gods

see parallel 01, "scapegoating" on pages 120-1

DISEASE AS DIVINE PUNISHMENT

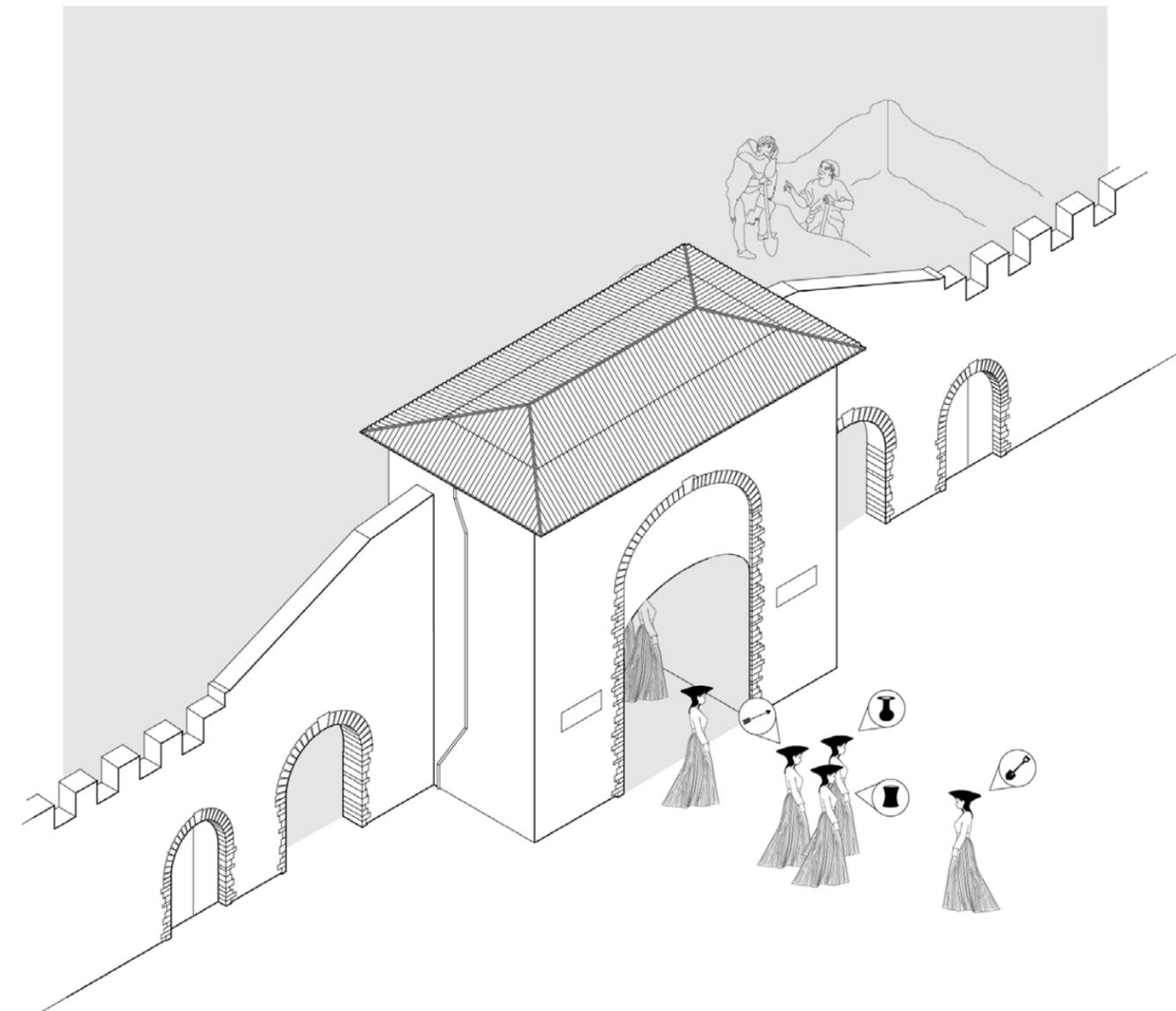
[1] Giovanni Boccaccio's *The Decameron* (1353), ultimately, is about behaving yourself. It is a collection of different stories on a variety of topics, but all of them contain the overarching theme that those who are bad, get sick and die, but because God is good, they are redeemed in the afterlife. Storytelling in this case, is used to promote Christianity, but even more importantly, it is a mechanism to control human relation and behavior in order to protect the masses from future plague.

[2] Parable 01 depicts the seven women of *The Decameron* fleeing the plague-ridden city. They argue who could have caused the plague to enter the great walls of their city, as they observe the **becchini** hard at work to their left. The women think of the gravediggers like the pestilence itself, but the gravediggers think only of the layers they are digging like that of a lasagna:

[3] Corpses, dirt, chloride, repeat.

+

becchini (trans) = Italian for a group of gravediggers who collected bodies during the Black Death. They were widely reviled



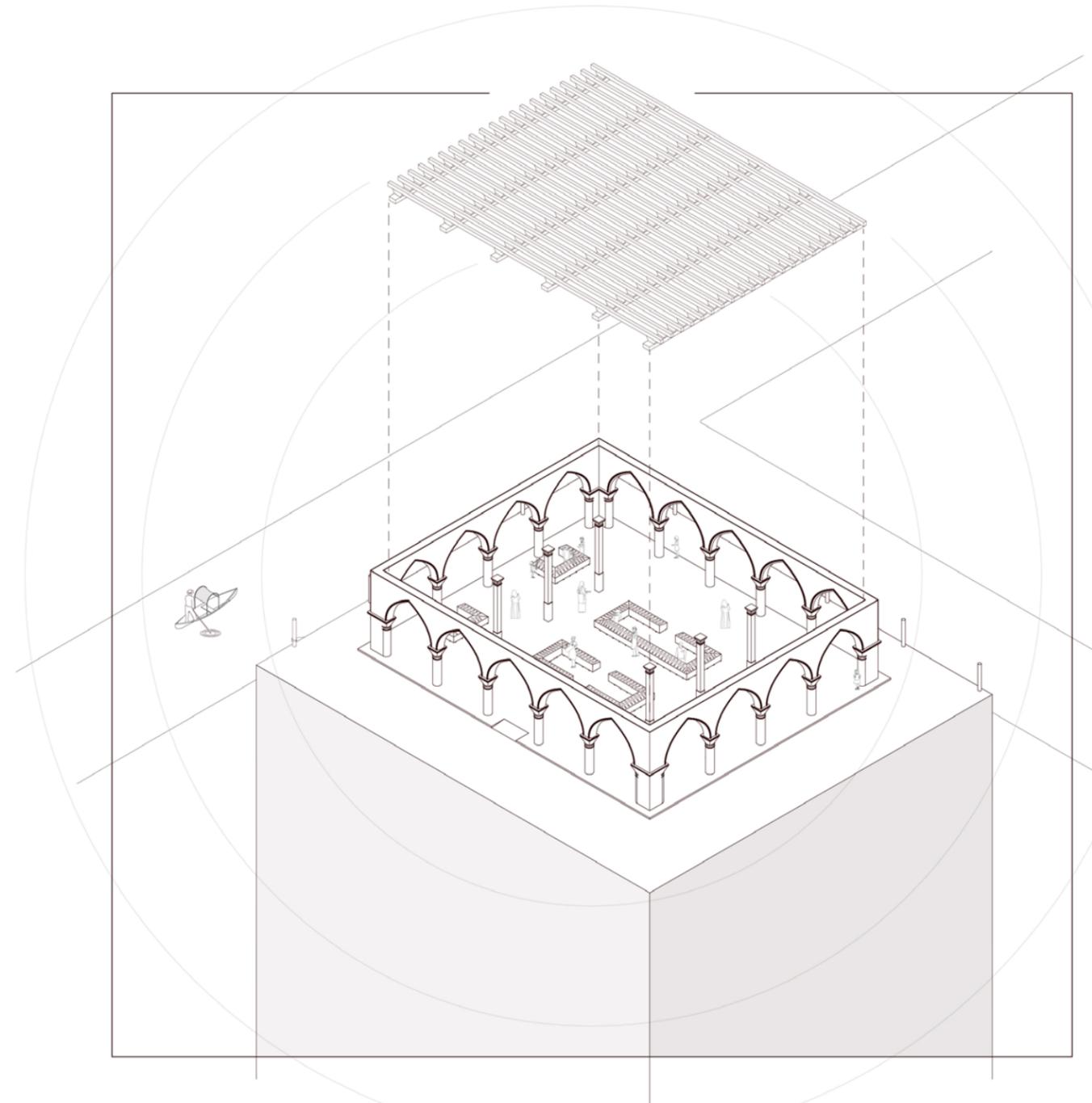
1.4 Parable 02
smelly fish

see parallel 02, "jean talon market" on pages 122-3

REGULATION OF MARKETS

[1] In order for a port city to work, it needs trade. City officials knew that the flow of goods was not possible if health was not guaranteed. Public health became more than just medicine: it became about politics and economics, and societal benefits, like making people feel safe. The lazaretto system in Venice made the port seem more trustworthy. As for the selling of the bounty coming in from the lagoon, there were strict rules for the exchange and handling of odorous food, such as fish.

[2] The Rialto fish market was heavily regulated by the Venetian Republic. Disease arose in spoiled food for unknown reasons. The only thing that made sense was to take draconian measures in hygienic practices. As soon as something smelled off, it was tossed, and if fish did not sell by the end of the day, it was disposed of. Littering was not permitted within one thousand paces of the market and every night the market was cleared for thorough sanitization.



1.5 Parable 03 quarantine

see parallel 03, “staying home” on pages 124-5

THE FIRST SYSTEMATIC LAZARETTO

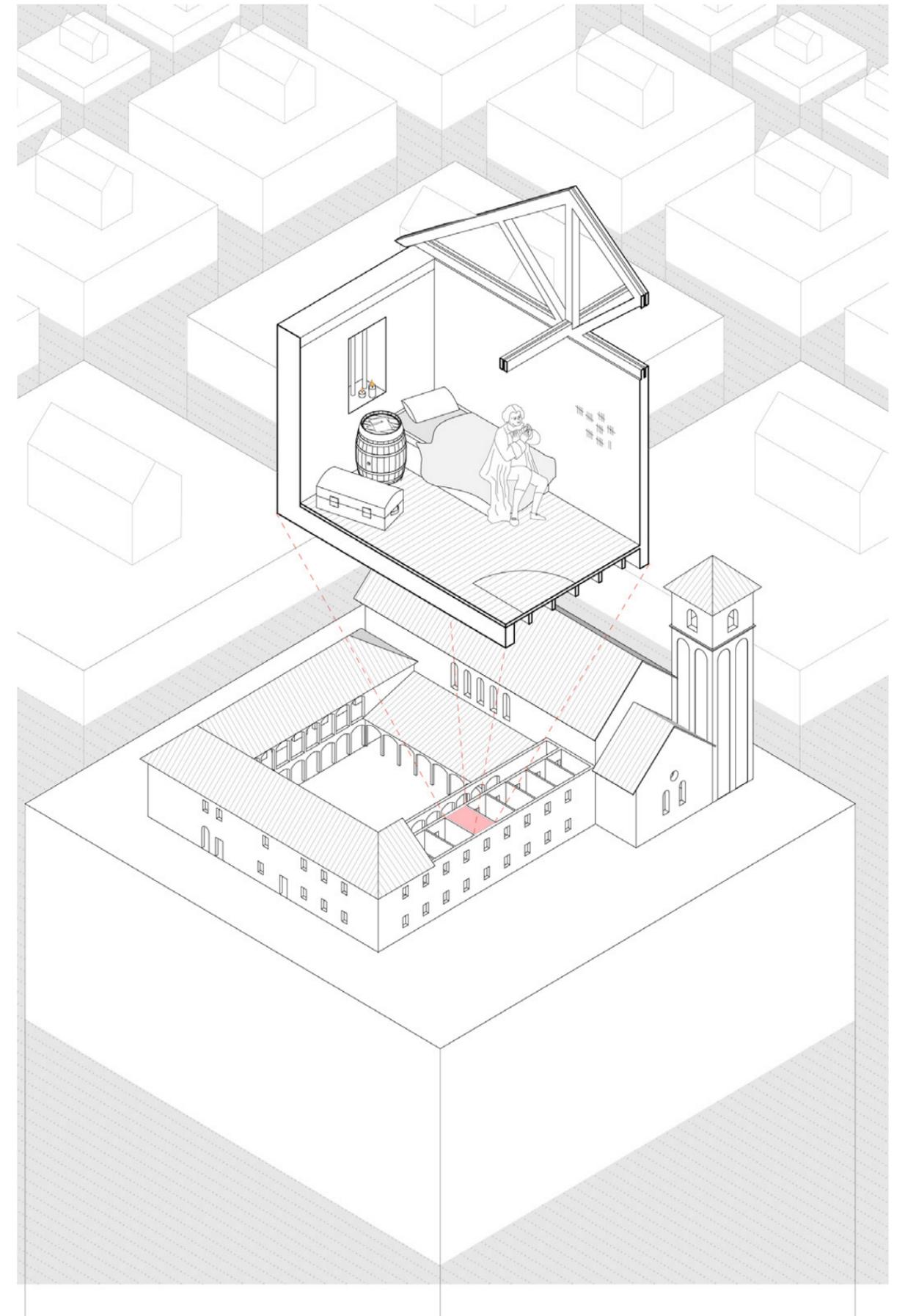
[1] Early modernity brought to the Mediterranean Sea an archipelago of quarantine buildings called lazarettos. Out of the growing concern of the relationship between trade and epidemic disease, this network came to connect the world's oceans, regulating the flow and exchange of goods and people. The English prison reformer, John Howard, described the Mediterranean network in his *Account of the Principal Lazarettos in Europe*, where he took particular interest in the famous institution in Venice.¹⁷

[2] Lazaretto Vecchio was famed for becoming the first systematic quarantine station at the beginning of the fifteenth century.

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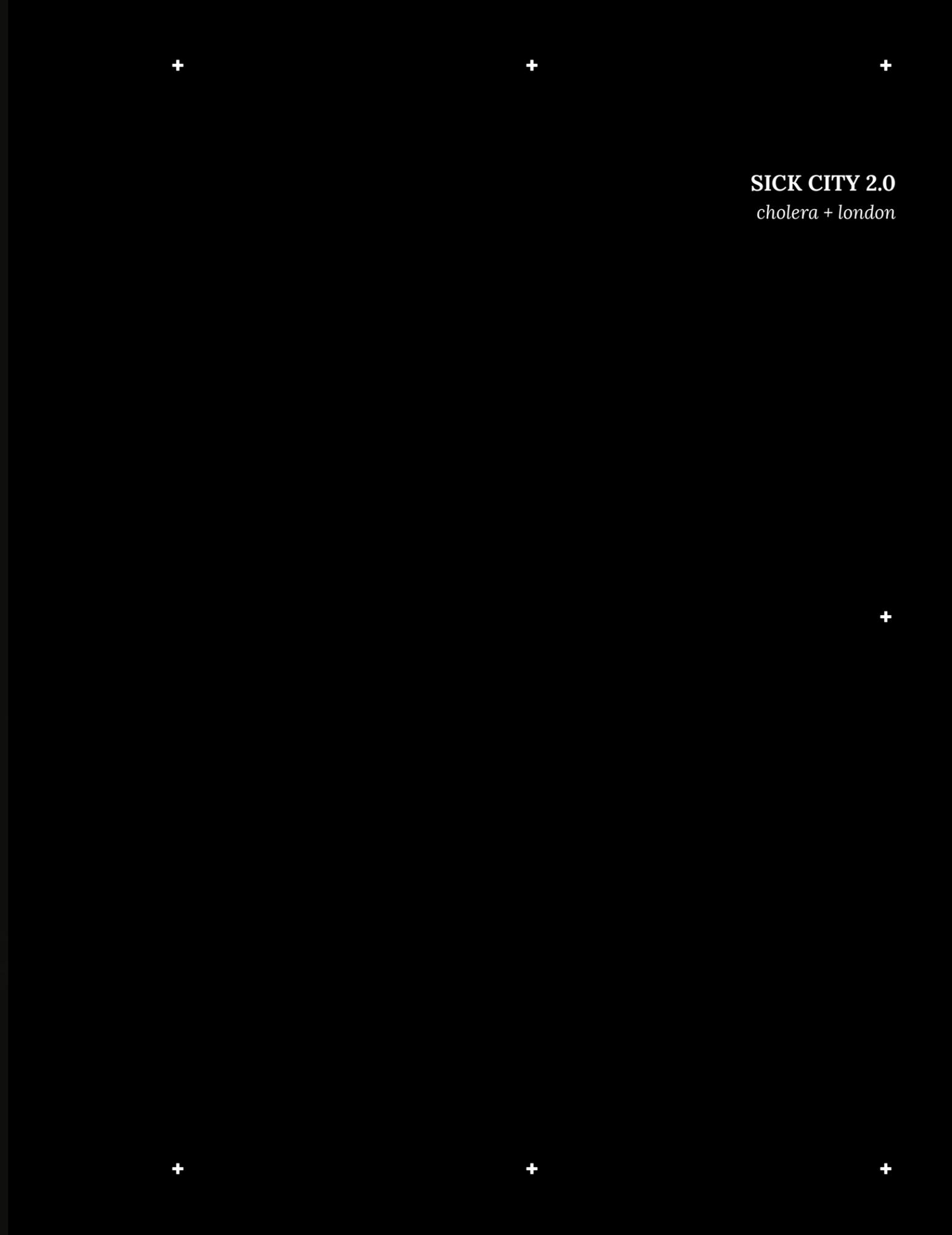
plague protocol = With higher risk of exposure to disease, policy included descriptions of *sequestrate* (confined) and *serrata* (locked up) for people, and *sborrata* (cleaned) or *espurgata* (purged) for goods.⁸

Adapted from a medieval monastery, it acted as a place for observation and care for the merchant ship as they waited out their quarantine (plus or minus forty days depending on international relations) and transformed into a hospital during outbreaks of bubonic plague. Harsher policies were enacted under higher risks of exposure to disease.





SICK CITY 2.0
cholera + london



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+

+

Pathogens R Us

URBAN
APOTHECARY

+

PRESCRIPTION

CHOLERA

O R G A N I C	N ^o	
	002	
	FOR: LONDON	
	EXP: 1866 <small>(dd.mm.yy)</small>	
ALL OF OUR MICROBES ARE UNSUSTAINABLY SOURCED		

INGREDIENTS: dehydration, nausea, diarrhoea, vomiting, muscle cramps, rapid heart rate, shock, irritability, restlessness, skin becomes blue-grey and loses elasticity, eyes sunk into their sockets, organ failure. **MAY CONTAIN:** anti-Indian sentiment, colonial health rhetoric, "disaster ideology of empire."

2.1 CHOLERA
miasmists vs.
germ theory

“City dwellers had lived with fear before, and London, of course, had not forgotten its Great Plague and its Great Fire. But ... the specific menace of cholera was a product of the Industrial Age and its global shipping networks: no known case of cholera on British soil exists before 1831.” - The Ghost Map

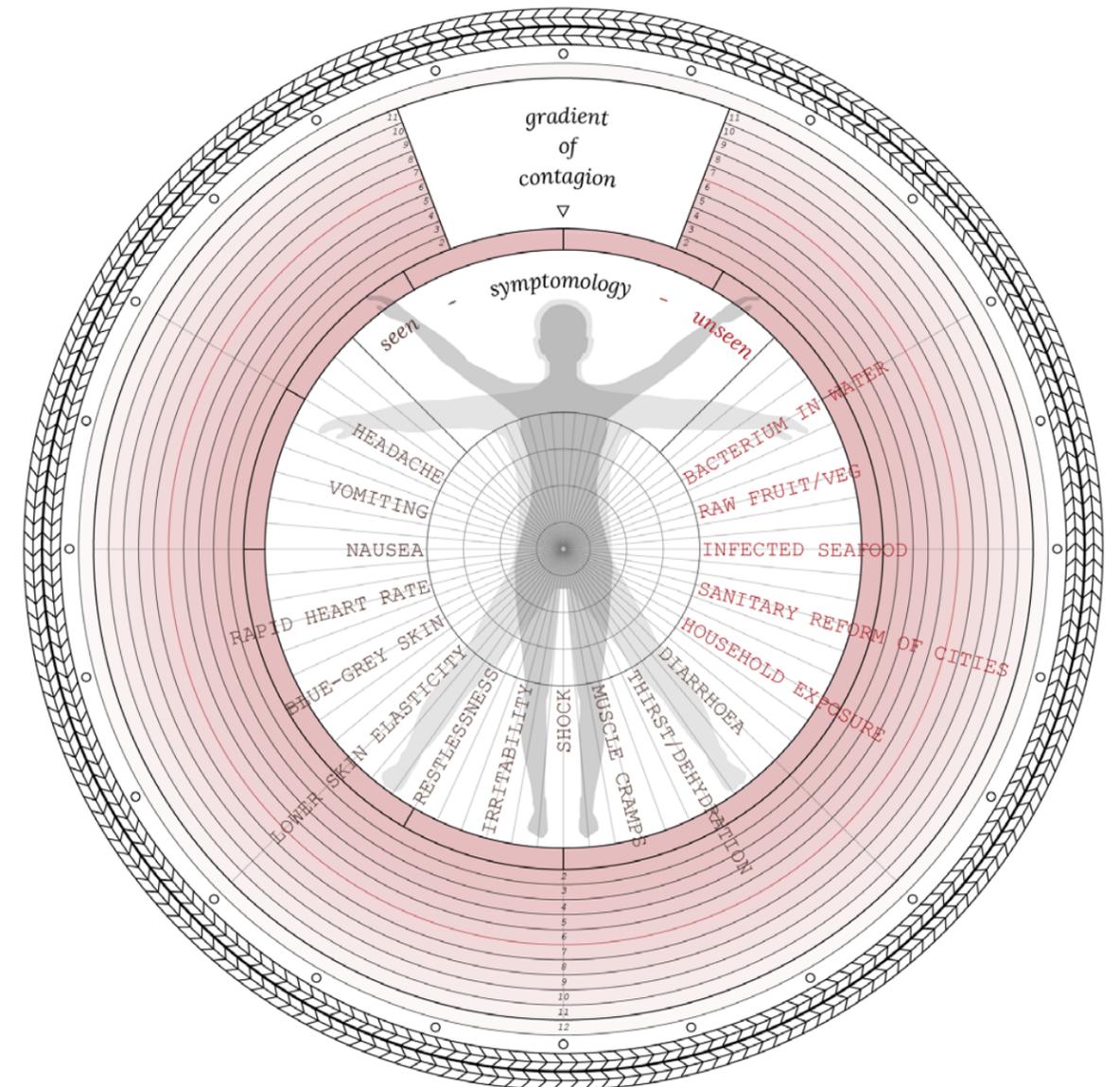
+
cholera (n) = Cholera is an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. Cholera remains a global threat to public health and an indicator of inequity and lack of social development. (WHO)

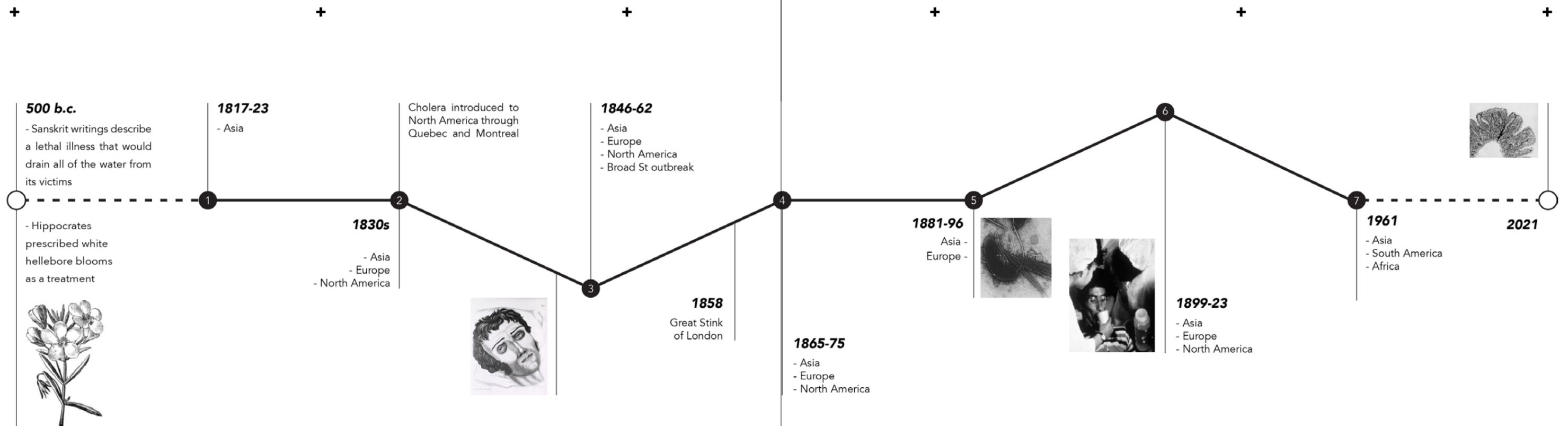
[1] **Cholera** can be divided into seven major, successive pandemics (Figure 32). When it first emerged at the start of the nineteenth century, it was primarily contained within the Ganges Delta in East India because the bacterium that causes it - *vibrio cholerae* - is delicate and does not travel easily. In the following decades, however, increased movement of people between India and the West led to successive pandemics. Three developments in particular were especially significant as part of this movement: (1) British colonialism (primarily through the East India Company), (2) religious pilgrimages (to Mecca) and (3) the transportation revolution (railroads, steam ships and the Suez Canal). The cholera microbe was able to gain broader global and Western reach, thriving in the waters of port cities.

+
opposite = cavity sam, cholera

next spread = timeline of the seven cholera pandemics

[2] At the same time, the English countryside was evolving with large-scale, agricultural operations and steam power serving to connect Britain by railway. This transformation helped to propel the Industrial Revolution and made London one of its central characters. With a booming population, sprawling, unplanned urbanization, crowded slums with inadequate





housing, an unstable water supply, the absence of sewers and atrocious urban hygiene, the “Big Smoke” became an optimal breeding ground for cholera.

[3] 1849 Victorian London, the capital of the mighty British Empire, was, to put it plainly, especially odious. In the summer of that year, the following appeal appeared in *The Times*:

*Sur ... we live in filth and muck. We aint got no priviz, no dust bins, no drains, no water-splies, and no drain or suer in the hole place. The Suer Company, in Greek Street, Soho Square, all great, rich powerfool men take no notice watsomdever of our complaints. The Stenche of a Gulley-hole is disgustin. We all of us suffer, and numbers are ill, and if the Cholera comes Lord help us.*²

The city’s leading novelists noted the “overcrowded slum

tenements, poor workmanship, inconsistent standards and overflowing cesspools,” in which they lived.³ A constant companion was cholera, named to evoke the horror it inspired: “cholera morbus,” “the gypsy,” “the monster,” “blue cholera,” and “king cholera.” It was feared for its sudden appearance as an unknown invader, and true to form, reviled because of its racist Eastern association: it was also known as “Asiatic cholera” or “Indian cholera” (Image 56). Charles Dickens spent a great portion of his career critiquing Victorian London. His aptly titled *Bleak House* (1852), does not mince words. He writes:

It is a black, dilapidated street, avoided by all decent people; where the crazy houses were seized upon, when their decay was far advanced, by some bold vagrants, who, after establishing their own possession, took to letting them out of lodgings. Now, these tumbling tenements contain,

by night, a swarm of misery. As, on the ruined human wretch, vermin parasites appear, so these ruined shelters have bred a crowd of foul existence that crawls in the rain drips in; and comes and goes, fetching and carrying fever, and sowing more evil in every footprint...⁴

Dickens, however, combines indignation with compassion. He accuses “all decent people” of ignorance and binds disease with the “poor wretches” that occupy the “tumbling tenements.”⁵

[4] Friedrich Engels, too, vividly described the conditions of Victorian London (and was a **great influence** on Dickens).⁶ In *The Great Towns* (1844), he draws connections between the physical decrepitude of urban infrastructure and the alienation and despair of the urban poor, noting:

After roaming the streets of the capital a day or two, making headway with difficulty through the human turmoil and the endless lines of vehicles, after visiting the slums of the metropolis, one realizes for the first time that these Londoners have been forced to sacrifice the best qualities of their human nature, to bring to pass all the marvels of civilization which crowd their city; that a hundred powers which slumbered within them have remained inactive, have been suppressed in order that a few might be developed more fully and multiply through

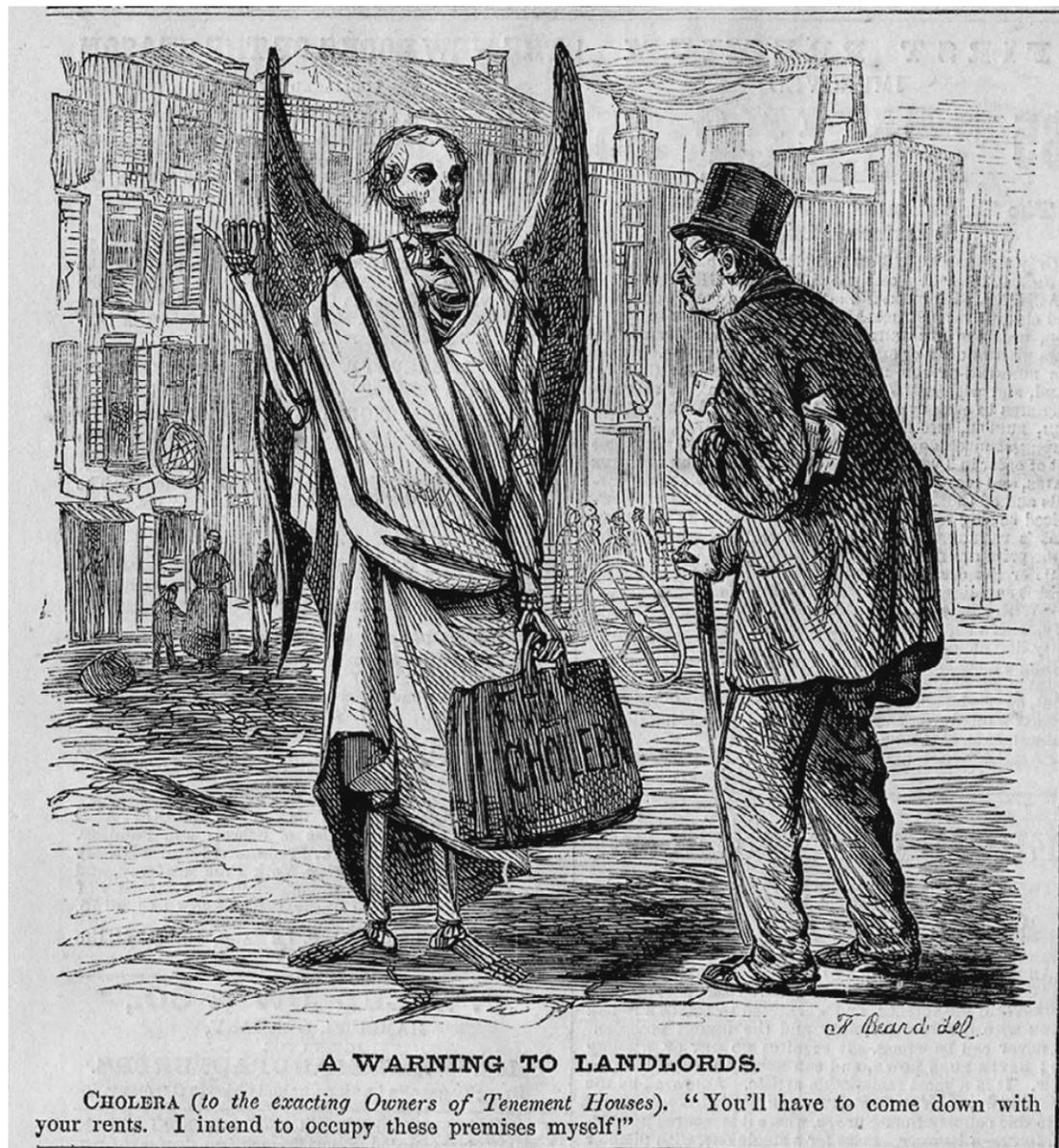
note = Engels also inspired the later work of George Orwell, particularly 1984

union with those of others. The very turmoil of the streets has something repulsive, something against which human nature rebels.⁷

Engels’ anti-urban sentiment shaped twentieth-century urban planning and influenced **capitalists and socialists** alike.⁸ Underlying his argument was the irony that in a time of widespread advance in science, nothing could be done to halt the spread of disease. The ravaging effects of cholera, and the associate political rhetoric around it, threatened to destabilize the new social order. How meaningful were the developments that romanticized life in cities like London, when “the epicenter of industry and the capital of a global colonial network,”⁹ could be totally overwhelmed by an outbreak that swept down mysteriously, “like a specter from the Middle Ages?”¹⁰

note = Engels and Karl Marx later wrote the *Communist Manifesto* together (1848)

Cholera was not plague. Quarantines and disinfection did little [5] against a microbe that traveled by water (but this was not known at the time). Health measures frustrated merchants and angered lower-class citizens, all of whom bore the epidemic, geographical and economic brunt. This growingly universal



sociopolitical unrest stood in contrast to the violence that had accompanied plague epidemics.¹¹

Whereas plague-stricken communities had attacked the [6] Jewish, alleged "witches" and other marginalized groups, cholera saw a shift in blame towards the governments and authorities regarding harsh sanitary measures or for starting the epidemic altogether. Doctors were believed to be colluding with elites to murder the urban poor. In Britain, this was undoubtedly fuelled by the fact that independent surgical schools often secured subjects for dissection by underhanded means (not unlike the graverobbers in *A Tale of Two Cities*).¹² London's poor, immigrant populations were singled out with particular disapproval from the bourgeois. The Irish were alleged to be, "exceeding dirty in their habits, much addicted to intemperance, and crowded together in the worst portions of the city."¹³ Cholera and the plague, although they impacted social life in different ways, the imperatives of morality and hygiene – and their spatial implications – were all bound together.

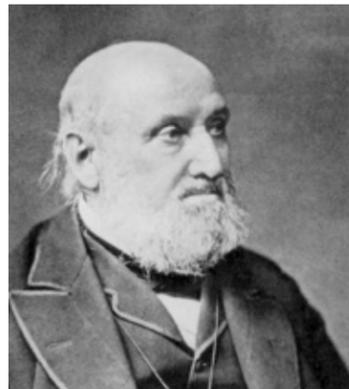
+ **opposite** = comic in *The Times* critiquing London's tenements. Storytellers such as Dickens and Mayhew outline the poor living conditions in many of their novels

+ **next left** = The miasmists (top to bottom): Sir Edwin Chadwick, Florence Nightingale, William Farr

+ **next right** = The germ theorists (top to bottom): Antoni van Leeuwenhoek, Robert Koch, Louis Pasteur

source = "Report of an Inquiry on the Sanitary Conditions of the Labouring Population of Great Britain"

"All smell is, if it be intense, immediate acute disease; and eventually we may say that, by depressing the system and rendering it susceptible to the action of other causes, all smell is disease." - Sir Edwin Chadwick (1842)



1.1.1 MIASMA

[6] The extension of Dickens' fictional writings on the conditions of the labouring population of Londoners into an imperial version of law is credited to the sanitary reformer, Sir Edwin Chadwick (1800-90). The sanitary movement, prompted by Chadwick's report on living conditions, was based on miasmatic theory and required a change in environment in order to ensure good health. The mass fear of epidemic disease was amplified by the transmission via smell. The disease was both invisible and everywhere: seeping out of gulley holes and looming in the yellowed fog along the Thames. Those who chose to fight the disease were valorized as heroes since the simple act of breathing within the vicinity of an outbreak was considered a dance with death.¹⁴

[7] British understandings of sanitation, hygiene, and disease transmission advanced rapidly as a result. The anti-contagionist miasma theory redirected the finger-pointing of an individual's morality towards the smell of the environment. In doing so,

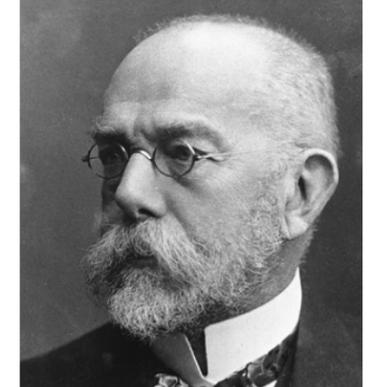
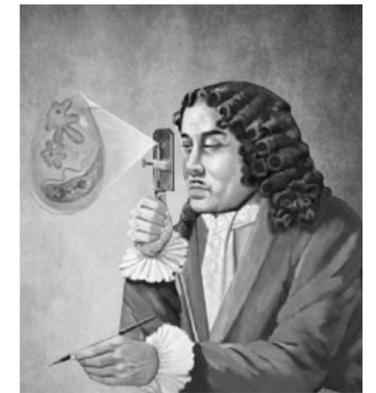
« Messieurs, c'est les microbes qui auront le dernier mot »
- Louis Pasteur (1822-95)

translation = "Gentlemen, it is the microbes that will have the last word"

the tools that were created shifted from controlling movement of infected bodies to changing the densely-populated environment in which infected bodies reside.

1.1.2 GERMS

In the final decades of the nineteenth century, German [8] biologist Robert Koch discovered the specific causative agents of tuberculosis and cholera, which supported the concept of infectious disease. This led Louis Pasteur to conclusively describe how germs invade the body and cause illness.¹⁵ It was understood that microscopic beings existed, thanks to Antoni van Leeuwenhoek's discovery of bacteria in 1676, but germ theory took a while to gain favour over popular miasmatic theory. Germs - and the transmission of disease by air - began to heavily influence the design of healthcare, housing, and the public realm at the turn of the twentieth century. Somewhere between miasma and contagion, however, was the real work in how to stop cholera - a mystery which was neither miasmatic nor airborne - from ravaging London.



2.2 CHOLERA public health tools

“Like any disease, cholera has in itself no meaning: it is only a micro-organism. It acquires meaning and significance from its human context.” - David Arnold

[1] England was spared from the first cholera pandemic. A military parade was held in celebration, celebrating victory, immunity, and the supposed superior British way of life.¹⁶

[2] A decade later, the unanticipated arrival of cholera was met with **bewilderment, fear, then panic**. Thousands died daily and London, the heart of the British Empire, was a very dangerous place to live. Conspiracy theories were rampant and hysterical claims of deliberate criminal poisoning were common. Tens of thousands died because the fear of infection by smell drove them to implement a series of hasty reforms that only exacerbated the crisis. Henry Whitehead, a clergyman documenting the epidemic in Golden Square observed: “Whilst pestilence slays in thousands, fear slays its tens of thousands.”¹⁷

[3] As well as new laws and reforms, the police felt obliged to issue proclamations that they were hunting down these alleged poisoners, in order to help calm public fear. The poor, in particular, were often victims of these allegations; in some instances, they became too frightened to eat or drink.

+
note = similar to the masses of toilet paper hoarders of March 2020 when COVID-19 first touched Canadian soil



In few instances, mobs hurled themselves at individuals who were seen carrying unfamiliar substances. Londoners were terrorized by an unseeable, microbial terror.

2.2.1 BOLD CLAIMS, QUACK CURES

[4] And what of the role of the press and the media? As police were making posters reassuring the public of their decisive action, governments began distributing pamphlets with guidelines on how to quarantine at home. The last and most notable form of printed anti-cholera content was through the press. Bold claims from local doctors would be written to the editors of *The Punch*, *The Builder* or *The Lancet*. One such claim was printed in *The Times*:

FEVER and CHOLERA.

The air of every sick room should be purified by using SAUNDER'S ANTI-MEPHITIC FLUID. This powerful disinfectant destroys foul smells in a moment and impregnates the air with a refreshing fragrance. – J.T. Saunders, perfumer, 316B, Oxford-street, Regent-circus; and all druggists and perfumers.

Price 1s.¹⁸



+
left = A cholera patient experimenting with remedies. Etching by R.I. Cruikshank (1832)

Another article claimed a remedy for cholera's most telltale symptom, diarrhea:

Will you ... kindly allow me a space in your columns, not only to reiterate what I have already with reference to ether and laudanum, but to explain how, in my opinion, these remedies act when taken into the stomach? You want something which will act immediately without requiring the slow, and in these cases uncertain, process of digestion. If the properties of **opium** are valuable, and they are acknowledged to be such by all authorities, the sooner these properties are brought into

+
the Victorian medical refrain = "Take a few hits of opium and call me in the morning."¹⁹

active operation the better ... In conclusion, Sir, I beg you to observe that in submitting these remedies to your numerous readers I feel that, as a public officer, I am only discharging a public duty.²⁰

Cholera remedies were a running item in the dailies, a source of endless debate. One quack cure would suggest linseed oil or hot compresses. By the following week, doctors would be prescribing **leeches** or copious consumption of castor oil to help purge illness from the body. The real cure was quite the opposite – and almost facile in its simplicity: rehydration.

[5] The proliferation of quack cures had an unexpected side effect.

It laid the groundwork for the art of newspaper advertising. By the end of the 1800s, patent-medicine manufacturers were the leading advertisers in the newspaper business.²² The press not only published articles about cures for cholera but illustrated its appearance and effects. Periodicals published during cholera outbreaks personified the germs in the Thames. Common themes highlighted civic disgust at the slums of London, the alien malignancy of the East and the putrid stench

note = Bram Stoker wrote *Dracula* (1897) with the background of being paralyzed as a boy. The story unfolds “against a backdrop of Victorian medical mysteries and horrors: cholera and famine fever, childhood opium abuse, frantic bloodletting, mesmeric quack cures, and the gnawing obsession with ‘bad blood’ ...” that informed the novel²¹

emitting from the Thames. In the infamous cartoon “**Monster Soup: Commonly Called Thames Water**” (Quack Cure 01), a horrified bourgeois woman zooms in on the aquatic, anthropomorphized bacteria. The satire was dedicated to London’s water companies and was a “correct representation of that precious stuff doled out to us.”²⁴ This characterization of the disease – causing microbes suggesting a *who*, not a *what* – was the underlying cause of cholera.

There was a fundamental shift in the way people thought [6] about disease during this crisis. Health became a public concern. Sanitary improvement clearly demanded a shift in focus – beyond the morals of society – to the alteration and transformation of the built environment. But the persistence of widespread illness in densely inhabited neighbourhoods led to debates about whether people were responsible as cholera incubators or whether it was the blighted environments they were forced to live in.

note = The artist, William Heath, often used Shakespearean poetry as the basis for his satire. For *Monster Soup*, he takes a section from John Milton’s *Paradise Lost*:

Where all life dies, death lives, and nature breeds / Perverse, all monstrous, all prodigious things / Abominable, unutterable, and worse / Than fables yet have feigned or fear conceived / Gorgons, and Hydras, and Chimeras dire.²³

+

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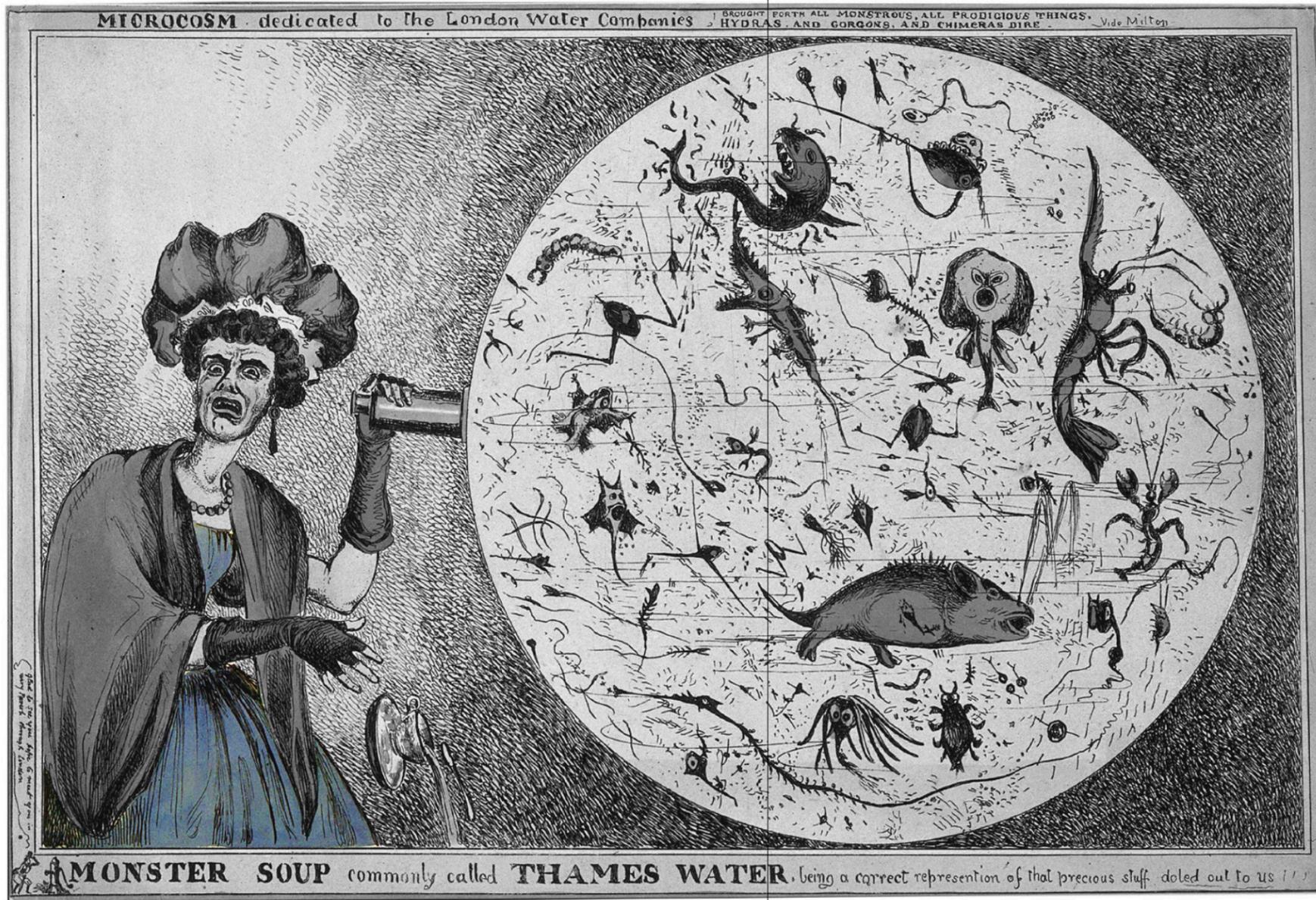
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[QC01]



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quack cure 01 = "Monster Soup: Commonly Called Thames Water" by William Heath

quack cure 02 = "Design for Cholera-Belt"

quack cure 03 = "Design for the Chemical Sanitary Belt and Cholera Repellent" by Thomas Drew, chemist

(next page, left to right)

quack cure 04 = "Fortifying Against Cholera"

quack cure 05 = Cholera Mixture by the Doig Brothers

quack cure 06 = "Valentine's Meat Juice," a tonic to cure all by Mann S. Valentine

(next page, left to right)

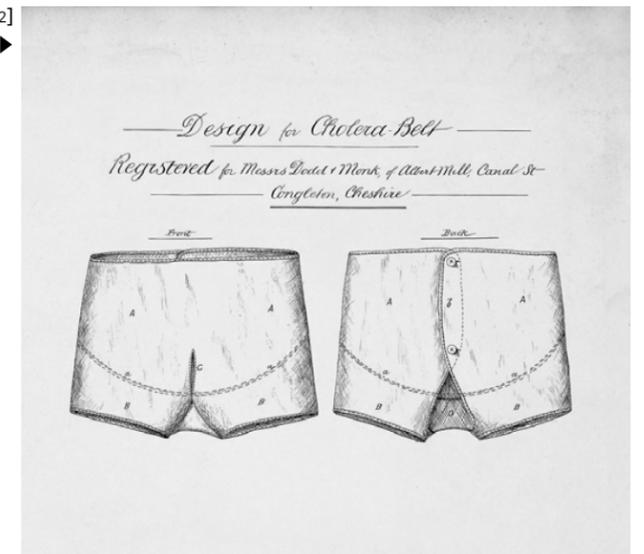
quack cure 07 = "Miraculous Cure: Dr. Williams' Pink Pills for Pale People"

quack cure 08 = "Dr. Chapman's Spine Bags"

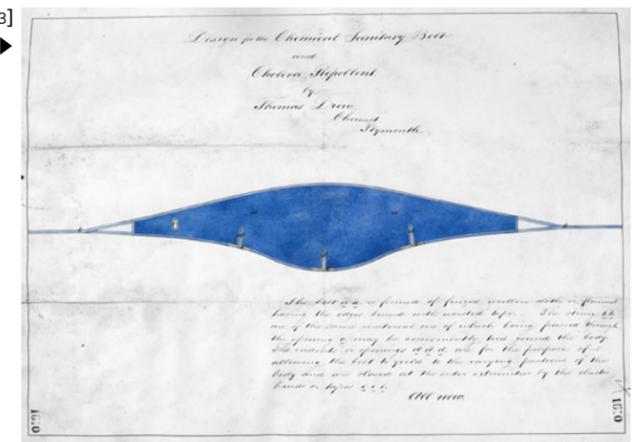
quack cure 09 = "Cholera Preventive Costume"

quack cure 10 = "McLaughlin's Magic Relief"

[QC02]



[QC03]





[Qc04]

[Qc05]

CHOLERA
MIXTURE

—FOR—
Cholera Morbus, Dysentery, Diarrhoea, Summer Complaint.

DOSE.—For an adult, from half to one teaspoonful every 2 or 3 hours in water; for a child of one year, 5 drops; 3 years, 10 drops; 10 years, 15 to 30 drops. Shake well before using.

PREPARED BY
DOIG BROS.,
 Druggists,
 LOWVILLE, NEW YORK.

[Qc06]

Valentine's Meat-Juice.

Established 1871,
 BY
 MANN S. VALENTINE,
 RICHMOND, VIRGINIA, U. S. A.

Miraculous Cure

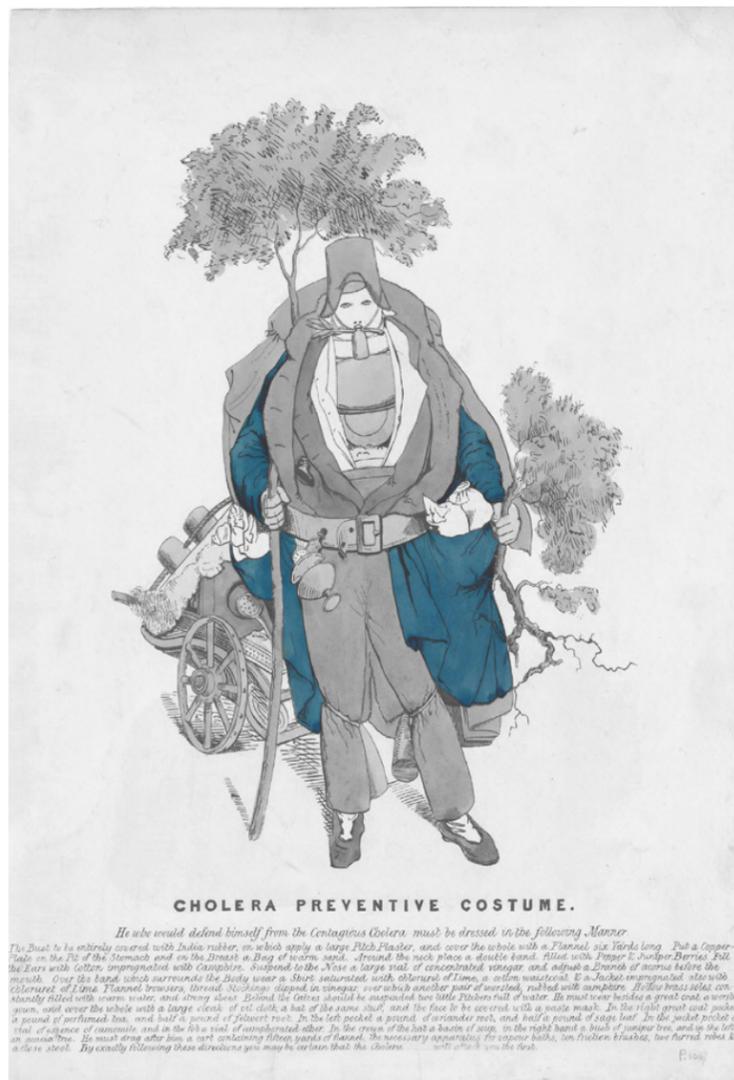
Richard D. Creech, of 1062 Second St., Appleton, Wis., says:

"Our son Willard was absolutely helpless. His lower limbs were paralyzed, and when we used electricity he could not feel it below his hips. Finally my mother, who lives in Canada, wrote advising the use of Dr. Williams' Pink Pills for Pale People and I bought some. This was when our boy had been on the stretcher for an entire year and helpless for nine months. In six weeks after taking the pills we noted signs of vitality in his legs, and in four months he was able to go to school. It was nothing else in the world that saved the boy than Dr. Williams' Pink Pills for Pale People.—From the Crescent, Appleton, Wis.

Dr. Williams' Pink Pills for Pale People

are sold by all druggists or direct from Dr. Williams Medicine Co., Schenectady, N.Y., postpaid on receipt of price, 50c per box; six boxes, \$2.50.

[QC07]



CHOLERA PREVENTIVE COSTUME.

Who would defend himself from the Contagious Cholera, must be dressed in the following manner: The coat to be entirely covered with India rubber, on which apply a large Plaster, and cover the whole with a Flannel six Yards long. Put a Copper Plate on the Top of the Stomach and on the Breast a Bag of warm sand. Around the neck place a double band, filled with Paper & Swallow-Berries. Fill the Ears with Cotton, impregnated with Camphire. Suspend to the Nose a large vial, of concentrated vinegar, and adjust a Thread of muslin before the mouth. Over the head which surrounds the body wear a shirt saturated with oil of Turpentine, or a Towel impregnated with Chloruret of Lime. Flannel trousers, thread stockings dipped in vinegar, over which another pair of woollen, rubbed with camphire. If the brass belt, commonly filled with warm water, and strong elastic. Behind the Throat should be suspended two little Tibbets full of water. It must wear besides a great coat a warm gown, and cover the whole with a large cloak of oil cloth, a hat of the same stuff, and the face to be covered with a muslin mask. In the right breast coat pocket a pound of portland tea, and half a pound of sweet root. In the left pocket a pound of artemisia root, and half a pound of sage leaf. In the pocket pocket a vial of essence of muscivore, and in the left hand a basin of soap, in the right hand a bowl of vinegar, and in the left an iron bar. He must drag after him a cart containing three yards of flannel, the necessary apparatus for vapour baths, ten frozen bladders, two turned ribs & a steel. By exactly following these directions you may be certain that the Cholera will not visit you the first.

[QC08]

DR. CHAPMAN'S SPINE-BAGS (PATENT), FOR THE TREATMENT OF DISEASE

THROUGH THE AGENCY OF THE NERVOUS SYSTEM, BY THE APPLICATION OF DRY COLD AND HEAT ALONG THE SPINE.



SPINAL ICE-BAG.

"The ICE-BAG, which has evidently been constructed with a great amount of thought, is divided into cells, and closed by a very ingenious clamp. Its arrangements enable it to be worn by persons moving about. The WATER-BAG consists of two parallel india-rubber tubes for the application of hot or cold water on either side of the spine. The bags are intended to enable the practitioner to carry out those 'vaso-motor nerve' views of the treatment of disease which were enunciated by Dr. Chapman in this journal July 18, 1863."

—MEDICAL TIMES AND GAZETTE, July 23, 1864. The Spinal Ice-Bag, when applied in appropriate cases, is soothing and agreeable, as well as curative. (See Statements of facts, pages 12, 13, and 14 of this Circular).



SPINAL WATER-BAG.

Among the many diseases over which, by means of Dr. Chapman's discoveries, a remedial control has been acquired is the important group consisting of Functional Diseases of the Stomach, and comprising those hitherto incurable maladies—Sea-Sickness, and the Sickness associated with Pregnancy. For evidence that

SEA-SICKNESS

MAY NOW BE PREVENTED AND CURED

See the following pages—2, and 18 to 22.

[N.B.—Copies of this Pamphlet are supplied gratis by the Agents named at page 3.]

[QC09]

McLAUGHLIN'S MAGIC RELIEF Formerly Magic Cure

Internally Cholera Morbus, Colic, Diarrhoea, Dysentery.

Externally Headache, Toothache, Rheumatism, Sore Throat, Hoarseness, Scalds, Muscular Soreness.

DIRECTIONS When taken internally 10 drops to a teaspoonful according to age; dilute with water or drop on sugar. Sore Throat, bathe the outside freely and use as a gargle dilute with water.

CASES DRUG STORE Logan, O.

2 OUNCES 75% ALCOHOL

[QC10]

+ + +

Mean Elev. from Thames (meters)	Mean Mortality (per 10,000)
0	177
10	102
30	65
50	34
70	27
90	22
100	17
350	7

+
table 1 = William Farr, once a miasmist, took to Snow's theory as the East End, supplied by a different water company out of the River Lea, continued suffering from cholera outbreaks as the rest of the city was slowly hooked up to Bazalgette's system

As a water-borne illness, Farr proved that those furthest from contaminated bodies of water sourced for drinking were safest

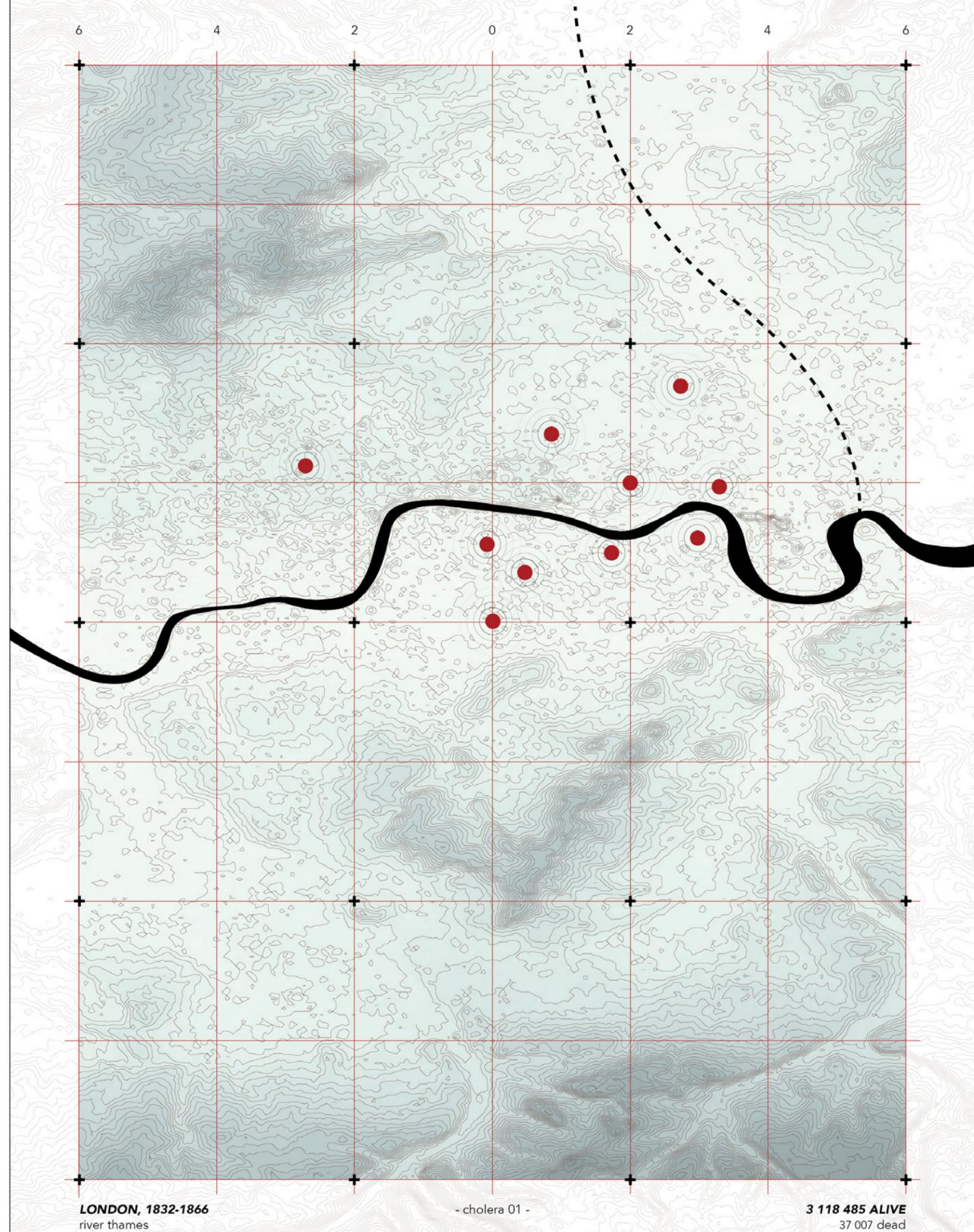
+
legend (opposite)
 outbreak
 10m topographic increment
 river thames
 river lea

+ p. 48

2.2.2 - EPIDEMIOLOGY

[7] Newspapers were not the only ones drawing and diagramming disease. Florence Nightingale and William Farr were recording deaths and trying to discover the cause of the disease and how it spread. Their coxcomb diagrams were among many visual representations that curated "vital statistics," which later came to be known as **epidemiology**. Soon these diagrams turned into maps that answered who was dying, as well as where they were dying.

[8] When an epidemic broke out in Soho in 1854, there were other medical detectives looking for statistical clues, trying to build chains of cause and effect. John Snow, a doctor of modest means, saw the ravages of cholera firsthand, first in 1831 as an apprentice in Newcastle and then outside his home in Soho. When cholera appeared in Britain for the third time, its cause and cure were still elusive. "We are at sea, in a whirlpool of conjecture," lamented an editorial in *The Lancet*.²⁵ Snow however, questioned cholera's ability to transmit through the



miasmas in the air.

[9] He theorized that cholera was transmitted through water, not air, since its symptoms affected the digestive tract and



not the respiratory system. To investigate, Snow took to his neighbourhood. He recorded his observations in 1849, suggesting that the flushing of water closets into the Thames

worsened the epidemic.²⁶ He created “ghost” maps (Figure 6) that scrutinized the Broad Street pump in particular. His work received polite interest from the medical community but was largely ignored. Frustrated, Snow’s trump card was stealing the pump handle on the Broad Street pump (Figure 53).

2.2.3 - SANITARY REFORM OF THE CITY

By mid-century, the Thames was so bad, that “the whole river [10] was ... a real sewer.”²⁸ The work from Dickens, Mayhew, Engels, Snow and other miasmists brought forward considerable evidence to the government in the hopes of affecting change. It proved fruitless. However, in the summer of 1858, a record-breaking heatwave finally drove Parliament to action. There was not enough **lime chloride** in the world that could soak the curtains of the House of Commons to hide the “Great Stink” of the Thames just beyond its windows. After a resounding “aye,” a tender was awarded to Sir Joseph Bazalgette (1819-91), the Chief Engineer to the Metropolitan Board of Works to see to dealing with the Great Stink.

+
note = Today John Snow is credited with “saving” London from cholera through his discovery of its transmission through water.²⁷ The maps get their namesake from Snow recording the deaths in the homes that surrounded the contaminated water pump on Broad St.

+
lime chloride (n) = a white powder used for disinfecting which is made by treating slaked lime with chlorine. It can be used for commercial bleach and in laundering as a disinfectant

[11] Bazalgette's primary task was to design and build a sewer system, with seven intercepting levels, to sweep the waste out of the city. In order to do this, he had to construct the vast embankments (Victoria, Albert and Chelsea), which reclaimed over fifty acres of land from the river.²⁹ Each embankment housed a new Underground train, low-lying sewers and services below grade. At the surface, Bazalgette laid new boulevards (Shaftesbury Avenue and Charing Cross Road) and parks (prominently Battersea Park and Clapham Common).

[12] Bazalgette, credited with saving more lives than any other nineteenth century public official, had far-reaching influence. London had created a two-part system that many other cities followed: urban investigation followed by state-sponsored change. London's industrialization had not only provided the means for cholera to spread, it had also created urban conditions that propelled outbreak into epidemic catastrophe. Like Venice and plague or Wuhan and COVID-19, vast, under-resourced urban environments not only facilitate the spread of contagious disease, they encourage

the adaptations of microbes that give rise to new diseases.

2.2.4 A (QUICK) TALE OF TWO (OTHER) CITIES

Two other European cities were ravaged by cholera. Under the [13] Second Empire, Napoleon III's Paris underwent Baron Georges-Eugène Haussmann's renovation where he "slic[ed] his bright boulevards through the dark uneven crusts of houses like knives through a city of cindered chèvre."³⁰ Inhabitants of the "squalid slums" were forcibly removed to the periphery where cholera epidemics would later run rampant. While it is apparent in Haussmann's memoirs that a major driving force for his design was the desire to stop the return of cholera, many of his urban motives had nothing to do with disease. Haussmann was an image maker as well. The new city would have to display the power and grandeur worthy of an imperial regime. The capital had to be ordered, beautiful, and ensure military efficiency. The poor were deemed undesirable under the Second Empire for they suggested "disorder and incivility."³¹ Cholera too was intolerable because it also connoted disorder, incivility, and, as

+
squalid (adj) = (of a place) extremely dirty and unpleasant, especially as a result of poverty or neglect; showing or involving a contemptible lack of moral standards (OED)

+

+

+

we have seen before, Asia, the East, and otherness.

+

note = To admit an outbreak of Asiatic cholera was too dishonourable a confession of backwardness. Italian authorities at both national and municipal levels adopted a policy of concealing and then denying the existence of an outbreak

[14] While scientific advancements in sanitation and hygiene for industrial cities had largely overcome cholera by the end of the nineteenth century, Naples was hit by a major epidemic in 1884 that King Umberto I considered a profound **embarrassment**.³²

Panic was widespread, distrust between classes led to insurrection, and miasmists were butting heads with Koch's brand-new (1883) germ theory. A plan, a project known as

Risanamento, was conceived to cholera-proof the city. The rehabilitation's narrow scope focused on Naples' Lower City and its "infamous tenements,"³³ and called for **sventramento**, or a "surgical" intervention. In the King's language, an "excision was required that would remove the hovels where *V. cholerae* had nestled."³⁴ The project followed Paris's miasmatic-plan, prioritizing light and air over water. In Naples disease began when it reached the groundwater beneath the city. There, under the right conditions of warm temperatures and high humidity, microbes fermented and emitted poisonous **effluvia** that the population subsequently inhaled.

+

risanamento (trans.) = Italian for "rehabilitation" or a "restoration to health"

+

effluvia (n pl) = an unpleasant smell or exhalation, as of gaseous waste or decaying matter

+

+

+

The soils, therefore had to be protected. Sewers were built to [15] flush away poisonous airs, big, bright boulevards (*rettifilo*) were cut through the urban fabric and organized along the lines of prevailing winds. Miasmatic cobblestone streets were paved over. Tenements were demolished to thin out the population and the rubble was recycled to **elevate housing away from toxic soils**. This layer of insulation between the soil and the people was a defense mechanism to trap vapours belowground so they were unable to poison the atmosphere. Unsurprisingly, Naples succumbed to the last significant epidemic in western Europe in 1911.

+

note = the age of bacterial disease gave birth to many aspects of modernism. When implementing his *pilotis*, Le Corbusier wanted to detach the building from "the humid ground where disease breeds"³⁵

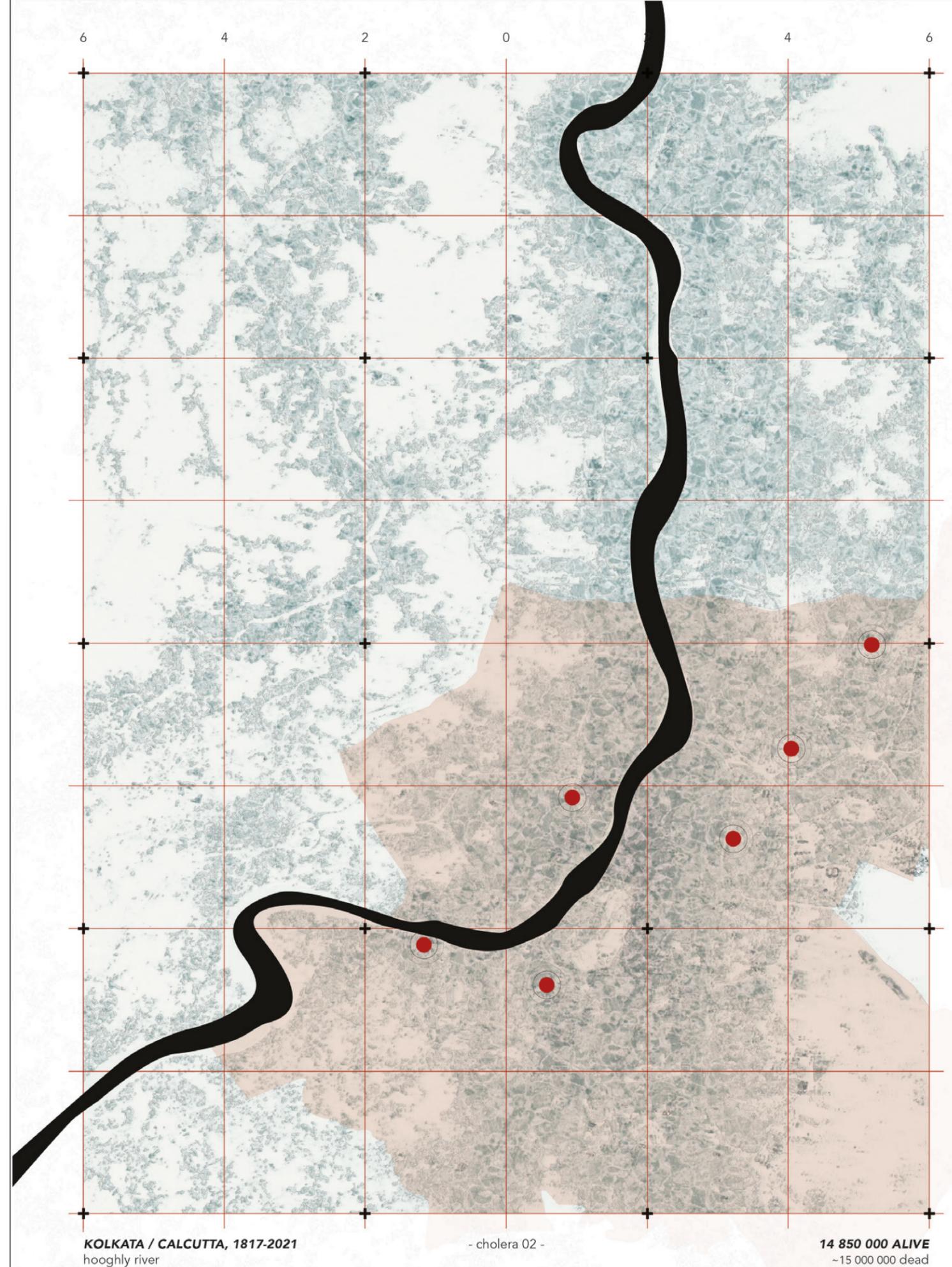
When the pandemic struck Paris, the German poet, Heinrich [16] Heine realized that it brought down the façade of tranquil normalcy and allowed the anatomy of society to be scrutinized.³⁶ By exposing the horrid living conditions of the working class in Paris, cholera had given Parisians a glimpse of the future: there were too many people living with too little. The status quo could not persist. Revolution was on the horizon.

2.2.5 CHOLERA TODAY

[17] Because of cholera we have epidemiology. Epidemiology has, in turn, guided modern, global public health. By the turn of the twentieth century, most European and North American cities reduced the risk of cholera outbreaks by developing urban water infrastructure, such as Bazalgette's system for London. The same could not be said for the much of the rest of the world (Figure 54). David Arnold made the crucial observation that, "Western medicine in India was a colonial science and not simply an extension or transference of Western science to a colonial outpost ... [I]t ... had grafted onto its ideas and concerns that had their origins in India or in Europe's Orientalizing of India."³⁷ Between 1865 and the end of British rule of India in 1947, colonial officials reported 23 million deaths from cholera.³⁸

[18] Cholera outbreaks remain possible today as climate catastrophe affects non-Western cities. Now that over half of the world's inhabitants live in cities, and hundreds of millions experience

- +**
legend (opposite)
- outbreak
 - 10m topographic increment
 - hooghly river
 - susceptible to a cholera outbreak



+

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inadequate housing and water supply, unsafe sanitation infrastructure, or have unequal colonial relationships in the global trade network, the risk of cholera outbreaks is profoundly troubling for many African and Southeast Asian cities. The ways in which we reflect on cholera and where it came from is a predominantly **Western concept** and caters to westernized worldbuilding. Consider this excerpt from *The New York Times*' article, "Turning the Tide Against Cholera." Pay attention to the language:

*Two hundred years ago, the first cholera pandemic emerged from these **tiger-infested mangrove swamps**. It began in 1817, after the British East India Company sent thousands of workers deep into the remote Sundarbans, part of the Ganges River Delta, to log the jungles and plant rice. **These brackish waters are the cradle of Vibrio cholerae**, a bacterium that **clings to human intestines** and emits a toxin so virulent that the body will pour all of its fluids into the gut to flush it out. Water loss turns victims ashen; their eyes sink into their sockets, and **their blood turns black and congeals in their capillaries**. Robbed of electrolytes, their hearts lose their beat. Victims die of shock and organ failure, sometimes in as little as six hours after the first abdominal rumblings. **Cholera has***

+

note = even cholera's discovery took place in a country that was first a corporation (East India Company) followed by a colonial state (British India)

+

note = language binding the horrors of illness (cholera) to landscape (Ganges Delta) in *The New York Times* passage is bolded

+

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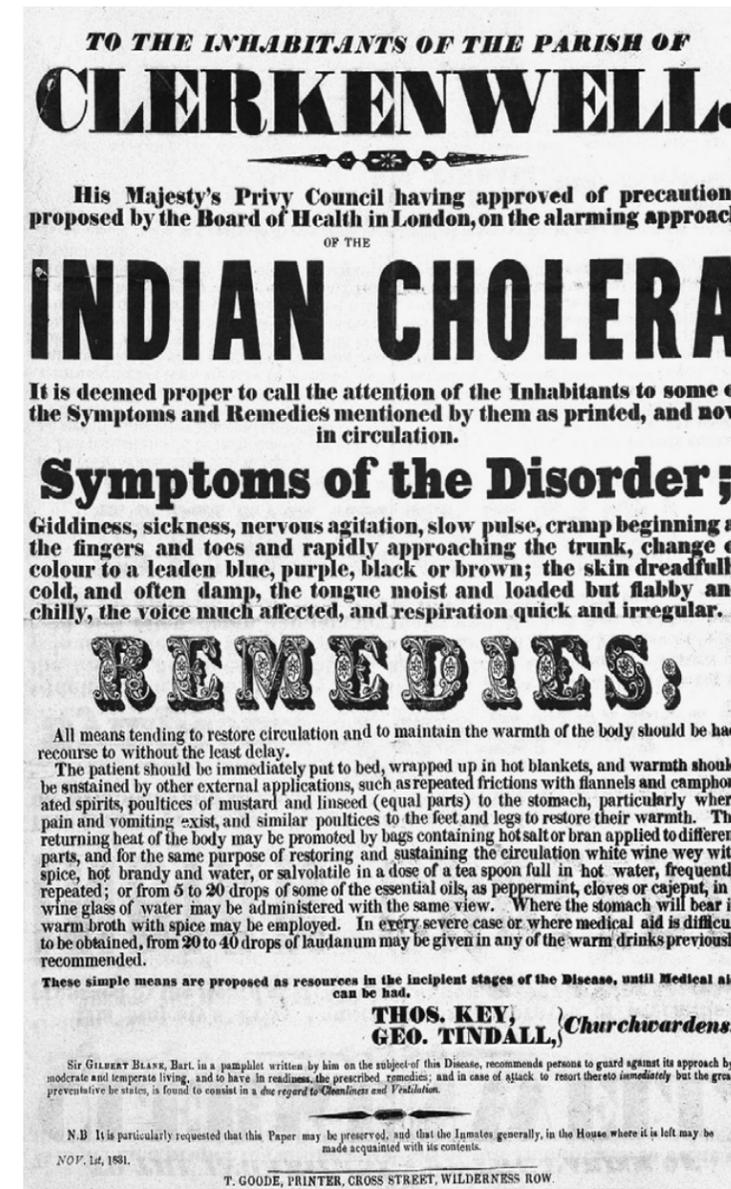
probably festered here for eons. Since that first escape, it has circled the world in seven pandemic cycles that have killed tens of millions.³⁹

This thesis examines how contagious disease is bound to an^[19] urban environment, but in this example, *The New York Times* binds illness to the "tiger-infested mangrove swamps" of the Ganges River delta. Branded onto this landscape is a racialized horror entwined with the brutalities of the disease that are prescribed to the landscape and the people who roam it – namely the Indian/Bangladeshi Muslim pilgrims journeying to Mecca.⁴⁰ Clichés such as "tiger-infested mangroves" create an fictionalized form of the East that continue to "glower and threaten the global body as much as to the famous Broad Street pump and John Snow's iconic morbidity maps of London's Soho" (see PROSTHETIC 06).⁴¹

The narrative modes in which cholera is manifested are^[20] colonial products and they are with us today: The China Virus, the Kung-Flu, the Spanish Flu. They attach metaphor and cast blame away from ourselves. While imperial London

was fighting an illness “seen as an alien invader, a colonist in its own right, occupying both body and land,”⁴² India was viewed as stagnant and lacking self-discipline, “like the immature child of the great British parent.”⁴³ Cholera came to symbolise the aspects of Indian society most feared by Europeans. Immigrant communities of East London were seen as unhealthy and vulnerable until “improved” (yet were the last communities connected to Bazalgette’s system); India, on the other hand, was seemingly beyond hope. Because of cholera and its fictitiously disease-ridden landscape, India became a representation of disorder and uncleanliness, inextricably bound to Asiatic cholera (Image 56).⁴⁴ For these reasons, it is argued that London’s colonial cholera literature remains – and is told – as an epidemic fiction.

opposite = Indian cholera poster (1831)

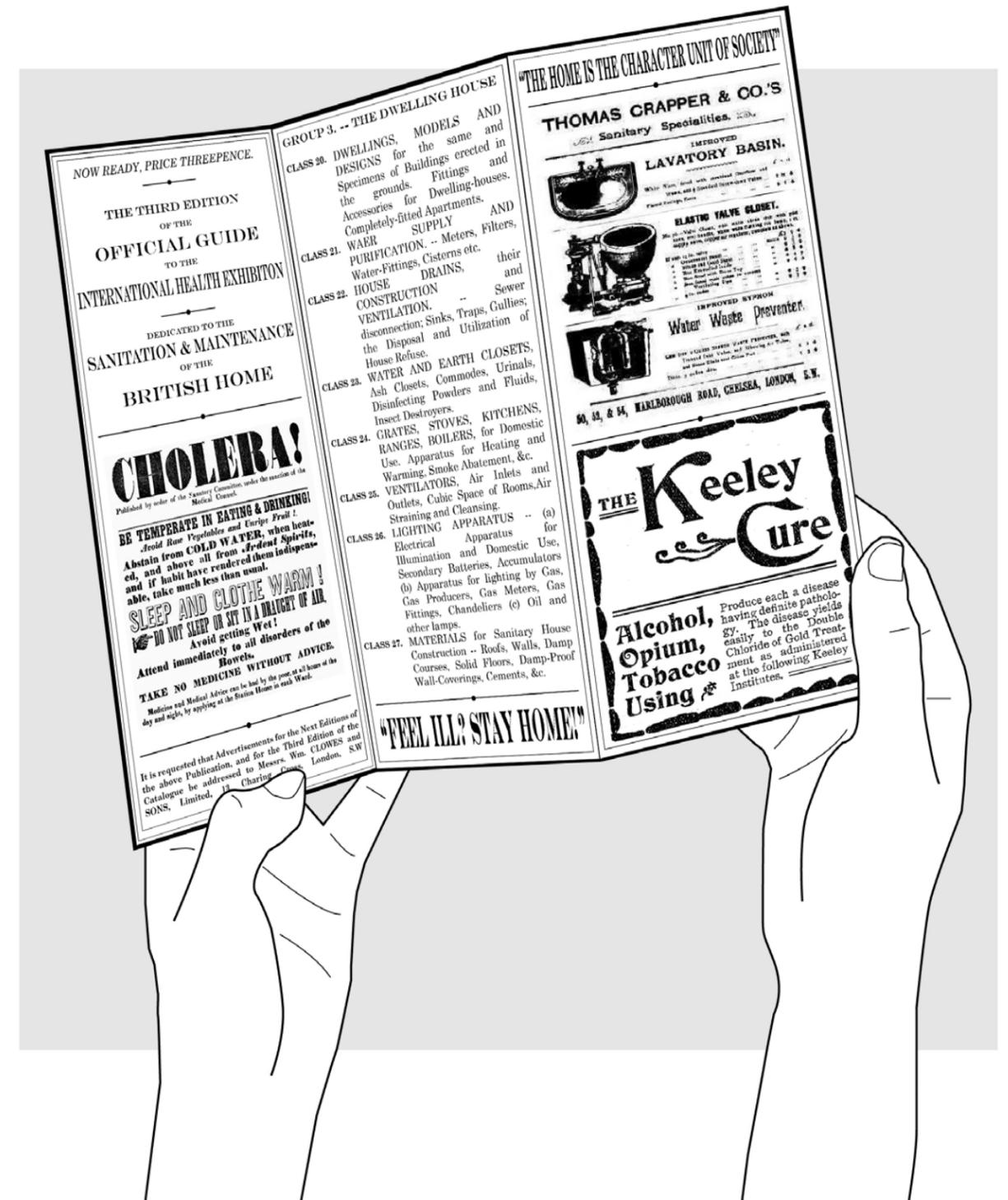


2.3 Parable 04
quarantine is for losers

see parallel 04, "epidemic & empire" on pages 126-7

WHY THE BRITS BROKE THE RULES

- [1] The British were the first to reject the lazaretto system in an effort to promote free trade and quickly expand their global reach.⁴⁵ The forty days spent in lockdown was seen as a hinderance on their economic growth.
- [2] London's solution was to domesticize the lazaretto: a do-it-yourself quarantine system. With pamphlet propaganda, sanitarians encouraged London's upper class and educated households to regulate their own physical health through the regulation of their homes. The pamphlets, as objects, "were among the most common in the literature of architecture, cheaply produced, widely distributed, and generally discarded by their owners as soon as their usefulness ended."⁴⁶ The movement towards domestic sanitation - in the interest of the expansion of the empire - was one of the most important public health developments of the nineteenth century and one of the driving forces behind modern urban planning and social housing.



+ + +

2.4 Parable 05

enter: epidemiology

see parallel 05, "pathological cartographies" on pages 128-9

IMPLICATIONS OF DRAWING DISEASE

[1] Bodies are vectors; carriers of a virus. The microbe becomes political during a pandemic, as the body becomes not only a surface to read, but a territory to administer, and a network that contaminates. Contagion and rhetoric combine together to create different forms of pandemia. By monitoring, tracing and mapping, the illness "exposes political bodies who rely on it to perpetuate their own power and governance, often being parasitic to a virus."⁴⁷

[2] Mapping illness means you are marking the geographic location of the mortality of ill bodies. What it really means is that once a specific address has been prescribed with illness, the building and the bodies within that building are bound to the illness and its metaphors. These are pathological cartographies.

[3] John Snow may have saved London from epidemic disaster, but the black bars on his ghost maps also led to the stigmatization of Soho and the addresses prescribed by cholera.

+
relevant reading = Orkan Telhan and Dietmar Offenhuber's "The Inscriptome: Virus as a Visual Instrument" is an informative article on the politics of visualizing an epidemic



2.5 Parable 06

great stinks

see parallel 06, “scales of resiliency” on pages 130-1

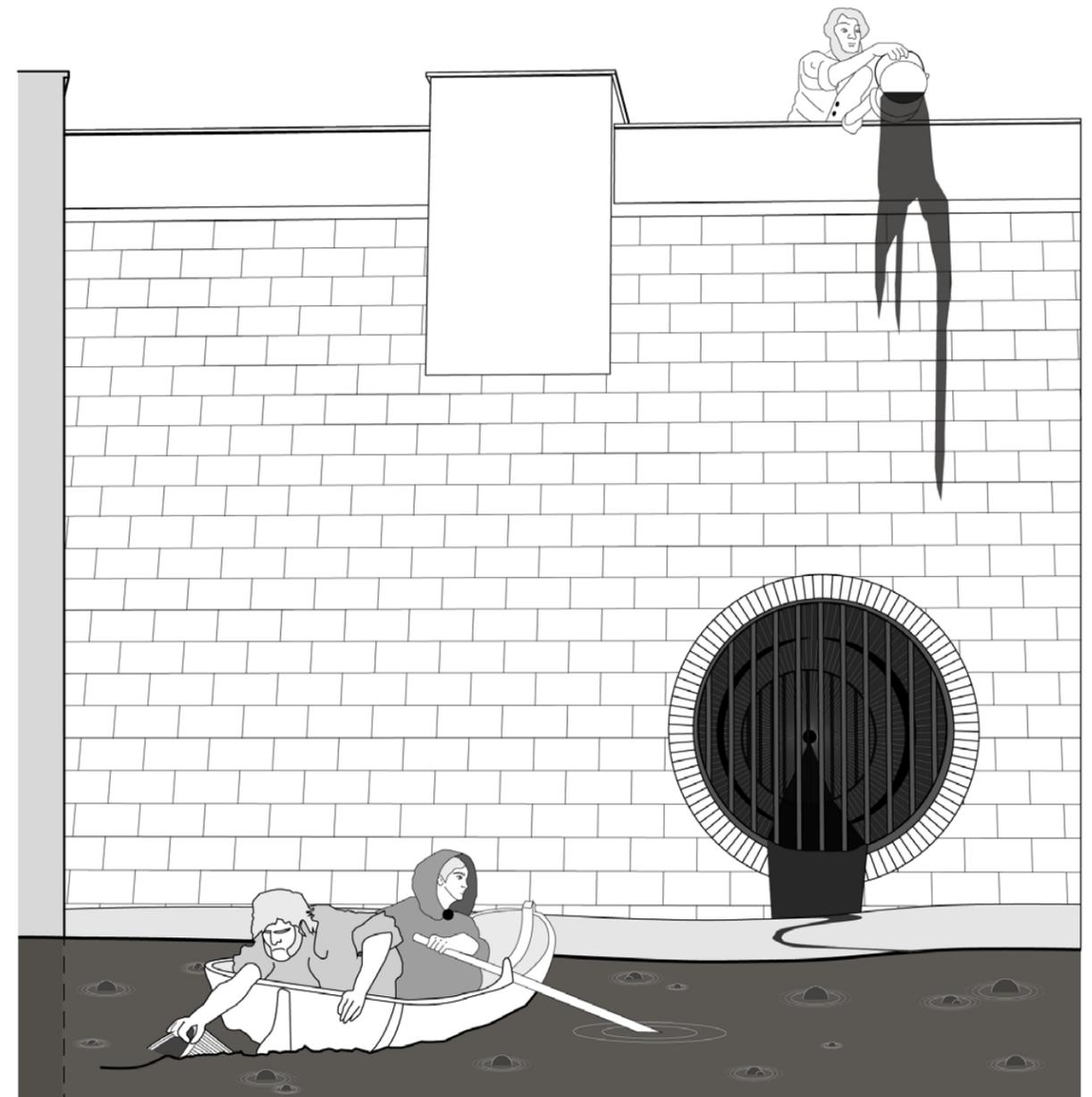
SANITARY REFORM OF CITIES

[1] After dedicating much of his career as a writer critiquing the living conditions of Victorian London, Dickens begins *Our Mutual Friend* (1865) with a description of a father-daughter team of **toshers**, stumbling across a corpse floating in the Thames. The father pockets some coins from the body and asks, “What world does a dead man belong to? ‘Tother world. What world does money belong to? This world.”⁴⁸ There are two worlds here: that of the dead and that of the living, and they began to coexist in London’s marginal spaces. Where there was great industrial, economic prosperity, there existed an equal, opposite “ghost class” of the less fortunate, the dispossessed, the disenfranchised.

[2] Parable 06 evaluates the dichotomy - life and death (tosher and corpse), clean and filthy (a person’s proximity to water), rich and poor (merchant ship or scavenger boat) - at the heart of London’s sanitary reform: The River Thames.

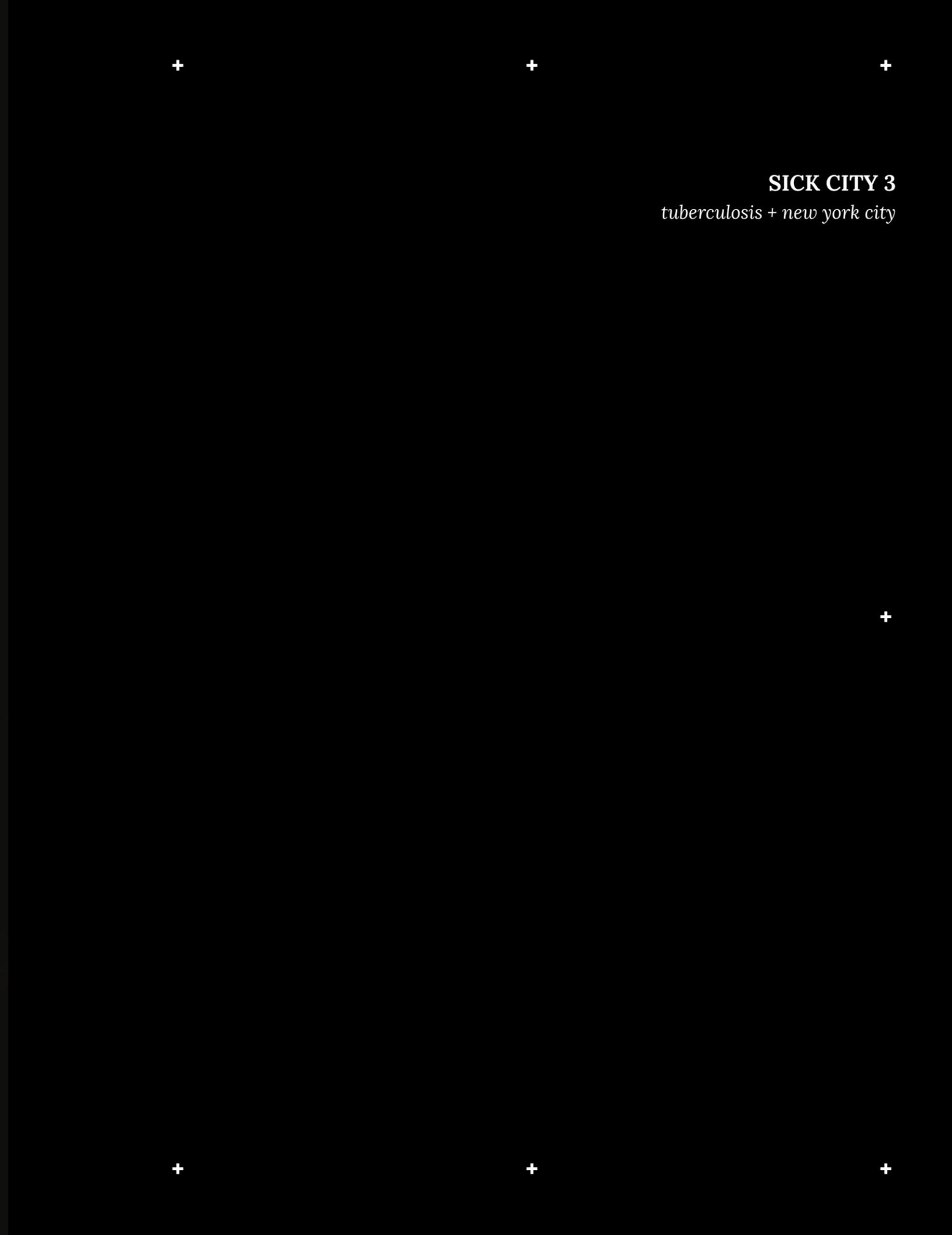
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tosher (n) = “The sewer-hunters were formerly, and indeed are still, called by the name of ‘toshers,’ the articles which they pick up in the course of their wanderings along shore being known among themselves by the general term ‘tosh,’ a word more particularly applied by them to anything made of copper” (Henry Mayhew)





SICK CITY 3
tuberculosis + new york city



+

+

+

Pathogens R Us

URBAN
APOTHECARY

+

PRESCRIPTION

TUBERCULOSIS

O R G A N I C	N ^o	
	003	
	FOR: NYC EXP: 1921 <small>(dd.mm.yy)</small>	
ALL OF OUR MICROBES ARE UNSUSTAINABLY SOURCED		

INGREDIENTS: la femme fatale, the tubercular look, a romantic outlook on disease in popular culture, consumption, coughing, blood, phlegm, chest pains, tiredness or weakness, lack of appetite, weight loss, night sweats, chills, fever. **MAY CAUSE:** lung block, new immigration policy, a sudden urge to clearout slums or change housing typology for the poor, a desperate need for fresh air and sunlight, exile at a sanatoria, romanticism and/or a tendency to kill of your main character with a dignified or redemptive death.

3.1 TUBERCULOSIS romanticizing disease

“The tubercular look, which symbolized an appealing vulnerability, became more and more the ideal look for women – while great men of the late nineteenth century grew fat, founded industrial empires, made wars, and plundered continents.”
– Susan Sontag, *Illness as Metaphor*

+
TB (abbr) = tuberculosis

m. tuberculosis = main strain of microbe causing TB; classified in a genus with nearly 200 species of mycobacteria

[1] Tuberculosis (TB) is one of the oldest human afflictions. Over thousands of years, **M. tuberculosis** has adapted to inhabit almost every organ in the body. This section explores TB as “consumption” versus “contagion.”

3.2.1 LA FEMME FATALE

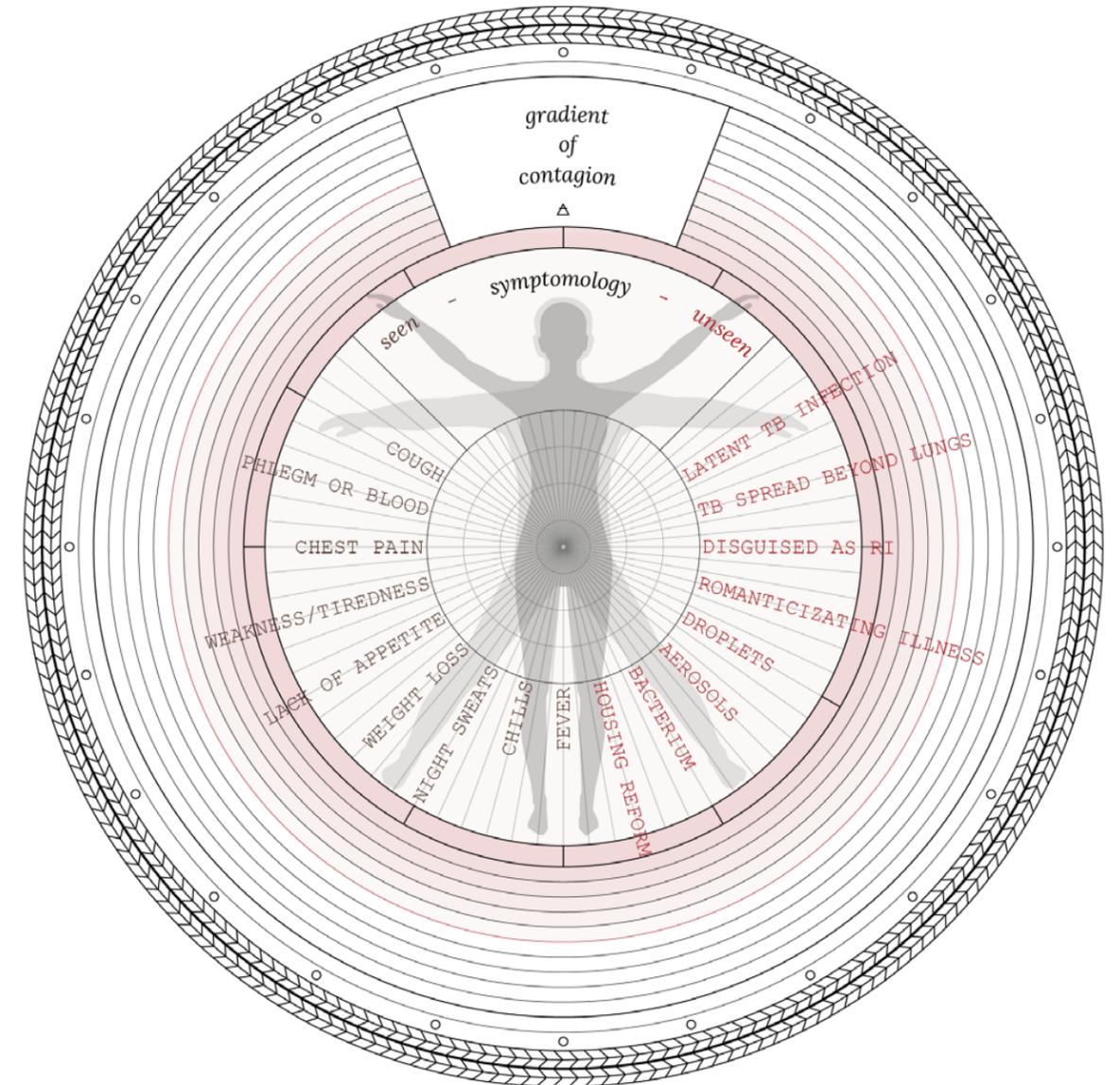
+
opposite = cavity sam, tuberculosis

[2] When casting the lead in his play *La Dame aux Camélias* (1852), Alexandre Dumas Jr. needed the perfect actress to portray the “exploits, redemption, and death from consumption of a Parisian courtesan.”¹ Securing the lead was the renowned actress, Sarah Bernhardt. No one could die on stage quite like her. Often a young and beautiful victim of TB, **la femme fatale** personified the deadliest disease of the nineteenth century.² Bernhardt’s role was a hit, and for decades she completed over a thousand performances around the world, captivating audiences with passionate speeches, swoons and coughs.

+
la femme fatale (n) = an archetype exploited by playwrights to convey a “seductive woman who lures men into dangerous or compromising situations.” (Miriam-Webster)

+
note = (see PROSTHETIC 02)

[3] TB was in. Thin garments and thin bodies became **haute couture**. Popular culture exploited the drama intrinsic to the malady.





The visibility and slow progression of TB's symptoms exposed human vulnerability in a way that could not be portrayed by other diseases. Bubonic plague and cholera had symptoms that were terrifyingly ugly, but death came quick, however violently. For many storytellers, "TB remained the preferred way of giving death a meaning – an edifying, refined death."³ Nineteenth century literature was littered with descriptions of "beatific" deaths from TB. Consider Fantine's redemptive death in *Les Misérables* (1862) and Smike in *Nicholas Nickleby* (1839), where Dickens refers to TB as the "dread disease," to soften the death of his character.⁴ TB was used to great melodramatic effect in literature, effectively numbing audiences with the tragic, slow death of protagonists, which contrasted starkly with the swift, appalling ends of cholera and bubonic plague.

+
opposite - collage of la femme fatale and "consumptive chic"

TB was portrayed as a disease of passion, where fever was a [4] sign of an inward burning. The metaphors that describe love – the image of a "diseased" love, of a passion that "consumes" – predate the Romantic movement. In Act II, Scene 2 of Sir George Etherege's 1676 play, *The Man of Mode*, he writes,

“When love grows diseas’d, the best thing we can do is to put it to a violent death; I cannot endure the torture of a lingering and consumptive passion.”⁵ Or, in *The Magic Mountain* (1924), Thomas Mann observes that “symptoms of disease are nothing but a disguised manifestation of the power of love; and all disease is only love transformed.”⁶ As “contagion,” however, TB was considered to be a “social” disease. Its apparent causes – poverty, malnutrition, weakness and overwork – created a spectacle of the poor but also reflected widely-held anxieties about the unhealthy effects of urban life. As germ theory became more widely accepted, TB as a bacterial infection came to replace its romanticized tragedy. Consumption became, more firmly, contagion.

3.1.2 CITY AS ILLNESS

[5] The year is 1903 and Ernest Poole (1880-1950), the Pulitzer Prize-winning American journalist had just wandered around the Lower East Side, calling it the most congested and disease-ridden place in the city, or perhaps, the world.⁷ His report, *The*

Plague in Its Stronghold: Tuberculosis in the New York Tenement, linked between disease and social “pollution,” (identical to Victorian public health theory as discussed previously), which held that infectious diseases – such as TB – were caused by bad air and exacerbated by moral, cultural or ethnic shortcomings. Take for example the following passages from his report:

*It is a Plague in disguise. Its ravages are insidious, slow ... It is the Plague of all plagues – both in age and in power – insidious, steady, unceasing.*⁸

*With every breath I felt the heavy, foul odor from poverty, ignorance, filth, disease.*⁹

*The halls above and behind are grimy, offensive, hung heavy with cobwebs, and these cobwebs are always black. The stairways in the rear house are low and narrow, uneven, and thick with dust piled up in every nook and corner. This dust is virulent with disease. Through the years a score of consumptives have lived here, groping their way each night up the stairways, stopping on the landings to catch their breath and cough, and so spread the infection. But for light trickling through grimy panels in doors, these halls are forever dark. It is in halls like these that the germs can live two years or longer... This house is not only a danger to those who live in it. From here the Plague is constantly spreading out all over the city – to rich and poor alike.*¹⁰

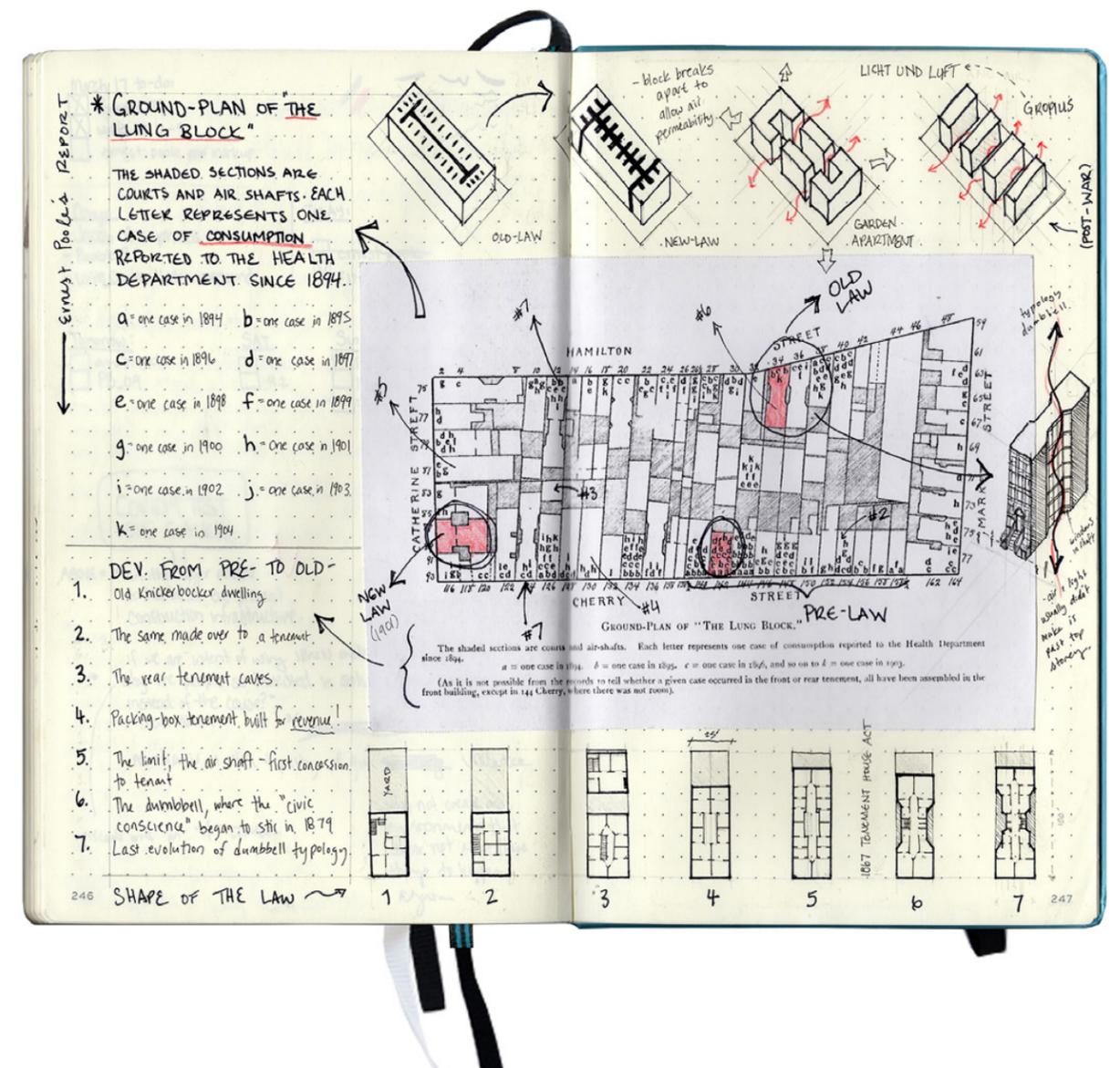
+
insidious (adj) = proceeding in a gradual, subtle way, but with harmful effects

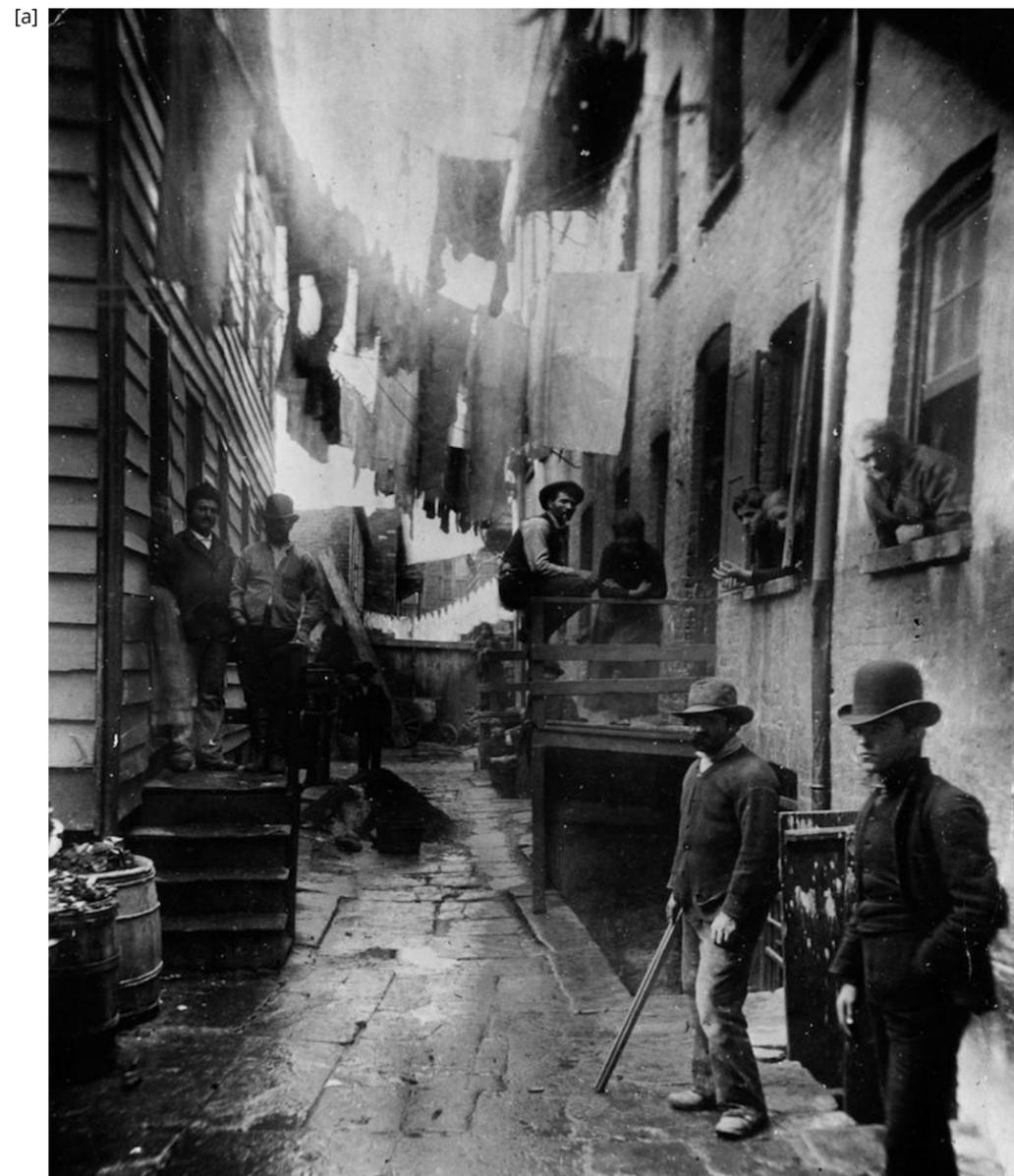
+
lung block (n) = the generic name for anywhere that TB thrived in the city. The city block that Poole mentions in his report (opposite) later becomes Knickerbocker Village in 1933

+
next spread = another social reformer, Jacob Riis, used photography to evoke compassion in his report, *How the Other Half Lives* (1890)

Poole mentions tuberculosis very little in his report, and instead, consistently refers to it as the Plague, emphasizing the severity of his observations. When discussing the Jewish, Irish and Italian families of the **Lung Block** as particularly prone to disease, he blamed their “natural” inclination towards crime, drinking, ignorance, and poverty.¹¹ Many agreed that in order to attack the disease, you have to attack “its stronghold” in the tenement. Poole’s writing was sufficiently **influential**, and attracted the government’s attention.

[6] Robert De Forest, head of the 1901 Tenement Commission observed, “I know of no other tenement house block in this city, which is so bad from a sanitary point of view, or from a criminal point of view. Every consideration of public health, morals and decency require that the buildings on this block be destroyed at an early date.”¹² Medical and social ills (real or imagined), that proliferated among the city’s immigrant and working poor populations, were thought to infect the city at large and therefore had to be removed.





+
clockwise - photographs from Jacob Riis' *How the Other Half Lives* (1890), a report that digitized the "social ills" of the city:

a - "Men stand in an alley known as 'Bandit's Roost'"

b - "Boys from the Italian quarter with a 'keep off the grass' sign"

c - "A young girl, holding a baby, sits in a doorway next to a garbage can"

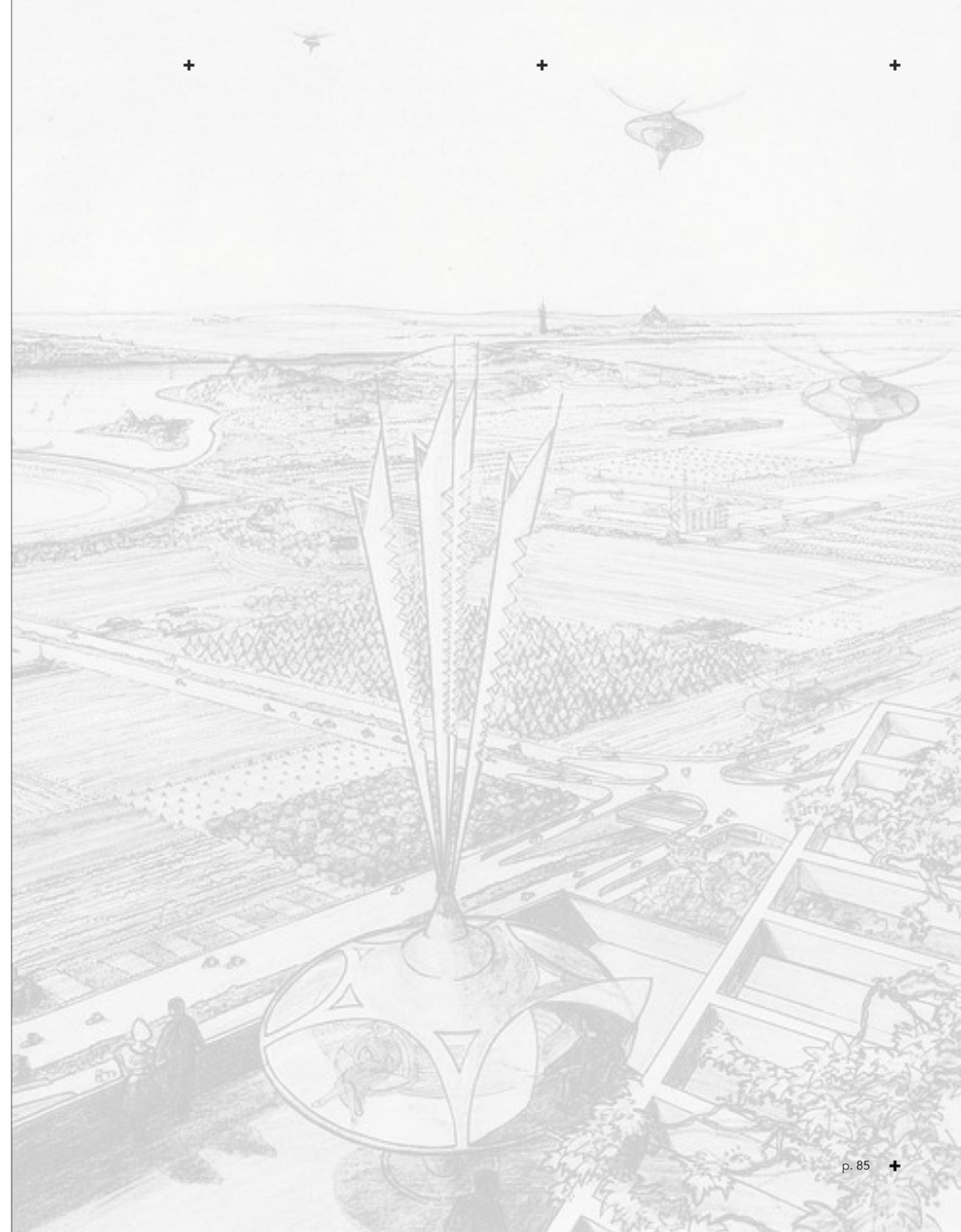


the lay-out of cities. Without hygiene and moral health, the social cell becomes atrophied.”¹⁶ The ideal, and healthy, society was achieved, according to Le Corbusier, by ridding illness in the body politic by “demolishing rotten old houses full of tuberculosis,”¹⁷ and replacing them with towers in the park. Frank Lloyd Wright’s Broadacre City, with its foundational rights of democracy and freedom,¹⁸ was a part of the American pursuit of a new aesthetic to embody a patriotic, republican order. His attitude towards the city is plainly evident in *When Democracy Builds*:

OUR PRESENT SOCIAL AND ECONOMIC DISEASE

*To look at the plan of a great city is to look at something like the cross-section of a fibrous tumor. Seen in the light of space needs today there are not only unnatural concentrations of tissue but more and more painfully forced circulation, comparable to high blood pressure in the human body. Think of the towns you know, then try to imagine what modern mobility and new space-annihilating facilities are doing to them!*¹⁹

[19] The city in Frank Lloyd Wright’s mind – as well as most of the modernists – was synonymous with disease.



3.2 TUBERCULOSIS public health tools

	population	density
NYC	1 513 501	15 026
Manhattan	1 440 101	28 080
10th Ward	57 514	129 200
11th Ward	75 708	95 448
13th Ward	45 882	105 960

table 2 = population density (per sqkm) of the Lower East Side, 1890

superspreader (n) = a person who transmits an infectious disease or agent to an unexpectedly or unusually large number of other people

opposite left = ellis island
opposite right = island of manhattan
x = ernest poole's lung block

[1] New York's reaction to TB sought to control the mobility and behaviour of suspect and susceptible populations (immigrants and working-class poor) as well as to retrofit their homes. This new, imperial language took to germ theory, but the architectural avant-garde remained miasmatic: altering space in a pursuit of light and air.

3.2.1 - NEW WORLD QUARANTINE

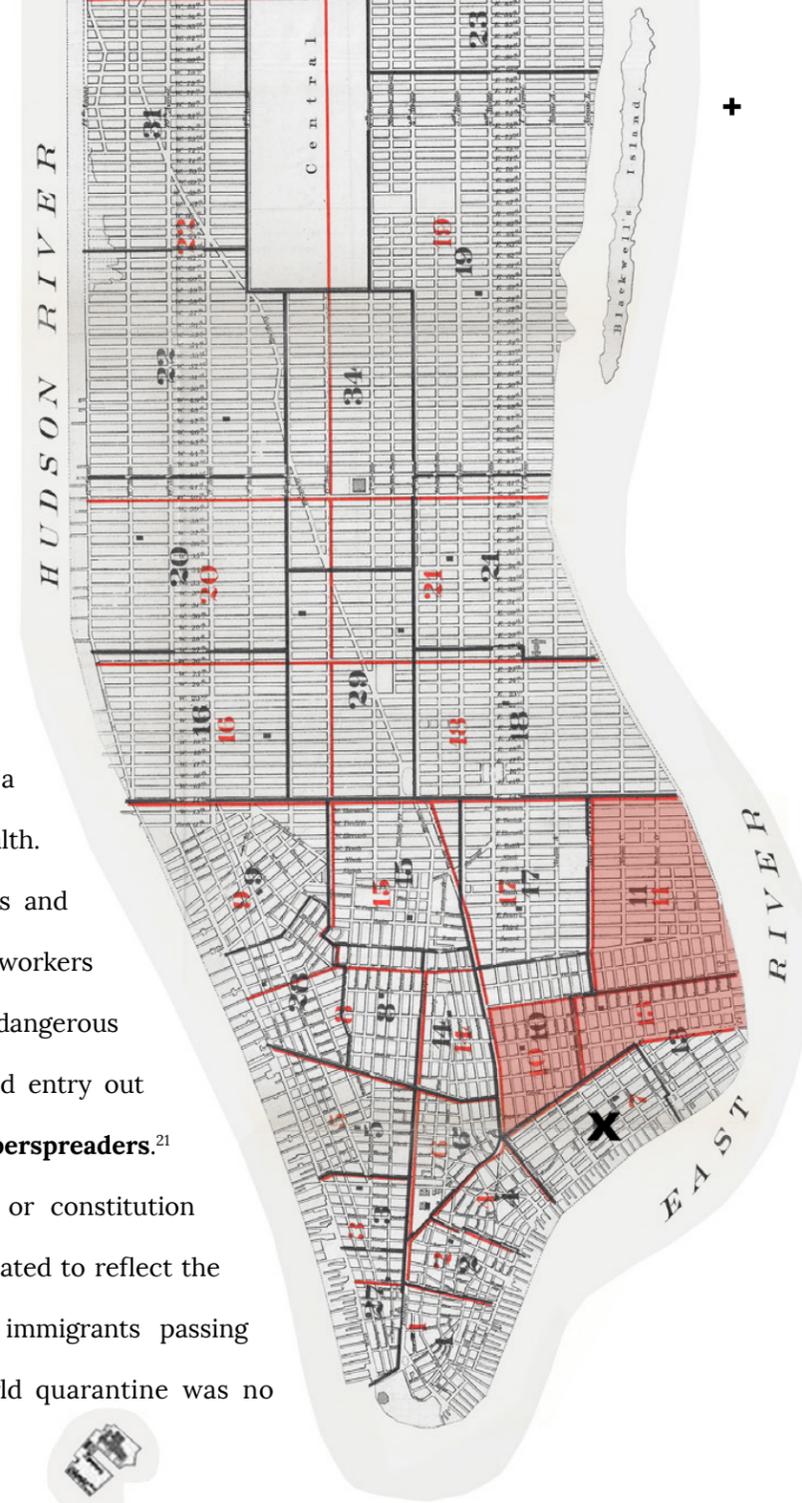
[2] As the world migrated towards North America, port cities transformed to become a part of the lazaretto system. New York saw the transformation of its harbour as people and goods arrived from across the Atlantic. Fears of epidemics and disease arriving from outside of the country increased with the growing number of people disembarking at Ellis Island.

[3] TB, as well as cholera, led to a corresponding shift in epidemic control tactics – from the exclusion of infected bodies to the management of risk in the population as a whole. Quarantine on Ellis Island shifted from trade – foreign bodies that provided

commerce – to immigration – foreign bodies that provided workforce. This reorganization was a means of controlling individual health. Ellis Island contended with diseases and bigotry. For example, Irish canal workers were labelled as “exceedingly dirty,”²⁰ dangerous carriers of cholera, and were denied entry out of fear that they would become **superspreaders**.²¹ The notion that a person's habits or constitution predisposed them to illness was updated to reflect the experience of nineteenth-century immigrants passing through Ellis Island. This New World quarantine was no longer just a 40-day holding period as a precaution against contagion, it had evolved into a detention center for undesirable ethnicities.

3.2.2 - CHRISTMAS SEALS

By the turn of the twentieth century, American media took a [4]





similar approach to controlling the spread of TB as Victorian London did with cholera. The difference? Vectors. Controlling the spread of cholera required controlling water, which is much easier than controlling air. Much of TB was blamed on poverty and squalid surroundings, as many writers described, another way to beat it was to control the behaviour of those bodies believed to carry the disease. In Poole's report, he notes the nature of the disease as follows:

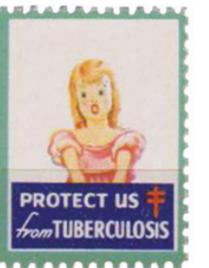
*... (TB) can be **stamped out**. Its workings are no longer hidden. We know now that consumption is not produced by direct heredity – the tendency alone is inherited. It is produced by infection from living germs, coughed up, millions in a day. Ignorance lets these millions live, spat out on walls and floors and pavement, to float later in the air and so spread the infection. Darkness, foul air and filth keeps these millions alive.²²*

These warnings about “germs” provided fertile ground for the emerging advertising craze that proclaimed the value of clean living for the growing, American middle-class. It was common to read snippets like “15 minutes in the sun, 15 years in the dark,”²³ and “Carless spitting, coughing, sneezing spread influenza and tuberculosis.”²⁴ Around the holidays, the American Red Cross had a Christmas stamp fundraiser, which, as Poole noted, could “stamp out” TB.

3.2.3 - LAW AND TENEMENT

Where a thousand people fled to suburbia, ten thousand [5] more came to the city looking for work. With population increase, housing strategies in mid-nineteenth century New York included shantytowns (in the undeveloped north of the city), converted rowhouses (abandoned by the suburbanites), and tenements – all reflecting an unregulated approach to urban housing. This housing lacked sufficient municipal infrastructure and costs were offset by overcrowding the units. Before municipal intervention, “pre-law” tenements were five stories, with twenty apartments that were comprised of four rooms per apartment. Each building totaled about one hundred and fifty people (see TABLE 2). These “Railroad” tenements lacked privacy, light, and ventilation, but fostered a perfect environment for contagion.

State regulation began in 1867, out of fear of illness and fire, [6] with the Tenement House Act. This “Old-Law” tenement took on a “dumbbell” form to create central airshaft to let in light





and air into the center of the building. The act also required a privy and a water source on every floor, the elimination of basement units, and the addition of fire-escapes. Officials were still upset about the overcrowding, and soon Old-Law was replaced by the New-Law tenement in 1901. By adopting the perimeter-block type (Figure 63), the center of the block was opened to allow for cross-ventilation of all tenement buildings. In the following decades, housing projects developed over multiple city blocks, with buildings growing taller and further apart, suggesting that physical distance guaranteed immunity. Through the Tenement Act, and its revisions, the typology of the tenement changed with the hope that its reconfiguration would help to eliminate the contagious illnesses (literal, moralistic and social) of the working-class poor.

+
opposite = airshaft of the Old-Law
"dumbbell" tenement

+

+

+

3.3 Parable 07 magic mountains

see parallel 07, "escaping the city" on pages 132-3

LICHT UND LUFT

+

licht und luft (trans) = light and air

[1] Prior to the invention of antibiotics, the treatment of TB coincided with the advent of modernism, which celebrated the integration of form and social purpose. Where modernism was an attempt to create a liberated expression of equality and a clean lifestyle with socialist values, the specialized institution of the sanatorium - where isolated patients were separated from the broader community and provided with the management of their illness - aligned with its focus on light, air, and rest. Flat roofs for **heliptérapie**, recliners for the **jour médical** on covered balconies, and an array of peaceful gardens were essential architectural features.

+

heliothérapie (trans) = heliotherapy; the therapeutic use of sunlight

[2] Since Hippocrates, the curative effects of fresh air were well known. Early healing landscapes included the warm airs of the Mediterranean, before shifting to the dry climate of alpine or desert regions. These "good airs" combined with prolonged periods of rest and a healthy diet, were to help the TB patient achieve some degree of remission.

+

jour médical (trans) = the cure; an obligatory daily two-hour period of quiet rest in the open air, usually between 2-4 p.m. Treatment could take weeks, months, years - Hans Castorp accidentally stays seven years in *The Magic Mountain*

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3.4 Parable 08 careless coughing

see parallel 08, “controlling behaviour” on pages 134-5

ILLNESS PROPAGANDA

[1] In New York City we see America’s first campaign to control tuberculosis in 1893. Koch’s bacterium discovery indicated that the major avenue of TB transmission were respiratory secretions between people. Therefore, in order to win the “War on Consumption,” behaviour had to be controlled to reduce “careless” coughing, spitting and sneezing of the population.²⁵

[2] In 1907, the United States started using Christmas Seals to combat TB. Sold for a penny each, the proceeds went to support the care of TB patients. The stamps sold-out in two days, and then developed into an annual, nationwide campaign. Artists used cheerful holiday greetings, the dimpled smiles of innocent children, and the watchful eyes of Santa Claus to control the behaviour of young and old alike. Although the campaign promoted the detection and treatment of individual cases, the campaign did little to improve underlying social challenges.



3.5 Parable 09
death by tenement

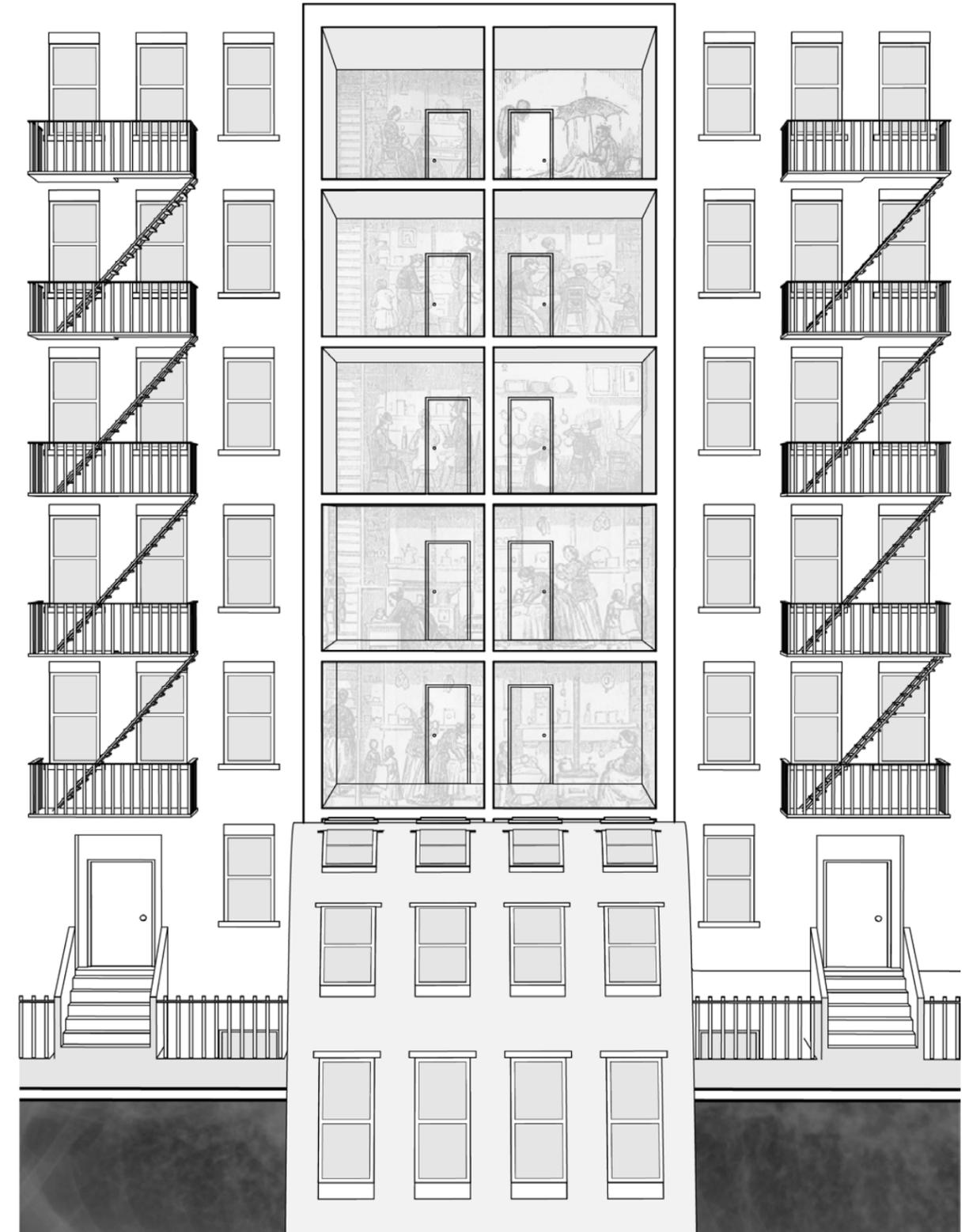
see parallel 09, "a new homescape" on pages 136-7

SANITARY REFORM OF HOUSING

[1] "Tenement" is a legal term, codified in city regulations, but is commonly used to refer to multi-family housing within a house or a block of apartments. In the 1867 Tenement House Law in the USA, a tenement is any building housing more than three families. It came, however, to symbolize inadequately serviced housing for the poor.

[2] The problem with the "Old-Law" (1879) and "Pre-Law" (1867) tenements lay in the narrowness of NYC's blocks, subdivided generally by twenty-five foot wide lots - appropriate only for single-family row housing. Plainly put, building tenements to fit twenty plus households, and their later overcrowding, created a sanitary problem. The airshafts of the Old-Law were too small to provide light and air to anyone below the top floor and instead were used as an impromptu garbage chute. "New-Law" (1901) increased the lot size to thirty-five feet, enlarged the airshafts, gave all rooms windows and each unit a toilet, and occupied less of the total lot area.

+ relevant reading = Metaphor illnesses can be found in Ernest Poole's 1903 report of New York's tenement conditions: <https://curiosity.lib.harvard.edu/contagion/catalog/36-990061702440203941>





SICK CITY 4
covid-19 + montreal

+

+

+

Pathogens R Us

URBAN
APOTHECARY

+

PRESCRIPTION

COVID - 19

O
R
G
A
N
I
C

Nº

004

FOR: MONTRÉAL

EXP: ??
(dd.mm.yy)



ALL OF OUR MICROBES ARE UNSUSTAINABLY SOURCED

INGREDIENTS: cough, shortness of breath, sore throat, headache, fever, loss of taste and/or smell, subscription to the Covid Alert app, government-mandated curfews, Black Lives Matter. **MAY CAUSE:** an inequal distribution of covid cases, testing centres, vaccinations and/or hospital beds, civic unrest, mistrust, toilet paper shortages, a yeast shortage, sourdough, hypochondria, long lines at Costco, adoption of a new hobby, unhealthy coping mechanisms, a sudden sense of dread when having to put on real pants, rent drops in cities, an existential crisis.

4.1 COVID-19
a “new normal”

“This will be the new normal until a vaccine is developed”
- Justin Trudeau, Prime Minister of Canada, April 2020

COVID-19 (n) = a disease caused by a new strain of coronavirus. ‘CO’ stands for corona, ‘VI’ for virus, and ‘D’ for disease (WHO)

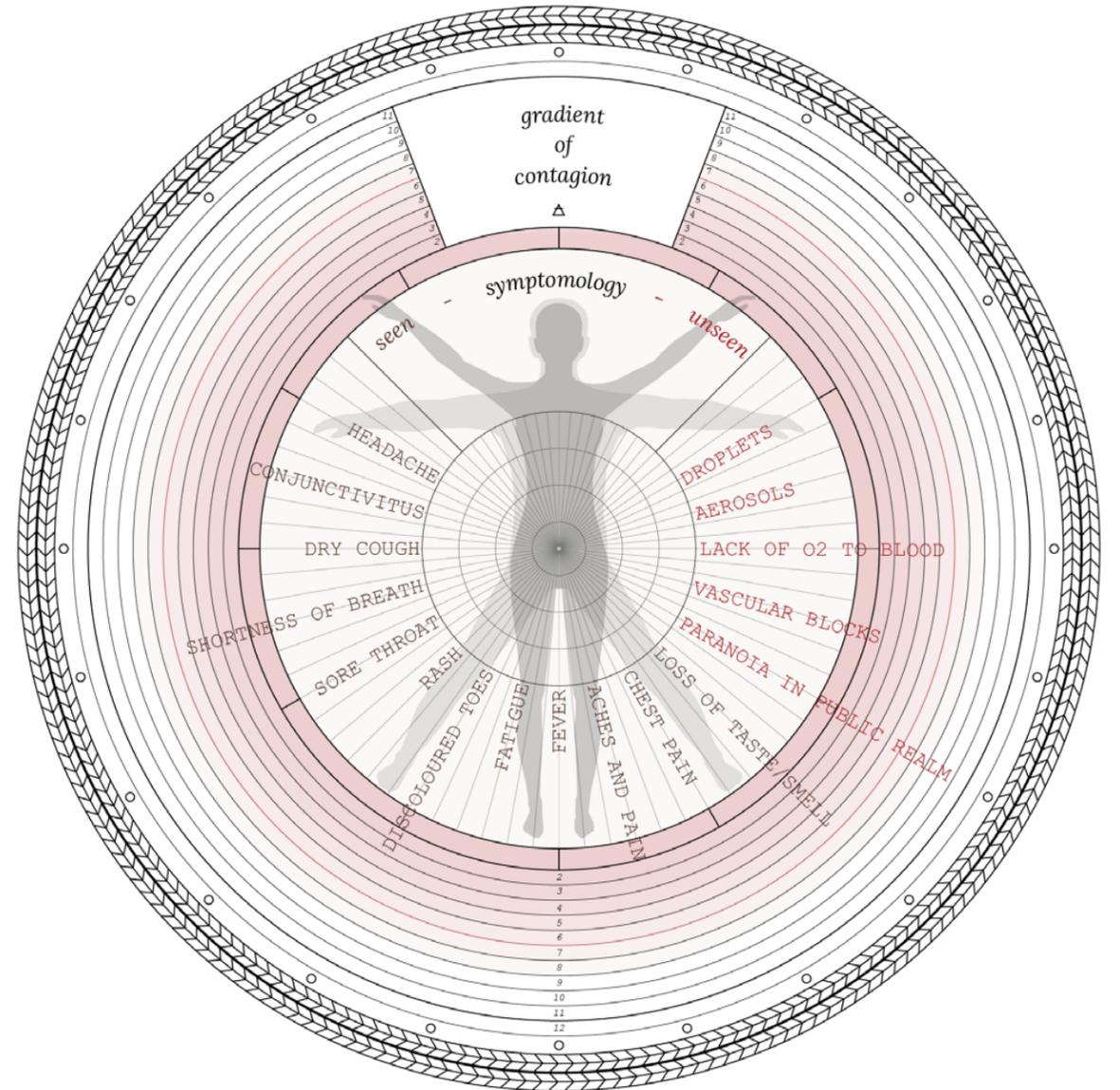
normal (adj) = conforming to the standard or the common type; (medical) free from any infection or other form of disease or malformation

normalcy (n) = the quality or condition of being normal; as the general economic, political, and social conditions of a nation

opposite = cavity sam, COVID-19

[1] Now. We have arrived at COVID-19. Our historical inclination to see viruses as metaphoric, as opposed to literal, is counteractive and counterproductive. We ceased to diligently prevent the spread of the coronavirus. Instead, we have insisted on calling it the “new **normal**.” The sick cities in this thesis highlight that this “**normalcy**” is anything but new – or normal – and we are fated to repeat its cycles of (1) panic and fear (2) sanitization and blame (3) immunity and hope, then ultimately: (4) forgetting.

[2] The cognitive framework of an epidemic serves to dehumanize those who carry the virus, or those imagined to be carrying the virus, namely, Chinese people from Wuhan – or if you are Donald Trump – China at large. Sadly, this too, is nothing new. Canada has seen more Anti-Asian hate crime than the US per capita,¹ and this number in Vancouver is up by a staggering 717% since the beginning of the pandemic.² The sick city oxymoron of humanizing a non-human virus while simultaneously dehumanizing an entire ethnicity of humans robs the humanity of those wrongfully blamed as well as deteriorates the global, regional, and local response.

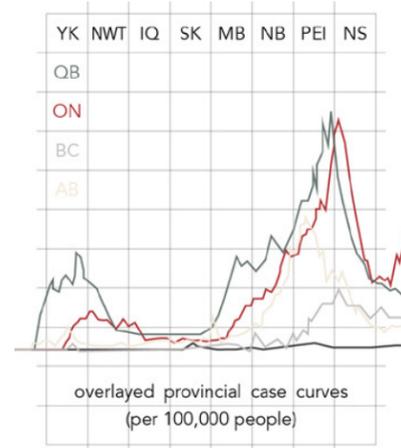


4.2 COVID-19
public health tools

« On pourra faire des siestes »
- François Legault, Premier of Quebec, December 2020

+
translation = « on pourra faire des siestes »
is a suggestion to take more naps

[1] The fourth – and final – sick city investigation looks at COVID-19 in Montreal. The thesis, so far, has looked at pandemics, disease and contagion through various systems – from trade to the city, and from the city to housing. We shift now to something more digital. The similarity between all of these is their regulation of the (sick) body.



[2] In one year, statistics as of March 2021 indicate that Canada has seen 927,065 Covid-19 cases and 22,617 deaths, a third of which are in Quebec.³ Montreal, the largest city of Quebec, is a COVID-19 hotbed, with 112,146 cases confirmed since the start of the pandemic.⁴ Compared to other urban centers (per 100,000 inhabitants), Montreal rests at the top of this graph. This next section investigates why this is and what public health responses are being implemented (or ignored from our historical amnesia).

4.2.1 SURVEILLANCE

[3] Data can be among the most powerful instruments when

combatting an epidemic. The prevention of disease lies in monitoring and mitigation efforts. Demographic data needs to be collected and then analyzed for macropatterns in mortality. This began, to an extent, with the lazarettos, and over time, this process became more technologically digital. Today, epidemiologists create illness mappings that spatialize locations with case reports from our smartphones. These data representations can be either used to contact trace and/or a tool for reform to, “diagnos[e] the ills of society and shin[e] light on its inequities.”⁵ Epidemiology is the foundation for a national response that involves “varying levels of contact tracing and self-isolation or quarantine; promotion of public health measures, including handwashing, respiratory etiquette and social distancing; and closing all non-essential establishments.”⁶

An immediate concern is the age-old debate of Big Brother [4] surveillance: an opprobrium regarded as a social or political danger that has to be minimized even when its use is justified. However, connotations of a “surveillance” infrastructure



below = Montreal protester, March 2021

seemed to have changed in the midst of COVID-19, where the language of surveillance is descriptive rather than evaluative, signifying it not as an oppressive, controlling tactic but rather a constitutive feature of a stable society (Figures 86-87).

[5] The second issue, aside from privacy concerns, is the infodemic.

News and social media are the main platforms in which public health measures are communicated to the public. Where information during the cholera epidemics in London and the TB epidemic in NYC were released incrementally by the day or week even, today, new information is released and updated by the second – and not all of it can be trusted (much like the quack cures discussed earlier). In times of uncertainty and crisis, news media coverage needs to convey accurate information, but the reliance of these journalistic infrastructures can be shaky and may indirectly endanger the public's health (fake news versus Stephen Colbert's "truthiness").

Doomscrolling spikes anxiety, mistrust and skepticism. People can be shamed for disobeying public health policies. In many ways, COVID-19 has amplified the



prominence of a person's digital persona, whose footprint is scrutinized more than their physical beings.

4.2.2 AN EVANESCENT SANITARY REFORM

On March 11, 2020 the WHO declared COVID-19 a pandemic. [6]

A day earlier, Montreal had issued a warning that one of the seven COVID-19 patients in the province had taken buses and the Métro before developing symptoms. On March 14, the Premier of Quebec, François Legault declared a public health emergency and the province began its shutdown the next day.

What followed was a kind of guerrilla sanitary reform, in which [7]

shelves were cleared of doctor's masks, gloves, and bottles of hand sanitizer. Two-meter chalk circles were painted on park grass to enforce social distancing. Businesses began hanging rows on rows of plexiglass partitions, hung from drop ceilings, intending to create an illusion of sanitary division. Restaurants frantically claimed sidewalk space for makeshift patios, in the form of huts, sheds, tents or **parkets**. Streets began pushing out

doomscrolling (v) = the act of consuming a large quantity of negative online news

parket (n) = a temporary projection to the adjoining boulevard that can be used as additional space for street furniture, landscaping, outdoor cafés and other pedestrian-related amenities (Toronto)

cars and transforming into “**transit malls**” or were altogether pedestrianized.

4.2.3 EPIDEMIC FICTIONS

transit mall (n) = a street, or set of streets, in a city or town along which automobile traffic is prohibited or greatly restricted and only public transit vehicles, bicycles, and pedestrians are permitted (TRB); ex. St Laurent Blvd during COVID-19

[8] The last public health tool is the fiction that has come out of this pandemic. The first, is the race-based link of COVID-19 with Asia. This has happened before - with “Asiatic” cholera - and in this instance, has led to blame and significant increase in hate crime. Another is the fiction of internationalism. Even with illness at pandemically devastating scales, corporate and political leaders have tended to remain quiet, and in the case of the US, withholding contributions to the WHO.⁷

[9] The third fiction is that of front-line workers serving a “greater good.” The impact of the pandemic on working-class Canadians and the new demographic of “essential workers” - the vast majority of whom are people of colour who enjoy few, if any benefits of this categorization - has already been colossal.⁸ At a time when these workers are celebrated

as “heroes” (don’t forget to clap for your National Health Service Worker or donate money to get Big Ben to “bong” for our workers) and asked to sacrifice their health for the imagined “greater good,” it is worth recalling that Europe’s imperial aspirations valorized duty and sacrifice to a shared endeavor (see PARABLE 04) of a so-called prosperity for all.

COVID-19 hotpots clearly map onto underserved and^[10] disenfranchised communities - without access to pharmacies, or clinics, or sufficient health services. Yet, these are the communities, who, by and large, stock grocery stores and shelves, delivers medicines and injections, food and support. Whereas, in what seems like an alternate pandemia, the actor Michael Keaton described his worry about COVID-19 and returning to work, so begun isolating in his 17-acre residence outside of London. The brutal irony is that COVID-19 lays bare the historical continuum of this absurd, painful irony.

We know these lessons, and our history is full of them. This^[11] is not normal. Nor is it new. Arundhati Roy observed that:

The COVID crisis is still to come. Or not. We don't know. If and when it does, we can be sure it will be dealt with, with all the prevailing prejudices of religion, caste and class completely in place ... What is this thing that has happened to us? It's a virus, yes. In and of itself it holds no moral brief. But it is definitely more than a virus. Some believe it's God's way of bringing us to our senses. Others that it's a Chinese conspiracy to take over the world. Whatever it is, coronavirus has made the mighty kneel and brought the world to a halt like nothing else could. Our minds are still racing back and forth, longing for a return to "normality," trying to stitch our future to our past and refusing to acknowledge the rupture. But the rupture exists. And in the midst of this terrible despair, it offers us a chance to rethink the doomsday machine we have built for ourselves. Nothing could be worse than a return to normality. Historically, pandemics have forced humans to break with the past and imagine their world anew. This one is no different. It is a portal, a gateway between one world and the next. We can choose to walk through it, dragging the carcasses of our prejudice and hatred, our avarice, our data banks and dead ideas, our dead rivers and smoky skies behind us. Or we can walk through lightly, with little luggage, ready to imagine another world.⁹

The following drawings take on Roy's prompt to imagine.



4.3 COVID-19
the poissonerie shanahan:
an epidemic representation

The narrative of this epidemic representation investigates an outbreak surrounding the Poissonerie Shanahan in Montreal's Jean Talon Market. The story consists of nine Parallel Drawings of which each draws from one of the nine Parable Drawings.

4.3.1 A QUICK GUIDE TO NIKOLSKI

[1] *Nikolski*, written by the French-Canadian author Nicholas Dickner, is a collection of stories that spans over a decade through its three main characters: Noah, Joyce and the Narrator. The novel is used as a template to provide bodies and places in order to fuel the plot of this thesis' epidemic representation. The story touches on a variety of urban issues that have been magnified over the course of COVID-19.

+

Narrator = the main bookkeeper at S.W. Gam Inc. on St. Laurent Boulevard. Not much is known about the narrator, whose identity remains unknown throughout the course of the novel

Other than the broken compass he or she wears around their neck that points to the Aleutian village of Nikolski - and that they are an unknown cousin to Joyce and half-brother to Noah, the Narrator's world comprises mainly of the bookstore and his apartment a couple blocks over from the Poissonerie Shanahan

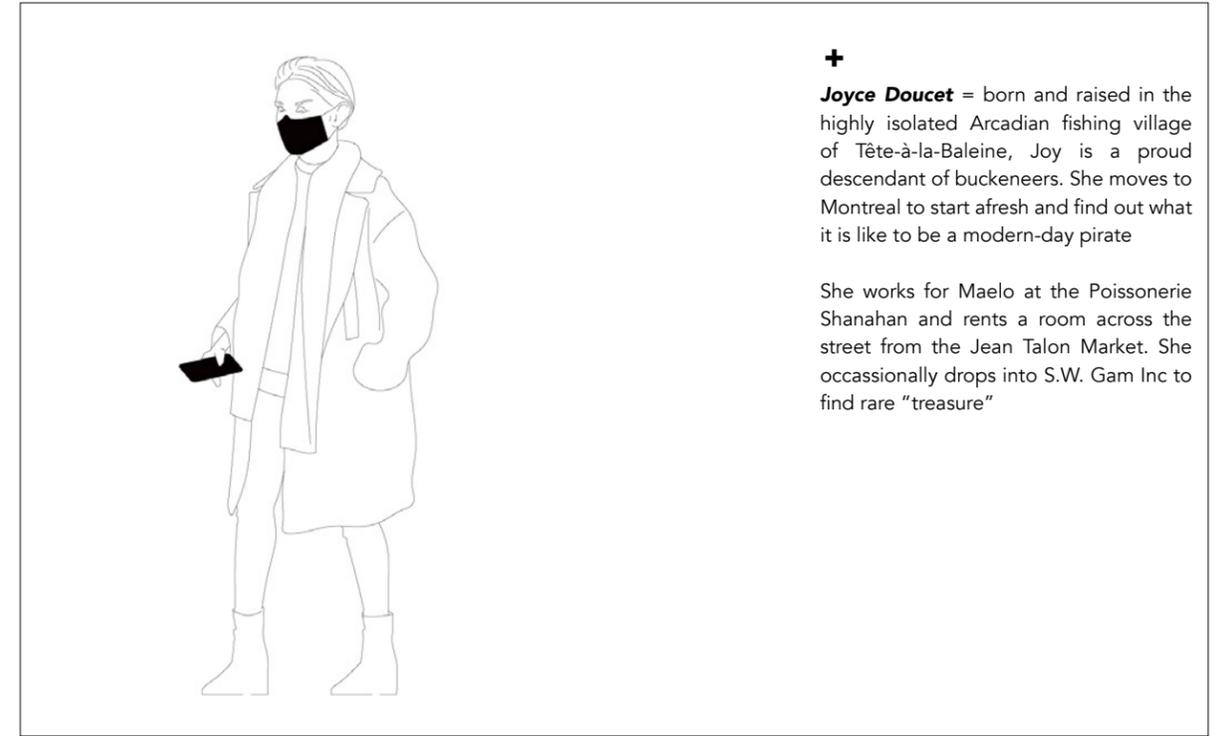
The Narrator serves as this story's Patient Zero



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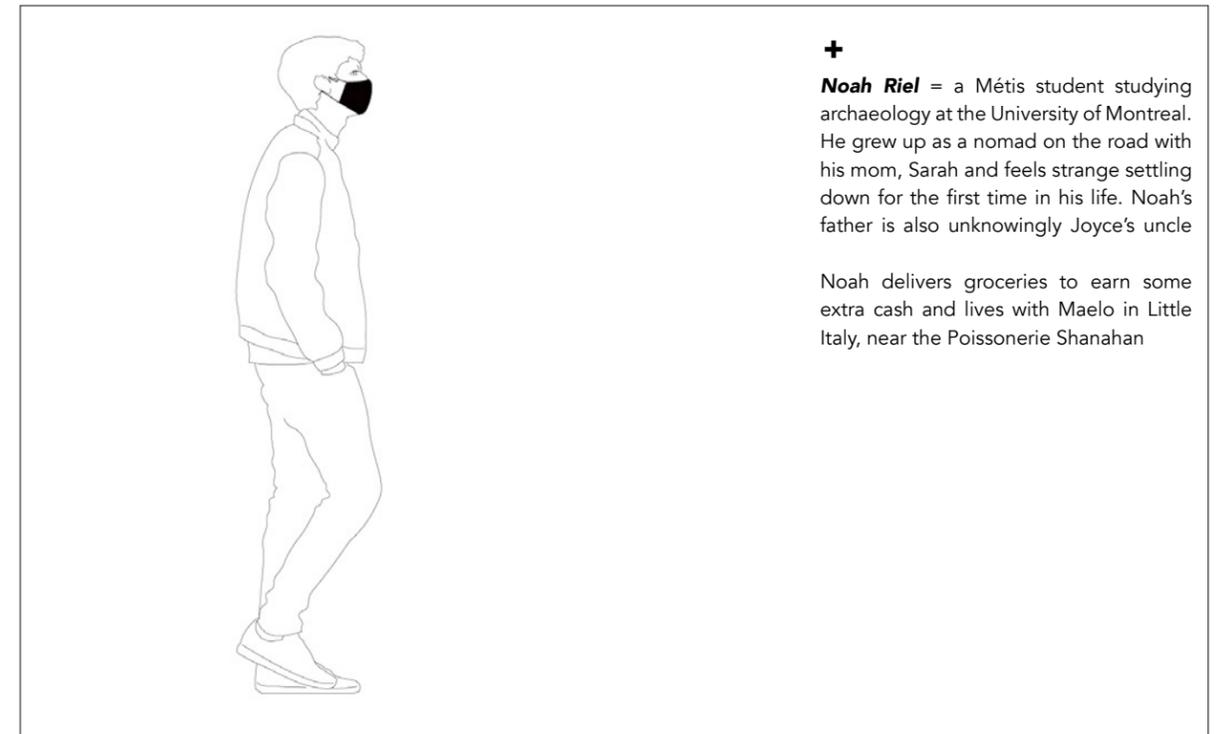
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Joyce Doucet = born and raised in the highly isolated Arcadian fishing village of Tête-à-la-Baleine, Joy is a proud descendant of buckeneers. She moves to Montreal to start afresh and find out what it is like to be a modern-day pirate

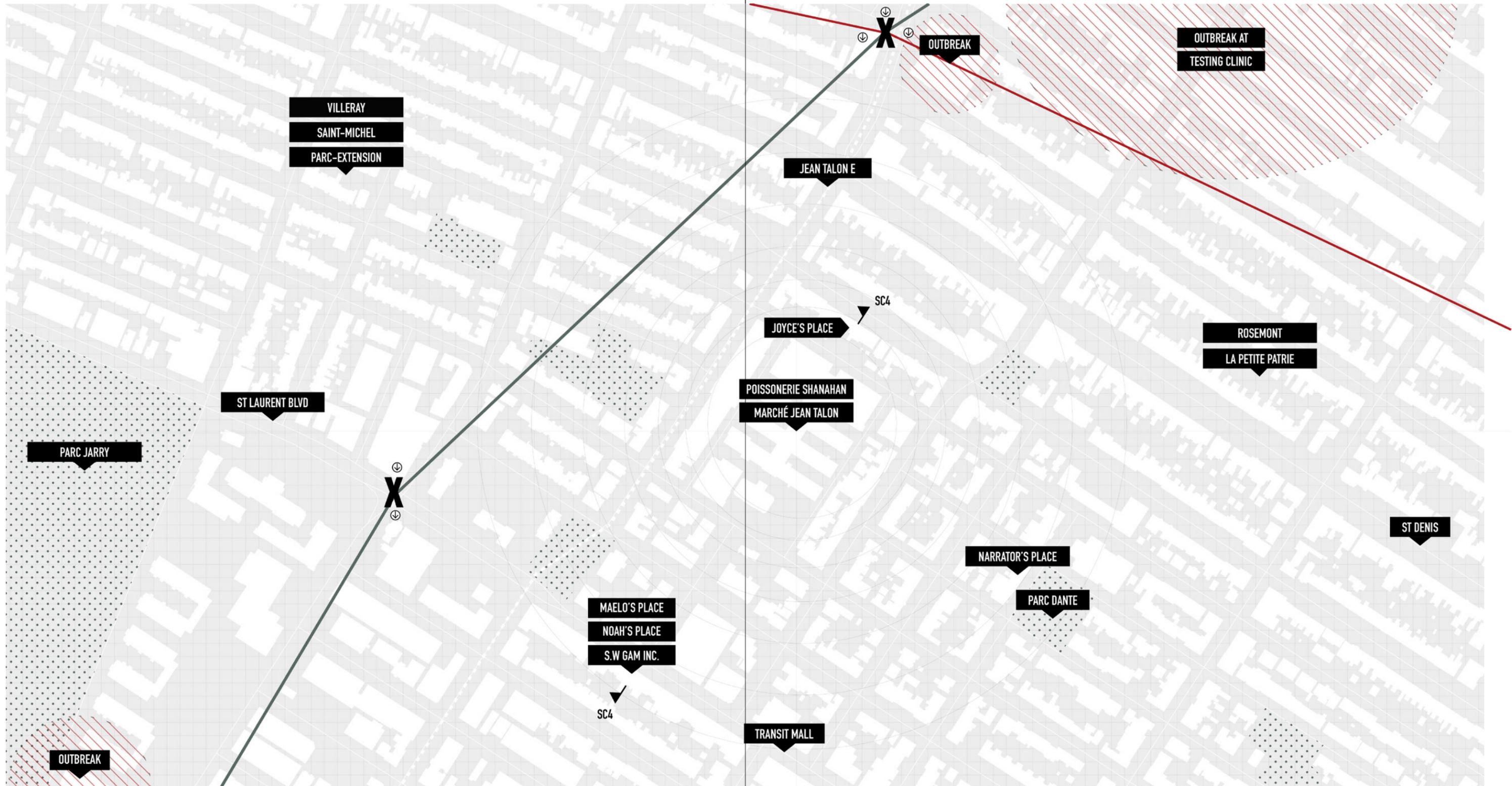
She works for Maelo at the Poissonerie Shanahan and rents a room across the street from the Jean Talon Market. She occasionally drops into S.W. Gam Inc to find rare "treasure"

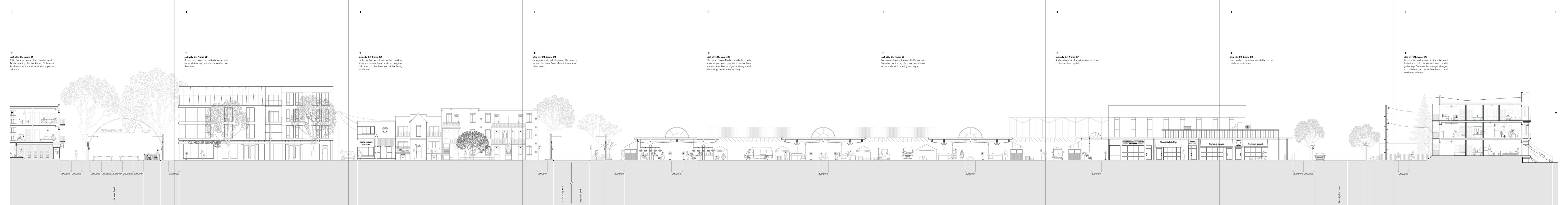


+

Noah Riel = a Métis student studying archaeology at the University of Montreal. He grew up as a nomad on the road with his mom, Sarah and feels strange settling down for the first time in his life. Noah's father is also unknowingly Joyce's uncle

Noah delivers groceries to earn some extra cash and lives with Maelo in Little Italy, near the Poissonerie Shanahan





+ sick city 04, frame 01
 S.W. Gan inc when the Narrator works; Noah entering the bookstore; St Laurent Boulevard as a transit mall with a park adjacent

+ sick city 04, frame 02
 Businesses closed or partially open with social distancing protocols advertised on the street

+ sick city 04, frame 03
 Higher police surveillance; certain outdoor activities remain legal such as jogging; balconies on the Montreal triplex being used more

+ sick city 04, frame 04
 Emptying and pedestrianizing the streets around the Jean Talon Market; increase of plant sales

+ sick city 04, frame 05
 The Jean Talon Market refurbished with rows of plexiglass partitions strung from the concrete beams; signs advising social distancing; masks are mandatory

+ sick city 04, frame 06
 Maelo and Joyce setting up the Poissonerie Shanahan for the day; thorough sanitization of the stalls each morning and night

+ sick city 04, frame 07
 Reduced capacity for indoor vendors; local businesses lose capital

+ sick city 04, frame 08
 Dog walkers maintain capability to go outdoors past curfew

+ sick city 04, frame 09
 Increase of wild animals in the city; legal limitations of indoor/outdoor social gatherings fluctuate; homescape changes to accommodate work-from-home and newfound hobbies

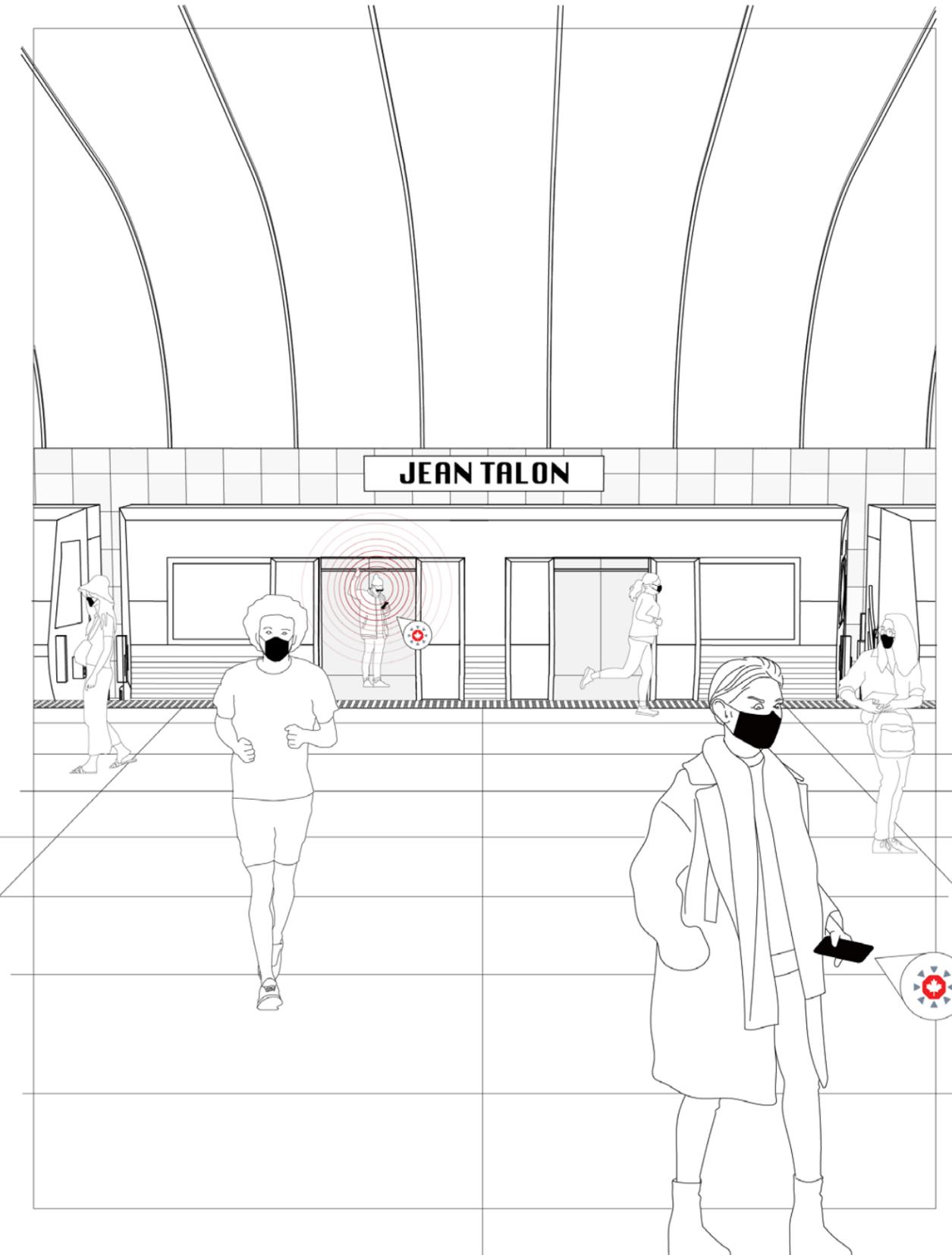
4.3.1 Parallel 01
based on “angry gods”
(p. 16-7)

“My name is not important.”
- The Narrator, Nikolski, p.1

SCAPEGOATING

[1] Infectious disease outbreaks have long been blamed on marginalized people and outsiders. During the Black Death, the pestilence in Europe was widely blamed on Jewish people and witches.¹⁰ In nineteenth-century England, blame for the spread of the disease was commonly attributed to Irish immigrants.¹¹ Conspiracy theories of poisoned wells and airs led to killings. This is part of the human story: that we have not just blamed marginalized people, we have killed them. These stories ground the injustice of pandemics, which almost always disproportionately sicken and kill the vulnerable. Today with politicians taking vacations and judging group photos taken without masks, we are still looking for Typhoid Mary.

[2] The story begins underground. The Narrator, one of the many morning commuters on Montreal’s Métro, lets out an uncovered sneeze in the middle of the carriage, causing many to flee to the platform. Joyce is one of those refugees, who receives a Covid Alert notification. Did that guy just give her COVID-19?



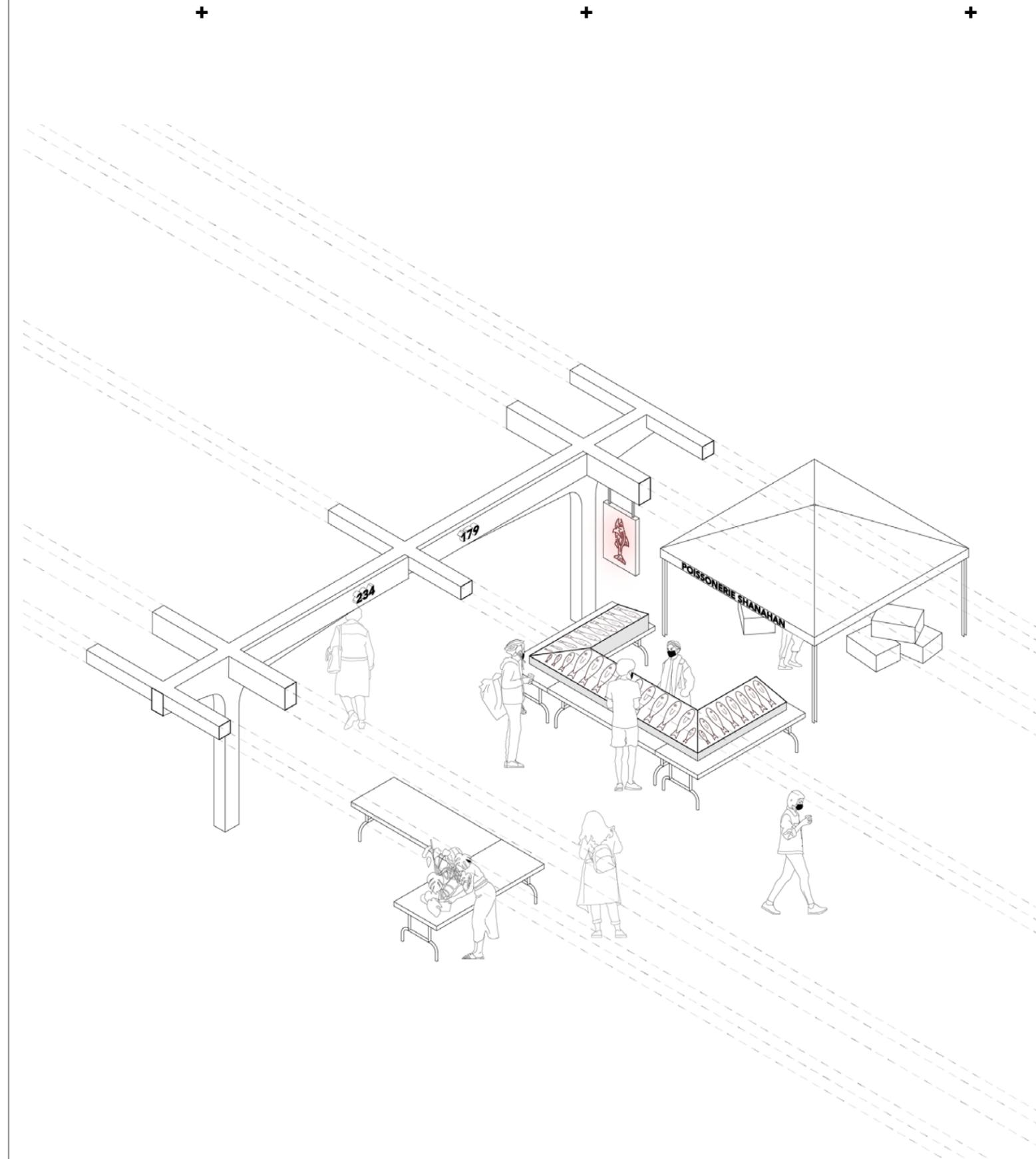
4.3.2 Parallel 02
based on “smelly fish”
(p.18-9)

“Fish blood. The smell is so familiar to Joyce that she feels tears welling up in her eyes. On the nearest storefront a huge salmon is leaping skyward, circled by the name of the business in red neon: Poissonerie Shanahan.” - Nikolski, p.71-2

THE JEAN TALON MARKET

[1] A Canadian grocery store was not a fun place to be in the spring of 2020. A Wuhan wet market was not a fun place to be in 2020. A Venetian market was not fun during the Black Death. Plague in this instance has taught us that a marketplace, or any commercial joint dedicated to selling the things we ingest, are spaces that gain significant surveillance in the time of a pandemic.

[2] Parallel 02 captures Joyce’s first day at the Poissonerie Shanahan while her boss, Maelo, goes to check something in the back. The Jean Talon Market is less busy than usual, but there are still throngs of nervous shoppers collecting supplies for the upcoming curfew. While Maelo is away, Joyce struggles to make the choice between a job with a steady income or listening to the Covid Alert notification she had received that morning on the Métro telling her to go home and isolate.



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4.3.3 Parallel 03 based on “quarantine” (p.20-1)

“I crawl out of [bed] and stumble over to the window. Clutching at the curtains, I watch the [police cruiser] pull up with a pneumatic squeal in front of our [plex]. Since when do diesel engines imitate breaking waves? Dubious poetry of the city.”

- Nikolski, p.4

STAYING HOME

[1] There perhaps has been nothing more terribly entertaining this past year than watching François Legault struggling in vain to order “**fun-loving**” (« C’est le fun! ») Quebecers to obey social distancing regulations and to just stay home. Quebec’s Health Minister says “it’s up to [all] Quebecers to follow public health regulations to stop the second wave of the pandemic in its tracks.”¹² Yet a lot of emergency policies and regulations remained largely ignored.

[2] After their COVID-19 test that morning, the Narrator slips into their local Dep to stock up on “supplies” for their upcoming quarantine at home. Parallel 03 shows a series of events unfolding later that day during the 8 p.m. curfew: First, the Narrator is seen dipping into said supplies while waiting for a call for their test results. Outside their apartment is a dogwalker (the only exemption from curfew), a **couple getting busted**, and Noah, late, running out of the Dep and away from the cop cruiser that had just pulled over. He receives a Covid Alert.

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“**fun-loving**” - in the words of Canadian correspondent, Dan Bilefsky

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<https://montreal.ctvnews.ca/quebec-couple-hit-with-curfew-violation-fine-after-wife-walks-husband-on-a-leash-1.5262178>

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p. 124



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4.4.1 Parallel 04
based on “quarantine is for losers,” (p.62-3)

“This university is a conservative institution. To survive you need a respectable specialization ... Indigenous prehistory is an excellent training ground!’ Noah can feel his head start to spin. The irony seems to be just too much. ‘I adore indigenous prehistory,’ he hears himself answering.” - Nikolski, p.118-9

EPIDEMIC & EMPIRE

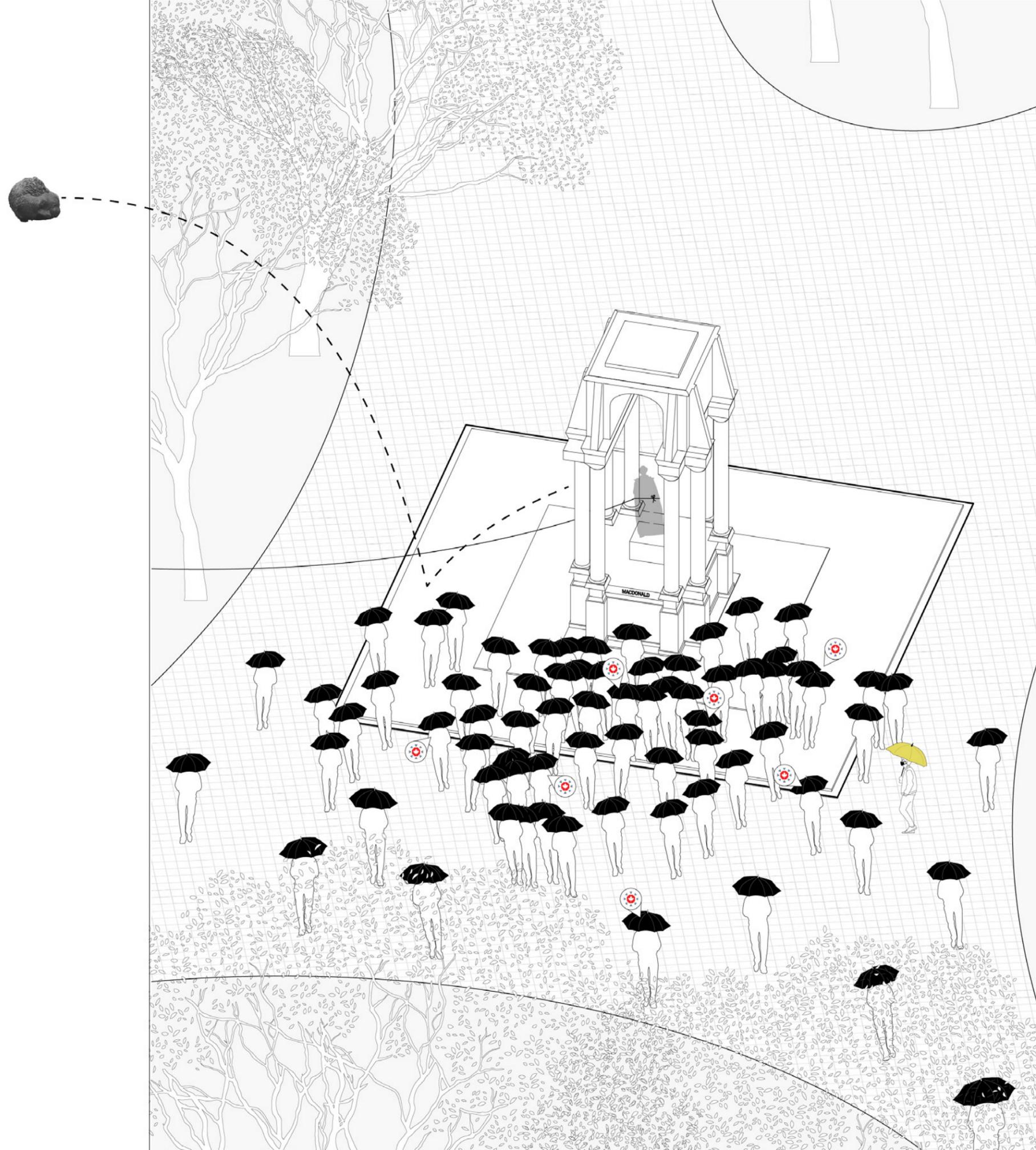
[1] An epidemic feeds the restlessness and clarity needed for social movements. Cities became host for decentralized, political protests everywhere and on August 29, 2020, protestors marched in the rain to Place du Canada, where witnesses saw the toppling of the statue of Sir John A. MacDonald - Canada’s first prime minister who established the culturally genocidal residential school system.

[2] Bronze statues of colonizers around the globe were atoning for the long-term repercussions of colonialism. COVID-19 has catalyzed the beginnings of the parting between empire and epidemic.

[3] Parallel 04 depicts the protest and the various Covid Alert notifications going off in the crowd. As a Métis student in Montreal, Noah attends the protest despite feeling symptoms of COVID-19.

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additionally = Vanessa Kisuule’s powerful poem *Hollow* was written on the toppling of Edward Colston’s statue in Bristol, UK:

https://www.youtube.com/watch?v=b3DKfaK50AU&feature=emb_title&ab_channel=VanessaKisuule



4.4.2 Parallel 05
based on “enter:
epidemiology,” (p.64-5)

“S.W. Gam Inc. is a business entirely devoted to the acquisition, presentation and retailing of the previously owned book. I’ve been working here for four years now, still parked behind the bookstore counter, where, however, I get to enjoy a spectacular view of St-Laurent Boulevard.” - Nikolski, p.14

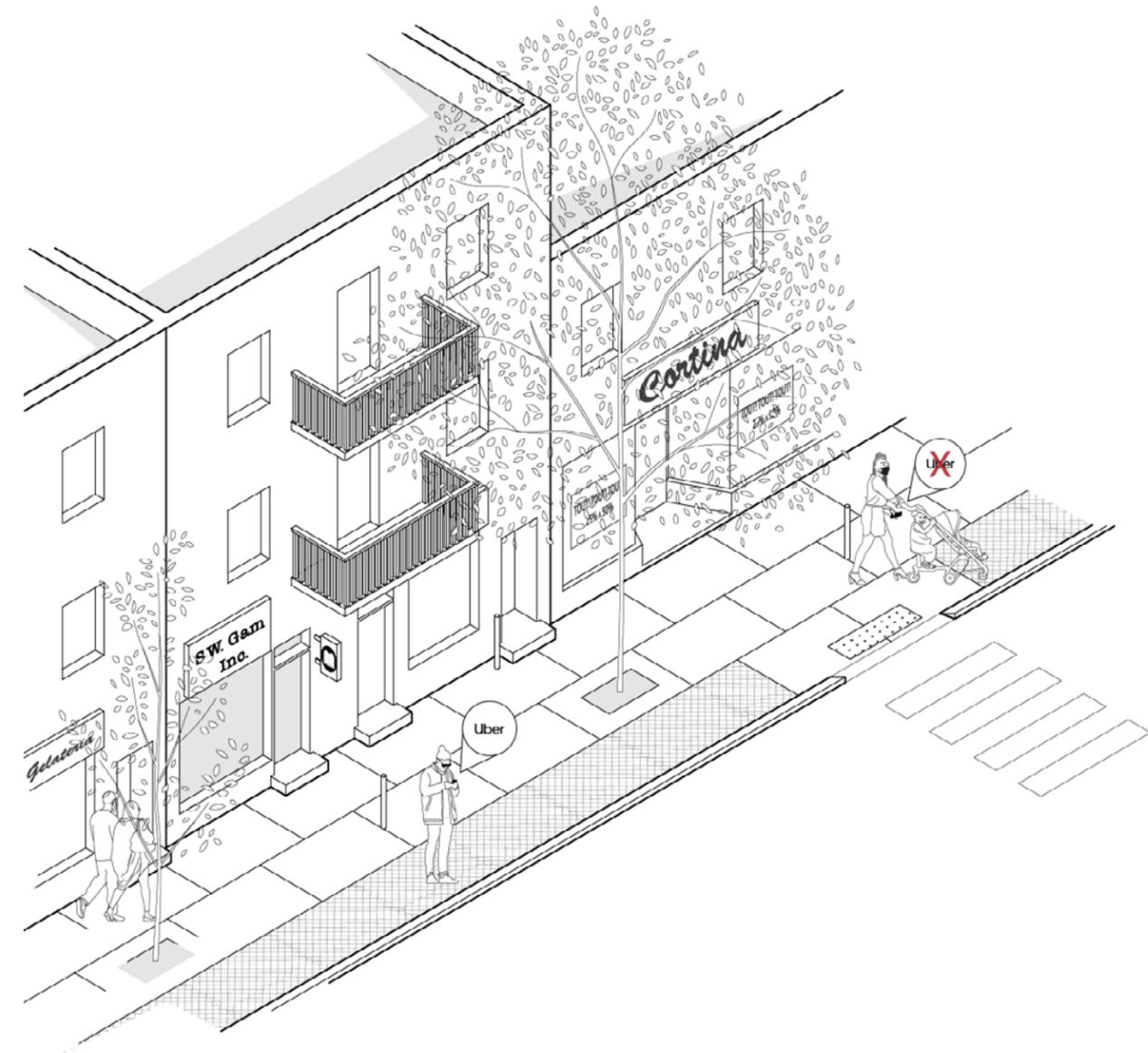
PATHOLOGICAL CARTOGRAPHIES

[1] The COVID-19 data representations and mappings lack the systemic factors that contribute to case numbers: demographics showing vulnerable populations, accessibility to healthcare or the availability of technology to work/learn from home. This gap in communication deems neighbourhoods, and its people, as sick or contagious. Montreal Nord, and its Haitian community, have been under this affliction. Advocates say “one-size-fits-all” protocols do not work there as it has maintained the most COVID-19 cases on the island.¹³ These prescriptions of illness, cast onto an entire borough, are tools used to restrict the mobility of people in the city.

[2] Parallel 05 presents the unseen limitations on a person’s mobility within the city. The mask-less Narrator is sent home from work and a woman cannot find an Uber to take her home to Montreal Nord. This shows that wearing **PPE** becomes a passport to navigate the city, as can a home address, or a skin.

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relevant reading = Lindsay Bremner’s “Border/Skin” in *Writing the City into Being: Essays on Johannesburg 1998-2008* is an informative reading on race and mobility

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PPE (abbr) = personal protective equipment

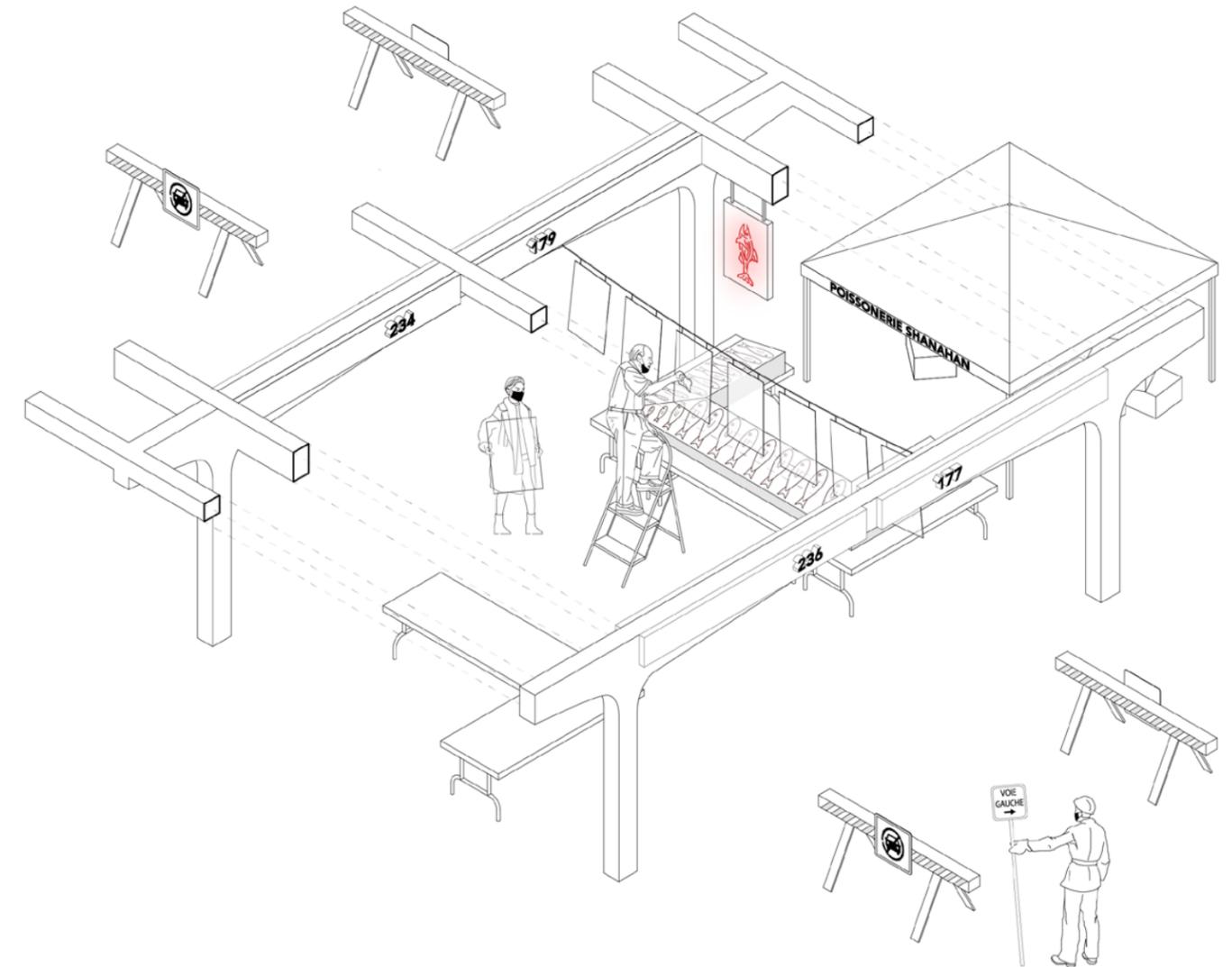


4.4.3 Parallel 06
based on “great stinks,”
(p.66-7)

“She shows up at work exactly on time, listens dutifully to Maelo’s biology lessons [and] smiles at the fussiest customers. Her aim is to become a model employee, to blend in with the great mass of sardines in the shoal, to dissolve into the ecosystem.” - Nikolski, p.85

SCALES OF RESILIENCY

- [1] The patterned language of a shared crisis - the COVID-19 pandemic - has resulted in the hasty redecoration of Montreal to create the visual illusion of sanitary protection and division. Ad hoc structures have been springing up around the city to fill the needs of businesses and restaurants. For example, a dining structure need to persuasively declare itself “outside” (ventilated and open) while maintaining the luxuries of indoor dining (heat and shelter). This language of the transient sanitary reform that COVID-19 has presented, in a sea of shared sadness, loneliness, and hurt, is a tiny and unaccounted instance of creativity and resiliency. However, skepticism prevails.
- [2] Parallel 06 shows Joyce helping Maelo readapt the Poissonerie Shanahan in order to keep the business running and assure the health of shoppers. This presents the scales of resiliency of sick cities: (1) the lazaretto for Venetians (2) the embankment for Londoners (3) the tenement for New Yorkers, and (4) the plexiglass partition for Montrealers.



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4.5.1 Parallel 07
based on “magic mountains,”
(p.92-3)

“Noah steps gingerly into the room. Not very big? He feels like a cosmonaut who has gone out for a walk around his Soyuz and discovers the void in every direction: millions of stars, infinite spaces, and pangs of nausea. He holds onto the door jamb.”

- Nikolski, p.80

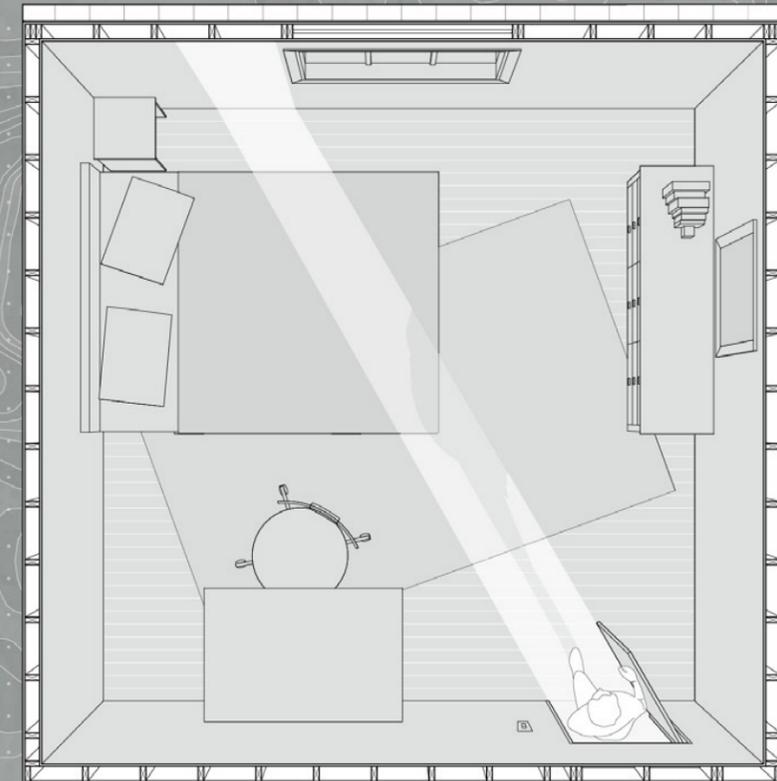
ANTI-URBAN SENTIMENT

[1] While real estate prices for suburban, detached, single-family homes and cottages have skyrocketed, inner city rent prices have plummeted. Urban “**blight**” has landed louder than a bomb. When the term is applied to a city, it has a lot to do with who lives there. During the first quarter of the twentieth century, architects started to use the language of blight as a metaphor in their descriptions of vast numbers of problems they noticed in cities. They borrowed the term from ecological studies of plant blight - as well as epidemiological metaphors - with the intent to make their studies of cities seem as rigorous as those of traditional sciences. It stuck.

[2] The winter months have rolled in, as has the second wave. Parallel 07 ends with Noah being invited by his classmate out to their chalet in the snowy mountains of Quebec. As he steps into the guest bedroom, Noah is amazed at the size of the place, wondering how he is ever going to be able to go back to isolate in his tiny apartment in Montreal.

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blight (n) = a plant disease, typically one caused by fungi such as mildews, rusts, and smuts; a thing that spoils or damages something



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4.5.3 Parallel 09
based on “death by tenement,”
(p.96-7)

“Joyce spent weeks of sleepless nights combing the business district. She scoured hundreds of dumpsters ... endured countless stenches ... Now, her tiny apartment looks like a bazaar. Everywhere there are piles of broken-down computers, display screens smudged with fingerprints, keyboards with missing teeth...” - Nikolski, p.112

A NEW HOMESCAPE

[1] The current global pandemic has not only been a reminder of our inherent spatial needs. Similar to the “outside” (i.e. outside the home) world reconfiguring itself to accommodate futile defensive lines against contagion, the “inside” is going through the same hasty measures to accommodate for a new army of those working from home. Ten second commutes, cravings for the outdoors, and the absence of quiet workspace have come to define the woes of the average home-worker. Now questions of adaptability are surfacing – What will be the new role of domesticity in the future? Is the home office the new den? Do you actually need to live close to work (see PROSTHETIC 04)?

[2] Parallel 09 ends with Joyce, isolating at home. Due to slow business, Joyce is temporarily laid off from the Poissonerie Shanahan, and is spending more time at home. This drawing traces her movements between her new hobby (computer piracy), eating, exercising, and sleeping.

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relevant reading = Joan Didion uses a coyote as a metaphor in her 1954 essay “On Morality”





EPILOGUE
post-pandemia

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Pathogens R Us

URBAN
APOTHECARY

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PRESCRIPTION

H O P E

O R G A N I C	Nº	
	005	
	FOR: ALL EXP: N/A <small>(dd.mm.yy)</small>	
ALL OF OUR MICROBES ARE UNSUSTAINABLY SOURCED		

WARNING: May cause amnesia.

5.1 CONCLUSION post-pandemia

“And you could say that as soon as it became possible for people to have the tiniest scrap of hope, the effective reign of the plague was over ... and ...

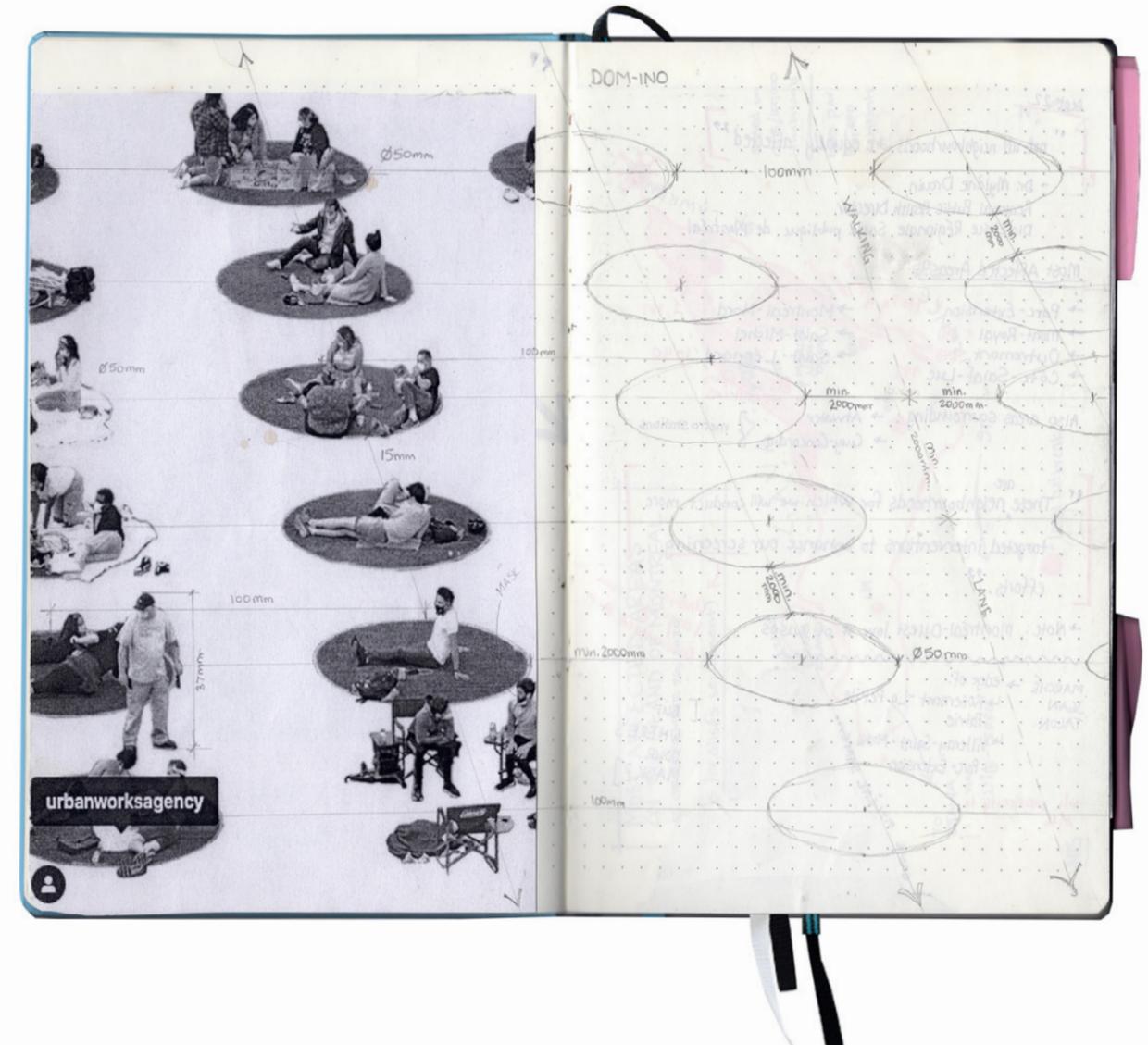
... the greatest desire of our fellow-citizens was and would be to behave as though nothing had happened, and that, consequently, in a sense nothing would have changed; but that, in another sense, one cannot forget everything, with the best will in the world, so the plague would leave its mark, at least on people's hearts.” – Albert Camus, *The Plague*

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note = post-pandemia according to Camus was a double-edged sword and a societal condition to be wary about: “Long after leaving the boulevards Tarron and Rieux could still hear the sounds of happiness following them, at the same time as in deserted side-streets they walked past windows with closed shutters. And precisely because of their tiredness, they could not separate this suffering, which continued behind the shutters, from the joy that filled the streets only a short distance away. The coming deliverance was two-faced, combining laughter and tears.”¹

[1] This research was an exploration of the infrastructures, systems, and architectures of epidemics. Fear of disease has shaped our cities. Contagion, and the science of communicable disease, has transformed human relations and architecture throughout history. We saw this in the Venetian lazaretto, the British embankment, the New York tenement. We are now in the midst of the next epidemic iteration of COVID-19. We see, currently, chalk circles, plexiglass partitions, pedestrianized streets, and parklets. How will we build and inhabit urban space following the COVID-19 pandemic?

5.1.1 INSIDE

[2] It is almost as if COVID-19 is a stern parent, who has sent us all to our rooms to think about what we have done. We have been demanding a lot of our rooms during the pandemic. We



have over-programmed them to accommodate schooling, exercising, streaming, resting, and working. The room complies in response, whining perhaps, but performing its double and triple duties, nonetheless. Any horizontal surface can foster disease, or can become a laptop desk. Elevators are suffocating, a hyper-sensitive enclosed space of communal contagion, whereas stairwells are a game of dodgeball performed with a deadly microbe you cannot see. Balconies became legal access to fresh air – a possible immunity to disease – and thereby a rightful extension to our living space.

5.1.2 OUTSIDE

[3] As for the perilous “outside” world, a.k.a. the space that is outside our homes and rooms, it is a realm that saw a swift spatial collapse within the first weeks of the COVID-19 pandemic. A person’s urban experience retracted to the walls of their home. The great “outside” refers to the city, where fear of contagion rules. But within this spatial collapse, an epidemic presents a spatial phenomenon that mutates sociopolitical

constructions.

Streets were abandoned except for the occasional last-mile [4] delivery. We have seen it in our new behaviours in these new, “open” mobility infrastructures. Less fear of cars. If we are approaching someone on the sidewalk, we step out into the road without a second thought. In this scenario, the threat is not the car, it is the person who could be carrying a virus. How does the public realm formally and informally rearrange itself when the pedestrian also becomes a threat?

COVID-19 has proven that our roads are not built to withstand [5] an air-borne communicable disease. Last spring, a Toronto resident created a “social-distancing machine,” to physically keep other pedestrians two meters away from him as he navigated outside his home (see PROSTHETIC 02). He wore a **four-meter-wide hoop attached to his shoulders** in a bid to prove that sidewalks are failing during a pandemic. Maybe the future of road networks takes on a modular formula (i.e. six-foot wide sidewalks) that ensures the health of the public

+ <https://globalnews.ca/news/6812047/coronavirus-toronto-social-distancing-machine/>

similarly to the Venetians and their quarantine islands.

[6] But we know that public infrastructure can be used to mitigate public health crises – we have seen it before. From London we learned how our modern sanitary sewer systems emerged as a response to cholera. Today, the average North American traffic lane, according to the National Association of City Transportation Officials, is three and a half meters.² In New York City, non-profits such as Street Lab have taken advantage of this to lobby for increasingly open and pedestrianized streets and sidewalks. Less commuters means open parking. With 76.4 percent of NYC's streets dedicated to the movement and parking of cars,³ less cars equals more flexibility in our mobility infrastructures.

[7] Public spaces, too, that were abandoned in the spring of 2020 transformed into chalk-painted circles to ensure social distancing. Large swaths of parking lot became playgrounds for children on bikes. Later, they transform into vaccination sites. Strip malls and sports venues, quiet during 2020, are

now full of people waiting in line for shots. Who would have thought that, in one year, a dead mall would become a lifesaving facility? Like all crises, the pandemic is proof that large change can nimbly happen if we have the will and a little imagination.

5.1.3 PROSTHETIC DRAWINGS

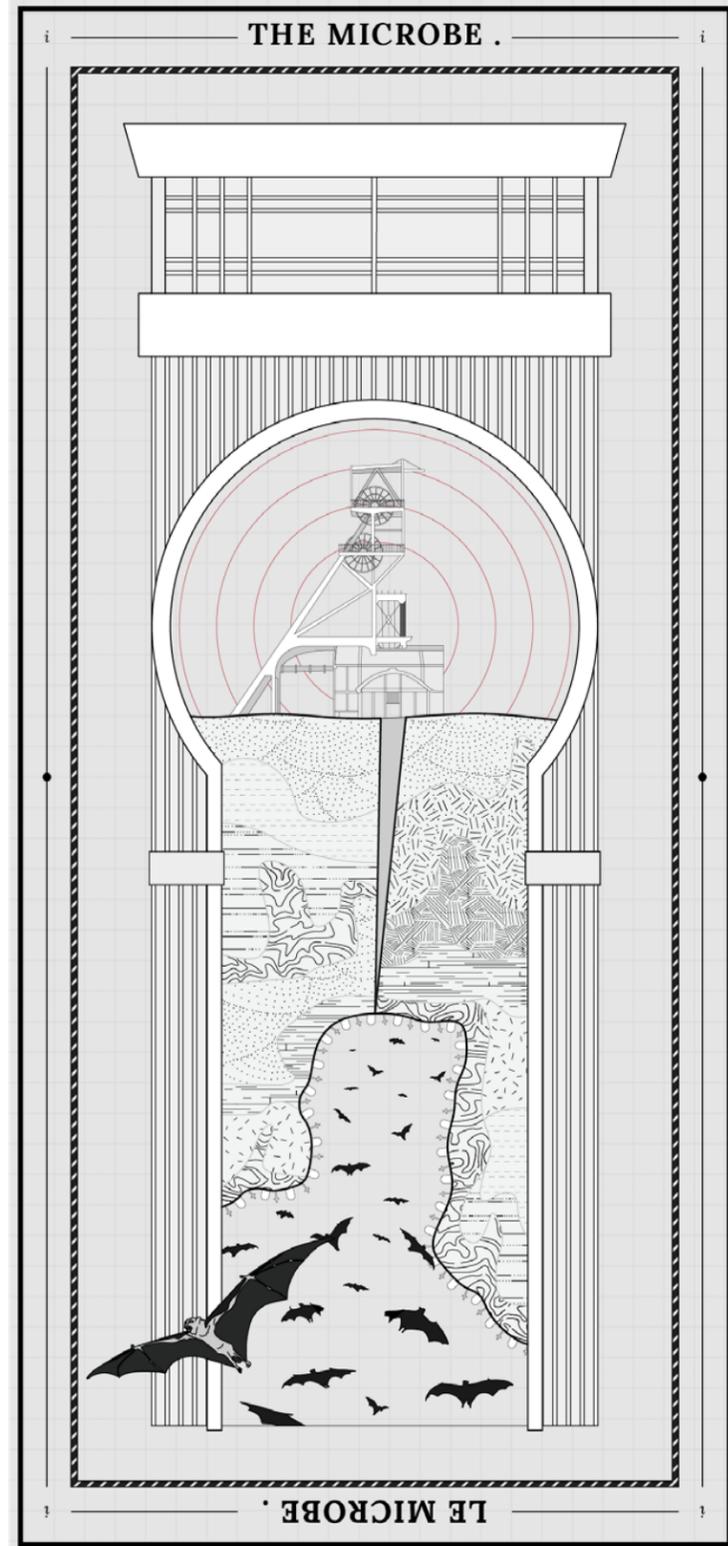
Sick Cities began with studying the history of cities and [8] infectious disease, through the evolution of isolative (quarantine) technologies from the lazaretto to the tenement. What emerged was a continuum that made and remade cities: panic, fear, blame, sanitize, forget, repeat. As we barrel towards vaccination, herd immunity, and a desperate idea of post-pandemia, we ask: are we fated to follow the sick city cycle? Will we face the same issues during the next sooner-than-anticipated pandemic?

Six different scales of post-pandemic constructions were [9] examined in six “prosthetic” drawings that drew from the sick city stories told so far.

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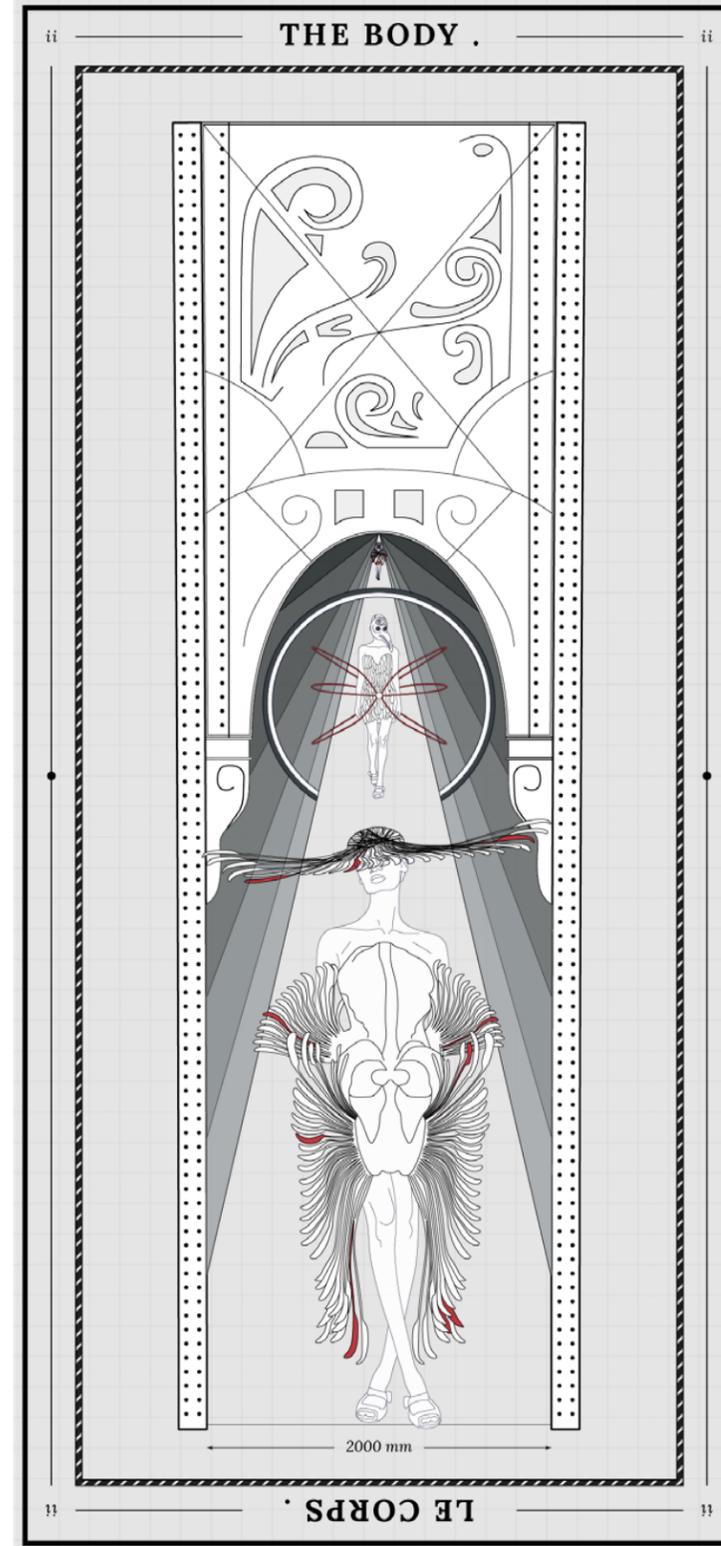
prosthetic_01: microbe

The COVID-19 pandemic has proven that a city provides a healthy environment for a contagious disease to fester. With increases in our extractive and exploitive industries, and therefore increased contact with dormant microbes sleeping in the furs of animals, will we become more prone to pandemic disaster?

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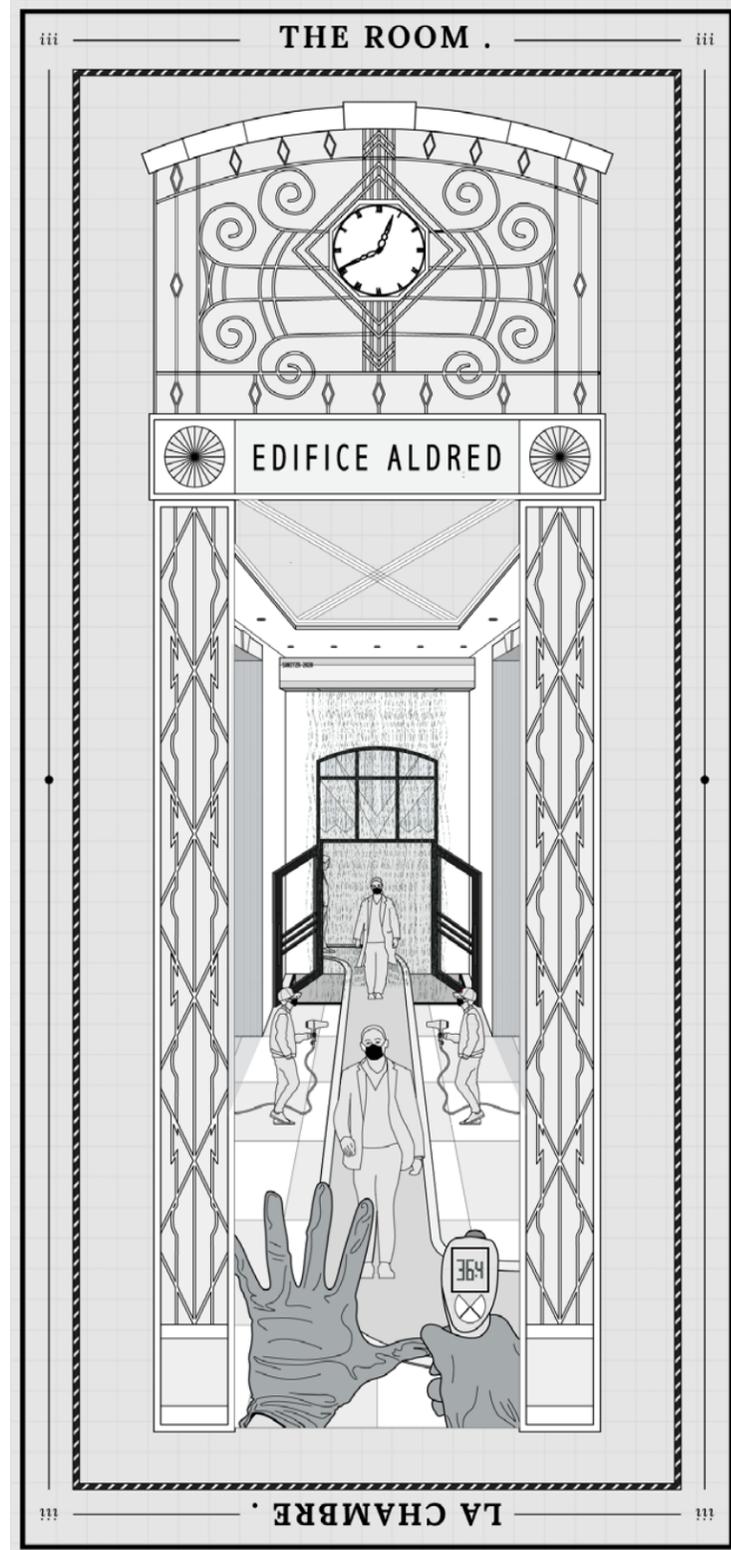
prosthetic_02: body

The scale of the body looks at physical prosthetics that we attach to our bodies in the time of a pandemic. Will masks and gloves become articles of clothing that physically ensure two meters between each other?

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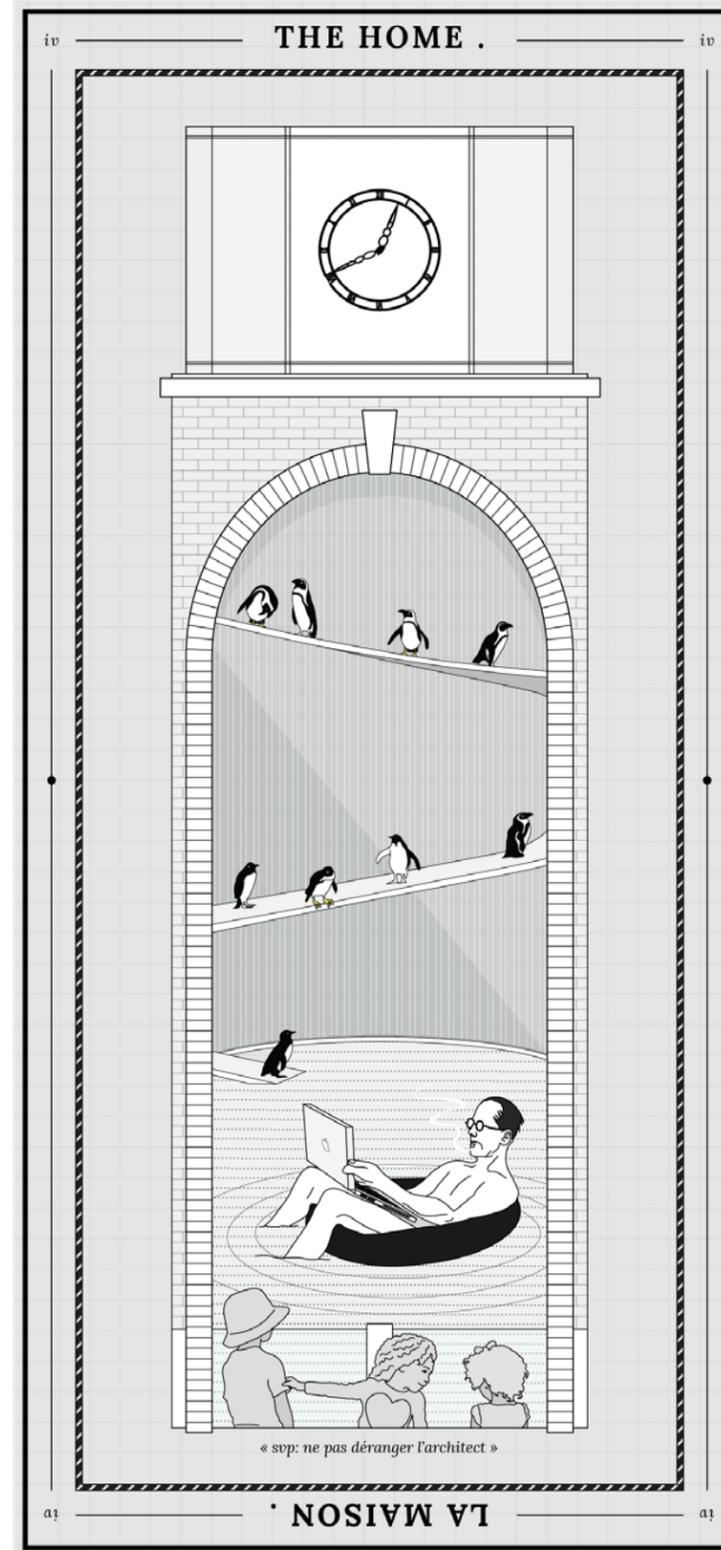
prosthetic_03: room

Office buildings were abandoned this past year. Will the office tower remain empty? Will the mothballed emptiness be filled with much-needed mixed-income housing to combat rising rent prices? Or will there be a return; a return of closed-off cubicles to reflect the supposed sanitation aspects of that of the plexiglass partition; a return with new testing protocols? A return where vestibules are transformed into sanitation drive-thrus?

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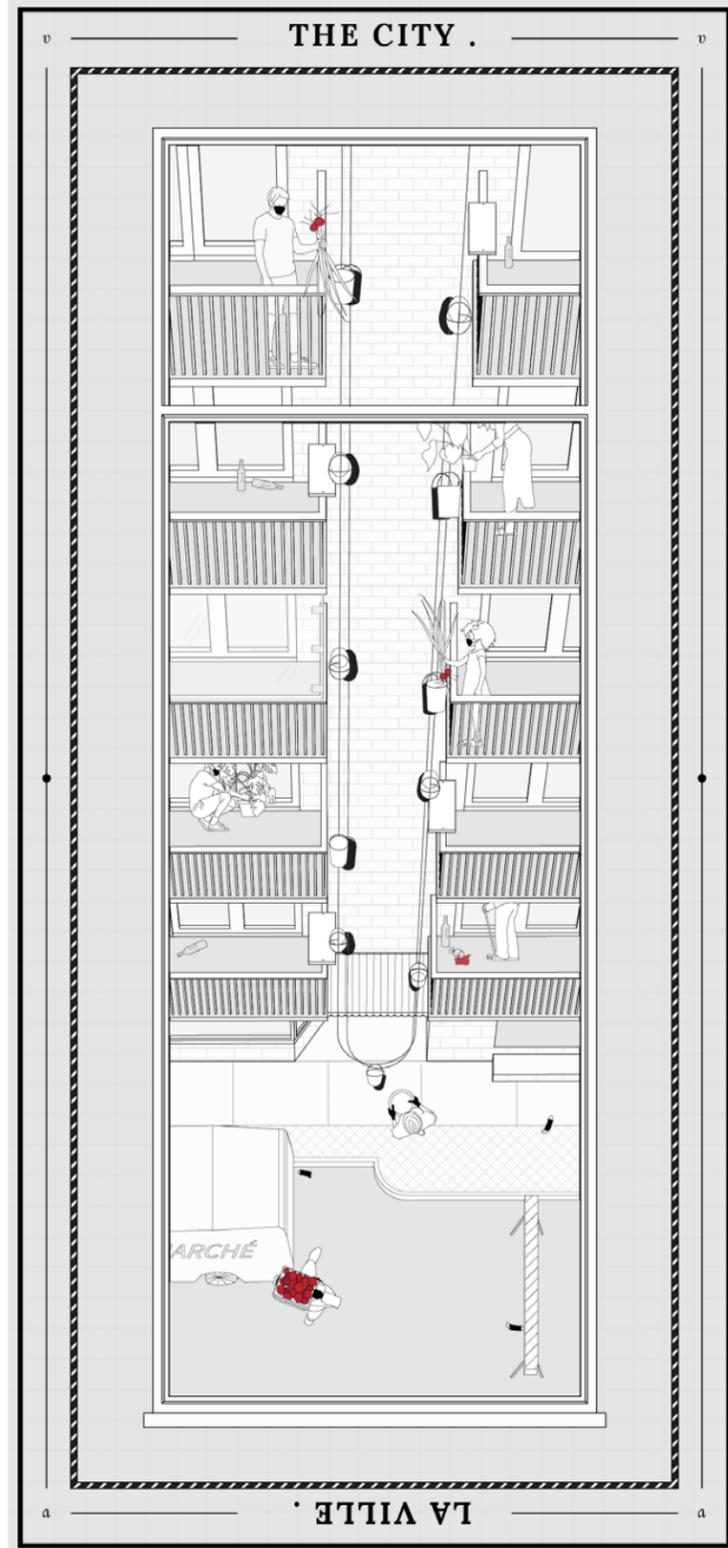
prosthetic_04: home

PR_04 considers the future of work from home. If we do choose to go this path, where will people choose to live and work? Le Corbusier is presented here haven chosen the penguin exhibit

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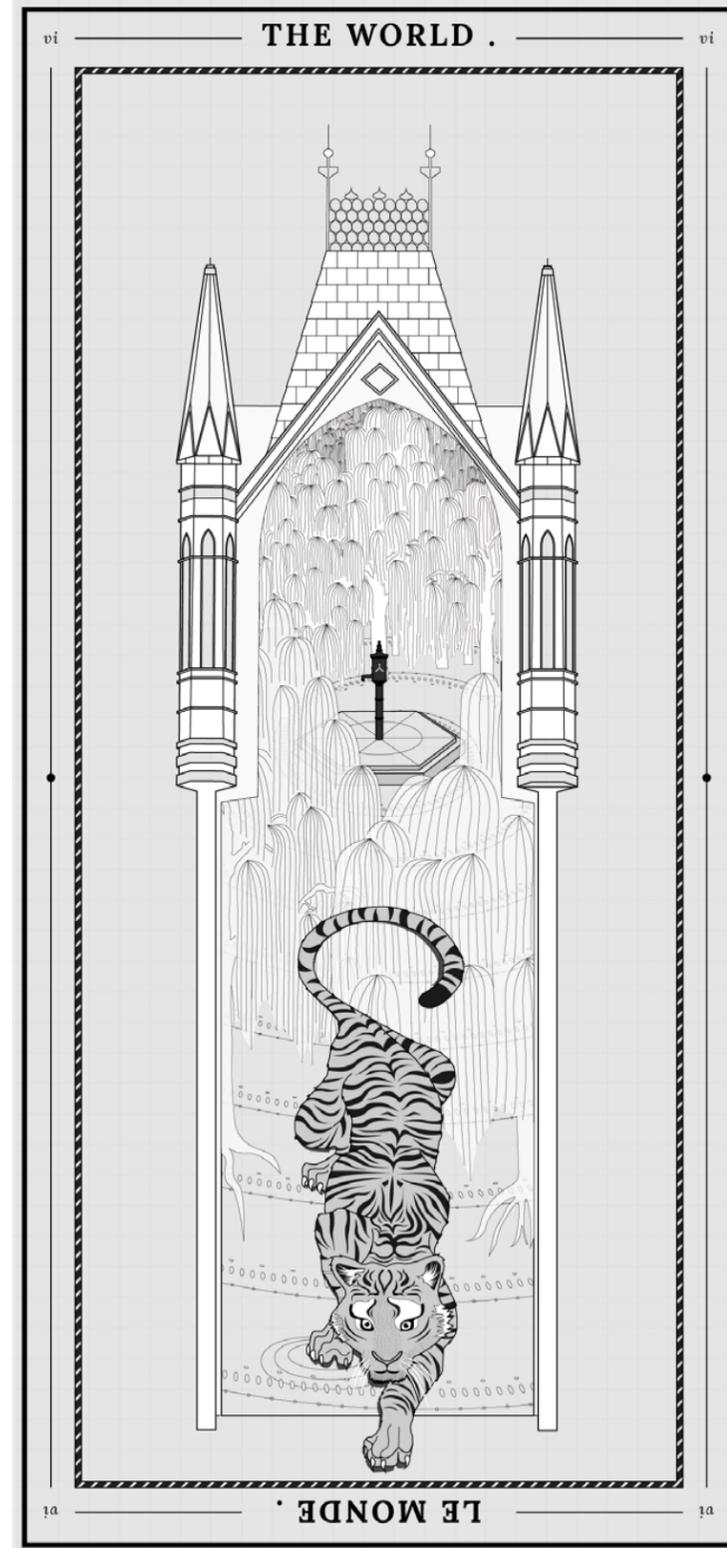
prosthetic_05: city

PR_05 looks at the scale of the city. 2020 has spiked the value of outdoor, open space. What will become of the balcony? How will people restructure and reprogram their limited, semi-private, outdoor space?

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prosthetic_06: world

Language is inherently important when world-building through storytelling. What happens when we juxtapose colonial fiction onto, as the *New York Times* put it, the "tiger-infested mangroves" of the Ganges Delta?

[10] My thesis work illustrated sick cities from the past, present, and future through writing, drawing, and mapping. If there were some critical reflections and observations from each set of drawings, they would be:

[11] (1) From the Parable Drawings the sick city cycle would be lamented and Camus' cautionary tale of hope retold: do not let hope and the prospect of normalcy blind us from the inequities that have been thrown into plain view. The injustice of pandemics, which always disproportionately sicken and kill the marginalized, is seen across all the sick city case studies.

[12] (2) The Parallels expose the falsehood of calling the coronavirus pandemic the "new normal." It is simply neither of those things.

[13] (3) And from the Prosthetic Drawings: the harmful effects of the language of a pandemic. Similes such as Frank Lloyd Wright's "like a fibrous tumour" or Jacob Riis' "it is like a plague in disguise" are spatialized by binding illness onto a landscape. Metaphors such as using plague, or other contagious diseases,

to cast horror onto something have similar effect. Language changes how public space is used through new forms of human relation. We saw this with "Indian cholera." Today, we continue to see it with the "Chinese virus."

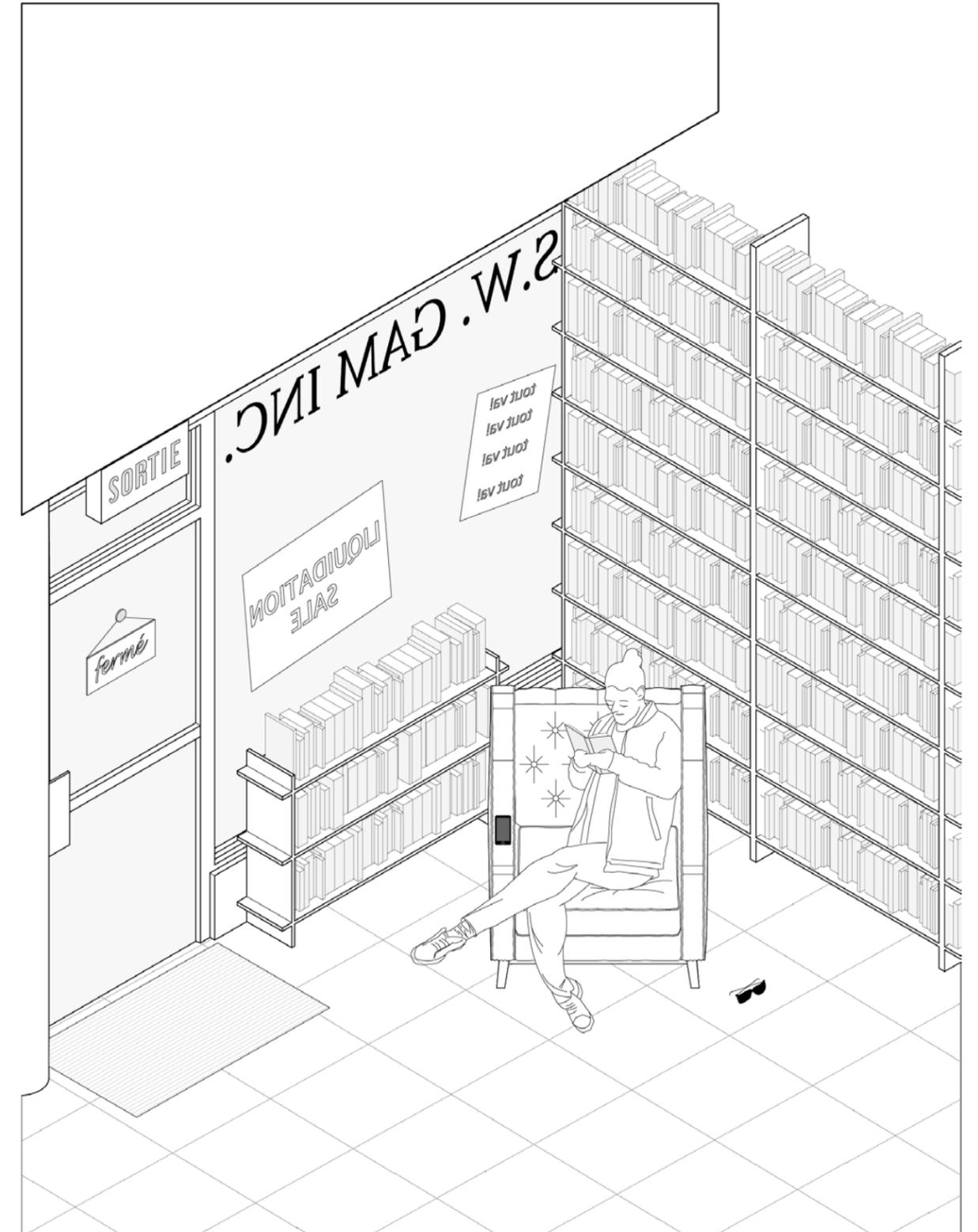
In this thesis, I wished to expose the oxymoronic irony of^[14] humanizing a non-human microbe that kills humans through the acts of writing, drawing, and mapping. Mapping an illness pinpoints the blame onto the people in a geographic location, which robs them of their humanity. What is argued to be the real failure in our pandemic response is the truthiness in media. There is a lack in communication that leads to mistrust, finger pointing, and rifts in understanding. The language of a pandemic ties disease onto people and places and has fundamentally transformed human relations and migration. It reifies old and deeply seated prejudices, stereotypes and bigotry. Cities are abandoned. People are racially profiled. So, from the prosthetic drawings, the final takeaway is that how we frame a story can sometimes be more important than the story itself.

5.2 Parable 10 hope

"The S.W. Gam Bookshop is one of those places in the universe where humans long ago relinquished any control over matter. Every shelf holds three layers of books, and the floorboards would vanish altogether under the dozens of cardboard boxes ... The slightest cranny is put to use: under the percolator, between the furniture and the walls, inside the toilet tank, under the staircase, even the dusty closeness of the attic. Our classification system is strewn with microclimates, invisible boundaries, strata, refuse dumps, messy hellholes, broad plains with no visible landmarks - a complex cartography that depends essentially on visual memory." - Nikolski, p.15

[1] When fear, hypochondria and boredom transform our cities in world of a pandemic, an often-forgotten condition that emerges is hope. When the rats return in Camus' town of Oran or in the conclusions of *The Decameron's* stories on the tenth day, we find hope.

[2] This tenth - and final - parable reflects on the solace we find in our fictions. No matter which world we are in, we tend to see ourselves in stories and in their metaphors. COVID-19 has - perhaps - not been a race back to normalcy, but rather an awakening, a realization, on how not normal our normal truly was. In post-pandemia, let us think of who we are designing for with deepest consideration and nuance. After all, "when we are at a loss, we begin with the words of others."⁴



5.3 POST SCRIPT

on positionality

[1] Hi, it's me, Shannon Clark - one last time. I have patiently waited as long as I possibly could to write this final note to see how the COVID-19 pandemic continues to unfold before I finally say goodbye. It is the end of May 2021 and the pandemic-verse still seems to be languishing - the once casual "How are you?" is now weighted; a question that carries a vast network of internalized anxieties.

[2] I have had friends and extended family come down with mild cases of the variant(s), but no one in my bubble has caught COVID-19. I am privileged for this circumstance, and it is owed to the fact that I had the opportunity to move home during the second wave and finish this thesis in a rural, Southern Ontarian community with my parents and grandmother at my side. As caregivers, and not frontline workers, we are incredibly fortunate to be able to choose social distancing.

[3] Using fiction as a medium for *Sick Cities* meant not only an intention to relay a more stable, human, and empathetic ground, but also that it had to come from my personal positionality

on a variety of pieces of imperial, non-fictitious, and fictitious literature. There has been a lot of storytelling in this thesis, and a lot of it was told with a heavy conscience. I have found it tough to validate my agency as an "expert" on this topic, the feeling growing with each hour spent doomscrolling. Yet whatever my circumstance, I remain conscious of the fact that my experience does not equate to that of another. Oppression is experienced in varying forms and degrees of intensity. Although we are all weathering the same storm, we are all in very different boats - some even without a floatation device. Inequity exists within our public health systems and responses. This has remained true throughout the history of epidemics and society.

As the *Sick Cities* story comes to an end, I would like to thank [4] you - the reader - for making it this far. Three months into the COVID-19 pandemic I began this thesis at a loss, searching for answers for a world that seemed devoid of hope within the words of others. I now hope (free from Camus' caution) going forward that we are able to carry more empathy and compassion for others when designing a post-pandemic world.

5.4 GLOSSARY

all definitions are sourced from the Oxford English Dictionary, unless otherwise noted.

asclepieia (n pl) = a Asclepeion Temple was a precursor to health spas, sanatoria, and hospitals. They provided care for the poor and the seriously ill. Patients entered the temple precincts after a period of preparation in which they bathed, fasted, prayed, and offered sacrifice. They would then sleep in the temple, and Asclepius would appear to them in a dream and disclose the appropriate therapeutic regimen

anthropocene (adj)(n) = the current geological age, viewed as the period during which human activity has been the dominant influence on climate and the environment

becchini (trans) (n) = Italian for a group of gravediggers who collected bodies during the Black Death. They were widely reviled

black death (n) = disease circulating mainly in fleas on small rodents. Without treatment, the bacterial infection kills about two thirds of infected humans within four days

cholera (n) = an acute diarrhoeal infection caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. Cholera remains a global threat to public health and an indicator of inequity and lack of social development (WHO)

consumptive chic (n) (adj) = During the late 18th and early 19th centuries, there was a tubercular 'moment' in which perceptions of the consumptive disease became inextricably tied to contemporary concepts of beauty, playing out in the clothing fashions of the day. With the ravages of the illness widely regarded as conferring beauty on the sufferer, it became commonplace to regard tuberculosis as a positive affliction, one to be emulated in both beauty practices and dress (Day)

contact tracing (v) (n) = the process of identifying, assessing, and managing people who have been exposed to a disease to prevent onward transmission. When systematically applied, contact tracing will break the chains of transmission of COVID-19 and is an essential public health tool for controlling the virus (WHO)

contagion (n) = the communication of disease from one person to another by close contact

COVID-19 (n) = a disease caused by a new strain of coronavirus. 'CO' stands for corona, 'VI' for virus, and 'D' for disease (WHO)

effluvia (n pl) = an unpleasant smell or exhalation, as of gaseous waste or decaying matter

epidemic (n) = a widespread occurrence of an infectious disease in a community at a particular time

epidemiology (n) = the branch of medicine which deals with the incidence, distribution, and possible control of diseases and other factors relating to health

etiology (n) = the cause, set of causes, or manner of causation of a disease or condition

femme fatale (trans) (n) = an archetype exploited by playwrights to convey a “seductive woman who lures men into dangerous or compromising situations.” (Miriam-Webster)

germ (n) = a microorganism, especially one which causes disease; a portion of an organism capable of developing into a new one or part of one; an initial stage from which something may develop

germ theory (n) = certain diseases are caused by the invasion of the body by microorganisms, organisms too small to be seen except through a microscope (Britannica)

ghost map (n) = the true story of Dr. John Snow in their effort to map out the 1854 cholera outbreak, and prove the waterborne theory of the disease (Johnson)

heliothérapie (trans) (n) = French for heliotherapy; the therapeutic use of sunlight (Colomina)

insidious (adj) = proceeding in a gradual, subtle way, but with harmful effects

jour médical (trans) (n) = French for the daily cure; an obligatory daily two-hour period of quiet rest in the open air, usually between 2-4 p.m. Treatment could take weeks, months, years
- Hans Castorp accidentally stays seven years in *The Magic Mountain* (Mann)

leper (n) = a person suffering from leprosy; a person who is avoided or rejected by others for moral or social reasons

lépreuse (trans) (n) = French for a moldering stone façade; derived from a leper (see *leper*)

lime chloride (n) = a white powder used for disinfecting which is made by treating slaked lime with chlorine. It can be used for commercial bleach and in laundering as a disinfectant

lung block (n) = the generic name for anywhere that TB thrived in New York City

lurid (adj) = presented in vividly shocking or sensational terms, especially giving explicit details of crimes

m. tuberculosis (n) = main strain of microbe causing TB; classified in a genus with nearly 200 species of mycobacteria

miasma (n) = a highly unpleasant or unhealthy smell or vapour; pollution

microbe (n) = a microorganism; especially a bacterium causing disease

normal (adj) = conforming to the standard or the common type; (medical) free from any infection or other form of disease or malformation

normalcy (n) = the quality or condition of being normal; as the general economic, political, and social conditions of a nation

outbreak (n) = the sudden or violent start of something unwelcome, such as war, disease, etc.

pandemic (n) = a disease that is prevalent over the whole country or world

parklet (n) = a temporary lateral projection to the adjoining boulevard that can be used as additional space for street furniture, landscaping, outdoor cafés etc. (City of Toronto)

pathology (n) = the science of the causes and effects of diseases

patient zero (n) = used to refer to the person identified as the first carrier of a communicable disease in an outbreak of related cases

pestilence (n) = a fatal epidemic disease, especially bubonic plague

pestilent (adj) = injurious to religion, morals, or public peace (1513); destructive to life; deadly; causing annoyance; troublesome; harmful or dangerous to morals or public order; pernicious (2021)

pestilential (adj) = morally baneful or pernicious (1531); relating to or tending to cause infectious diseases; annoying (2021)

plague (n) = a contagious bacterial disease characterized by fever and delirium, typically with the formation of buboes (bubonic plague) and sometimes infection of the lungs (pneumonic plague); a contagious disease that spreads rapidly

and kills many people; a thing causing trouble or irritation; used as a curse or an expression of despair or disgust

plague (v) = cause continual trouble or distress to; pester or harass (someone) continually

quack cure (n) = a medical treatment that you think is unlikely to work because it is not scientific, a.k.a. quack remedy

quarantine (n) (v) = Italian translation meaning “40 days,” which was a culturally significant timeframe

rettifilo (trans) (n pl) = big, bright boulevards of Naples’ renovation

risanamento (trans) (n) = Italian for rehabilitation or a restoration to health

SARS-CoV-2 (n) = the virus (microbe) that causes COVID-19. It stands for: severe acute respiratory syndrome coronavirus 2 (WHO)

sborrata (trans) (v) = Italian for cleaned; part of Venetian lazaretto plague protocol

scapegoat (n) = a person who is blamed for the wrongdoings, mistakes, or faults of others, especially for reasons of expediency

self-isolation (n) = Isolation means staying at home when you have a symptom of COVID-19 and it is possible that you have been exposed to the virus. By avoiding contact with other

people, you help prevent the spread of disease to others in your home and your community (Government of Canada)

serrata (trans) (v) = Italian for locked up; part of Venetian lazaretto plague protocol

social distancing (v) = keeping a safe space between yourself and other people who are not from your household. To practice social or physical distancing, stay at least 6 feet (about 2 arm lengths) from other people who are not from your household in both indoor and outdoor spaces (CDC)

squalid (adj) = (of a place) extremely dirty and unpleasant, especially as a result of poverty or neglect; showing or involving a contemptible lack of moral standards

superspreader (n) = a person who transmits an infectious disease or agent to an unexpectedly or unusually large number of other people

sventramento (trans) (n) = Italian for a surgical intervention

takmán (n) = devine figure conceived in terms of thunder and lightning that brought fever along with the monsoon rains

tenement (n) = legal term codified in city regulations (author); a room or a set of rooms forming a separate residence within a house or block of apartments; a house divided into and rented out as separate residences, especially one that is run-down and overcrowded

tosher (n) = The sewer-hunters were formerly, and indeed are still, called by the name of 'Toshers,' the articles which they pick up in the course of their wanderings along shore being known among themselves by the general term 'tosh,' a word ... applied by them to anything made of copper (Mayhew)

transit mall (n) = a street, or set of streets, in a city or town along which automobile traffic is prohibited or greatly restricted and only public transit vehicles, bicycles, and pedestrians are permitted (Transportation Research Board)

tubercular look (n) = see *consumptive chic*

tuberculosis (n) = an infectious bacterial disease characterized by the growth of nodules (tubercles) in the tissues, especially the lungs

Typhoid Mary (n) = an archetype for a transmitter of undesirable opinions, sentiments, or attitudes; the nickname of Mary Mallon (died 1938), an Irish-born cook who transmitted typhoid fever in the US

Western (adj) = living in or originating from the West, in particular Europe or the United States

wet market (n) = an affordable market selling fresh meat, fish and produce; cited as the site of the animal-to-human transmission of COVID-19 (author)

zona rossa (trans) = Areas under quarantine with severe limitations of movement with barricades and roadblocks

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