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Locating disease: on the coexistence of diverse concepts of territory and the spread of disease¹

Sarah Green

One of my most impressive family stories concerned the World War II adventures of my maternal grandfather, Robert Pulvertaft. After qualifying as a doctor, he served as a British medical officer in Egypt in 1942, where he was faced with many soldiers who were dying from infections that developed in their wounds, rather than from the wounds themselves. Major Pulvertaft was aware that a new potential treatment for bacterial infections, extracted from *penicillium* mould, was now available (penicillin).² He received a few doses from London, but they were nowhere near enough, so he made a crude version of penicillin himself, and used it to treat his patients.

Recently, I learned that this story was actually true.³ Major Pulvertaft commanded a hospital in Cairo in 1942 and, while there, he made batches of crude penicillin. He published the results of experimental treatments with penicillin in *The Lancet* in 1943.⁴ He also actively ignored Allied policy that knowledge of how to make penicillin should be kept secret; in line with H. W. Florey, who is credited with demonstrating that penicillin had some remarkable antibacterial properties, Pulvertaft was against patenting and happy to instruct anyone who asked him how to make it.⁵

Major Pulvertaft's experiments with home-made penicillin, used directly on live patients, sounds both illegal and unethical by today's standards. But this was 1942, it was in the middle of a world war, and my grandfather knew that he had both science and a large colonial power (the British Empire) on his side. In those days, treatments for diseases and infections were part of immensely strong discursive, medical and legal structures; the knowledge (science)

upon which the treatments were based was unquestionable.⁶ In that Cairo hospital, Major Pulvertaft, a doctor and officer in the British military, was the authority who could make life and death decisions with impunity.

It was a similar unquestionable authority that allowed the medical researchers working within the German Nazi regime to conduct their deadly medical experiments on people, even if their ideals were diametrically opposed to Major Pulvertaft's. Paul Weindling has studied Nazi medical researchers' focus, in their medical experiments, on a presumed link between lice and typhus.⁷ This research was based on the new science of bacteriology, as were the penicillin experiments. Weindling, among others, has noted that the point of all of these bacteriology-based projects was eradication: to destroy the bacteria that could cause illness or death in the living entity you are trying to protect. It was a chillingly short step for people who held eugenic views to conclude that some types of humans (classified according to the logic of eugenics) carried such a powerful danger of pathological infection for other humans that they should also be eradicated, just like the bacteria, microbes and parasites that cause disease.⁸

Major Pulvertaft was appalled by the medical experiments carried out by the Nazi regime; yet he would not have denied that the researchers working on the Nazi side were using the same science (bacteriology) as he himself was drawing upon in Egypt. Perhaps the main difference between the two was that while Major Pulvertaft was never quite sure about the wisdom of any of his treatments or experiments, the Nazi doctors seemed entirely certain of their practices. For my grandfather, certainty could only be achieved by having faith rather than knowledge, and in his view, faith had no place in the world of science.

The coexistence of contradictory political ideologies among people who nevertheless shared the same scientific knowledge is one key part of how different regimes have responded to the outbreak of infectious diseases over the centuries. When governments have to decide what to do about the threat of contagion, their political concerns and, in particular, their understanding of the relationship between territory and people, are bound to inform their decisions. Drawing on accounts of how different political regimes responded to outbreaks of infectious disease in the Mediterranean region in

the past, I am going to focus on how different regimes understand the *spread* of the disease: its movement across space.

The rapid spread of COVID-19 during 2020 and the highly diverse political responses to it have demonstrated the importance of this point. Close the borders or not? Quarantine the population or not? The issue here is how people understand, organize and structure spatial relations and separations, as well as how they understand the disease in itself. Given that the spread of a disease involves movement across space, including the crossing of political borders, the way that location is understood and organized is important to how diverse peoples and regimes respond to the spread of disease. The question I deal with, then, is how diseases are located – in the Mediterranean region, in this case.

I mean ‘location’ in a literal spatial sense, in terms of where diseases are thought to reside in bodies and places, and how they spread from one body and place to another. And I also mean it in terms of how those locations are understood politically, epistemologically and morally. The discomfiting thought that both the Nazi doctors and Major Pulvertaft shared the same science, and that both benefitted from powerful and transnational forces that created deep spatial hierarchies (the British Empire on the one hand and the Nazi regime on the other), also points to the historical contingency of how science, politics and locations come together.

Here, I will draw on this simple point to explore how political constructions of territory have informed efforts to attempt to control the spread of disease across space. I will focus on historical attempts to control the spread of disease in the Mediterranean region, and the way that quarantine sometimes did, and sometimes did not, become involved in that effort.

Avian influenza and cross-locations

I will begin with Frédéric Keck’s work on outbreaks of various avian influenza (bird flu) in Asia. Keck argues that certain scientific accounts of disease can become involved in defining a hierarchical difference between spatial locations.⁹ This is important, because attempts to control the spread of disease have historically

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often transgressed political borders. The transgression of such borders has usually been justified by the suggestion that the vectors of the disease do not respect political borders, so those charged with controlling the spread of disease also have to transgress them. As Bashford put it: ‘Over and over again, the aspiration to promote health and prevent disease has resulted in pre-emptive activity beyond the border’.¹⁰ In the same edited book, Zylberman presents a study of international health practices in the late nineteenth and early twentieth centuries in Europe, which outlines three ways in which attempts to control the spread of disease either pre-emptively crossed borders (especially by the French and the British into Ottoman territory), removed borders in order to create ‘health zones’, or created borders that had not previously existed by generating health cordons.¹¹ Zylberman argues that these practices sometimes reflected nation state border logic and at other times completely ignored that logic by violating the basic principles of nation state borders. Zylberman’s findings suggest that, here, more than one logic of location is operating: the familiar nation state border logic, and an additional logic, what might be called a disease-vector locational logic, which was occasionally superimposed upon, or cross-cut the nation state logic. That kind of cross-cutting of border logics implies the coexistence of different ways to classify and subdivide the same space; and where these classifications involve the operations of power, that can have a significant effect.¹²

I suggest that such a situation existed in the Mediterranean area, both during the nineteenth century when various empires coexisted and were beginning to be replaced by states, and in the twentieth century, with the arrival of new transnational entities such as the European Union. I will be suggesting that, historically, the logic by which most of the empires managed their territories (which could loosely be called a logic of bordered territories)¹³ coexisted with at least one other, rather different logic: that of the Ottomans (which could loosely be called a logic of territories as route/road networks). Both were overwritten by (nation) state logic, which currently coexists with a newer, transnational, locating logic, which could be crudely called the logic of cross-border alliances, particularly as exercised by the European Union and other transnational entities such as the World Health Organization (WHO).

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Locating sentinels

It is worth taking a closer look at the example of the disease-vector locational logic that Keck discussed before getting to the different logics of the political regimes in the Mediterranean. Keck noted that medical researchers studying different historical avian influenza events described Hong Kong, in which three strains of bird flu appeared before they were recorded anywhere else, as a ‘sentinel’, that is, the location of the early warning of the arrival of a potential new epidemic.¹⁴ In military terminology, a sentinel is a soldier who stands at the perimeter of an encampment to act as an early warning of the presence of the enemy. The sentinel is often the first to be killed if an attack occurs; the death warns the others that they have to scramble and get ready to fight. In medical terms, a sentinel is a mechanism that communicates the existence of some danger to health. In this sense, the medical researchers defined Hong Kong as being located at the border between some postulated potential threat of epidemic disease, present in the bird population, and a healthy human population. Hong Kong’s engagement with that potential threat could alert the rest of the world to its existence, as long as someone was there to read the signs (the medical researchers).

Keck’s main interest was in the way the researchers set up the engagement between the threat and the sentinel, which he called a form of cynegetic power, a hunting/hunted relation between the sentinel and the virus-carrying birds.¹⁵ This involved a process through which certain birds are re-described by the researchers as the vectors of a disease that, at a certain point, may cross a virtual border and reach humans. Much the same identification process has been described in 2020 in tracing the origins of COVID-19.

Keck’s description of this process involves the definition of two kinds of location: a virtual map created by the scientists, who imagine the movement of the birds as part of an arc that allows the influenza virus to cross the borders of species (from birds to humans); and a specific geographical location – Hong Kong – that stands at the border between health and disease for humans and communicates to the medical researchers the presence of disease. For Keck, sentinels are always located at borders (in this case, between birds and humans in the geographical space of Hong Kong).

They engage with the relations between inside and outside, and communicate information about the presence of danger.¹⁶

Here, there are two hierarchically organized spatial logics that have been brought together. First, which is Keck's main focus, the bodily world of birds and the point at which infection which exists within that world transgresses the bird world boundary and enters the bodily world of humans. And second, the geographical location of Hong Kong, identified as the location from which the infection travelled and crossed other geographical boundaries. Spaces that had previously been separated were now being transgressed.

This has some similarities to the account that Weindling gives of Nazi medics' research on lice and their link to the spread of typhus, followed by intensive delousing programmes.¹⁷ These programmes were particularly focused on the dangers that the Nazi scientists believed were coming from eastern Europe. As in Keck's study, there was a locational logic involved: a perceived spatial distinction between friend and foe. As many others have noted, this kind of spatial distinction is common in descriptions of the spread of disease.¹⁸

In that sense, a key element in common between Keck's and Weindling's studies is the way both sets of scientists perceived movement of the disease across both spatial and bodily borders. However, there is also a crucial difference. In the case of the Nazi researchers, racist beliefs combined with ultra-nationalist approaches towards territory implied that any crossing of these spatial and/or bodily boundaries was a transgression or invasion that was axiomatically harmful. In contrast, in the hunter/hunted (cynegetic) metaphor used by the bird flu scientists described by Keck, the hunters and hunted always coexist in the same place; the issue is how to manage that coexistence, how to prevent the hunted from killing the hunter. Indeed, there is a necessary relation between the hunter and hunted, as Willerslev has richly described in the case of the Yukagir elk hunters.¹⁹ That kind of spatial coexistence and mutual dependence is impossible within the racist nationalist rhetoric of the Nazis; within that logic, the borders should not be managed on the assumption of coexistence. On the contrary, the borders must remain as impermeable as possible. The avian influenza scientists' concept of Hong Kong as the sentinel and the Nazi scientists' notion of lice as parasites being carried by Jews from the east draw on two very different

understandings of the connections and disconnections between places. In the latter case, coexistence is impossible.

Many researchers working on the history of disease have noted that something to do with the ‘where’ of infection and disease – that is, how its spatial location is understood both geographically and within bodies – has always been an important part of attempts to control disease and infection. Studies ranging from research on the theory of miasma to explain medieval plague (the idea that bad air spreads disease), to considerations of geopolitics and trade in the management of disease, and to various studies of the practice of quarantine, have all noted the importance of the presumed relations between places in the story.²⁰ The crucial additional point I want to add here, and that is implied in the work by researchers such as Weindling and Keck, is that these historically variable theories of the causes and treatment of disease might work differently in different parts of the world and at different times as a result of their engagement with different political ideologies of location.

With all of that in mind, the remainder of this chapter briefly explores how the coexistence of different logics of location have become entangled with attempts to control the spread of disease. Much of the literature and debates on attempts to manage and control disease across the Mediterranean region have focused on the direction from which the disease is thought to come (almost invariably from the east and sometimes from the south), and the direction into which it might spread (almost invariably towards the west and north).²¹ At times, as in the case of Nazi German doctors’ concern with typhus, the question has concerned human bodies as much as it has concerned whatever is thought to act as the vector of infection across space: animals, insects, vermin, parasites, bacteria, microbes, as well as miasmas and a distinctly Mary Douglas-inspired notion of ‘general filth’.²² At other times, the main concern has been the terrain from which pestilence arrives, with little concern for the human bodies that carry or suffer from the diseases that have been targeted for attempted control.

This difference is important, as it signals shifts in border policies across time and space. Alison Bashford suggests that it was not until the development of nationalism that medical control over human bodies began to be closely associated with state borders and their use in territorial control.²³ Introducing an edited book on the

history of quarantine, she notes: 'quarantine was a key mechanism through which the authority and territoriality of modern nation-states was asserted and became meaningful'.²⁴ Although it was during an earlier European colonial period that concepts of race, eugenics and indigeneity developed – ideas which posited that human bodies can be biologically divided into different types, and that these types are rooted in their connections with certain geographical territories²⁵ – it was not until nationalist ideas developed that this logic was applied to specific bodies in political border management.

In short, the way in which human bodies and their relation to territories was understood changed over time, and even when ideas about race and eugenics began to circulate in Europe, these ideas were not necessarily instantly applied to all colonial regions, or not in the same ways. This means it cannot be assumed that distinctions between different types of bodies would always be a matter of concern in border management.

In that sense, earlier, pre-nationalist, quarantine practices around the Mediterranean region, which involved keeping people, as well as animals and goods, sequestered somewhere for long periods of time, were not motivated by a fear of the polluting character of foreigners' bodies. Rather, they were more concerned with fear of whatever those people, or their clothes, or their ships, or their goods or animals, or the air around them, may be carrying along with them. It was not until the late 1860s that surveillance of human bodies began in the Mediterranean region in earnest, indicating closer attention to, and control over, particular people's bodies, rather than human bodies in general.²⁶ And it is important to note that this surveillance of bodies has been informed by different ideas about human bodies at different moments. Sometimes, there has been a classification of bodies according to some racial profiling, in which certain bodies are assumed to be more likely to be diseased than others. In almost all such cases, the assumed geographic origins of different kinds of bodies has had a strong part to play in this profiling (Africa, Asia, Arab World, etc.). At other times, surveillance has been more an attempt to identify the presence or absence of a particular bacterium or virus, or focuses on some distinctive characteristic of particular individuals, irrespective of how their bodies might be classified in biological or geographic terms.

Here, it is important to recall that the history of the passport, which allows state authorities to identify particular individuals at

borders, rather than simply check whether they are sick or whether they have a ticket or pass which allows them to cross, is a relatively recent development.²⁷ It is not simply that technical developments in surveillance, as a selective form of ‘neoquarantinism’, allows most people (and goods and animals) to avoid quarantine and go through borders unhindered; it is also that attention to individual persons and bodies at borders is relatively new. Amy Fairchild’s detailed analysis of medical inspections for immigrants at the main borders of the United States between 1891 and the 1920s provides an excellent example of the variable way that different elements of these issues came together in the medical border inspections of that period. Fairchild shows that a complex amalgam of premises about disease (both physical and mental), race and class came together in the assembly-line health inspection system that was developed for examining migrant bodies for fitness to enter the United States.²⁸ Fairchild argues that the underlying logic of the whole system was an attempt to provide a healthy and able workforce for American industry²⁹, but that this logic coexisted with a persistent racial hierarchy that distinguished ‘all Europeans from “coolies” (Chinese, Japanese, Koreans and ‘Hindus’), Mexican “peons”, and other Latin American immigrants’.³⁰ By the time this system was put in place, the significance of the territories from which these migrant bodies came was apparently self-evident: different regions of the world were placed in a hierarchy of generating more or less desirable bodies.

Two implications can be drawn from this variation in the connection between territories, human bodies and different attempts at the control over disease. First, it is only under certain political and historical conditions that human bodies, as such, have been differentiated from one another and have been the focus of attention in the management of the spread of disease. And second, at the same time, all forms of attempted control over the spread of disease – quarantine, fumigation, inspection and examination of people, animals, and goods, as well as surveillance – have *always* involved spatial management. Such measures have always been attempts to impose a certain kind of order in the relations and separations between here and somewhere else. The final section briefly outlines what kind of location logics might have been coexisting in the Mediterranean region during the (mostly late) Ottoman period, and how that was played out through the management of the spread of disease.

All roads lead through Istanbul

In the extensive literature on the management of the spread of disease across the Mediterranean region, most particularly plague and cholera, there are several key areas of discussion. These centre around geopolitics, the different forms of knowledge people had about the causes of disease, and other factors that might have affected responses towards the outbreak of disease, including religious pronouncements about the meaning of pestilence. In these detailed historical accounts, several key tropes emerge.

One of the most prominent is a scholarly critique against the frequent assertion in European countries from the late eighteenth century onwards that the Ottomans were ‘fatalistic’ about contagious disease because of their Islamic beliefs and/or general lack of understanding of the medical causes of disease. This self-evidently orientalist assertion was frequently accompanied by the conclusion that the Ottomans most often caused the spread of the most dangerous and deadly diseases across Europe, via both sea and land routes across the Mediterranean region. One subcategory of this rhetoric has been that the Hajj, the annual Muslim pilgrimage to Mecca, has been particularly effective at spreading contagious disease.³¹ I will mention just three of the critiques against these orientalist assertions.

First, Birsen Bulmuş’s study, *Plague, Quarantines and Geopolitics in the Ottoman Empire*³² particularly focuses on Istanbul and the events leading up to, and leading on from, the year 1838. In that year, the Ottomans implemented a strict quarantine system that others (the British, French, Venetians, Genoans) had been using in a variety of forms during earlier outbreaks of plague and cholera. At the same time, a comprehensive free trade treaty was agreed between the Ottomans and the British, called the Treaty of Balta Liman. This was one of the most liberal treaties ever agreed between the Ottomans and any other power, and it allowed the British to flood the Ottoman markets with (for example) British cotton.

Bulmuş notes that almost as soon as the quarantine measures were imposed by the Ottoman Porte, British authorities became strongly involved in attempting to restrict and control these quarantine regulations, to ensure that British mercantilist interests were not harmed. Bulmuş argues that the vast majority of measures taken

to try and control the spread of disease in the Mediterranean region was actually about business interests, and little to do with science, let alone any attempts to protect the health of people living along the trade routes. In her words, ‘Quarantines were in fact mercantilist tools that protected and promoted internal economic development, and often flew in the face of free trade’.³³

Peter Baldwin, my second example of this debate, argues in his lengthy study, *Contagion and the State in Europe, 1830–1930*³⁴ that things were not necessarily as straightforward as Bulmuş suggests. Britain had been very pro-quarantine in some periods and very anti-quarantine in others. For example, in 1865, when there was a major outbreak of cholera along a Mecca pilgrimage route, Britain agreed with other countries that while quarantine was ‘no longer needed’ in Europe (meaning the north Mediterranean), it was needed, they decided, ‘in the Orient’.³⁵ Mecca, combined with the opening of the Suez Canal in 1869, had ‘turned Mecca into an epidemiological turntable’ in the views of the British at the time.³⁶

The earlier period studied by Bulmuş (1838) was indeed one during which the British were against quarantine in the Ottoman territories, even though the Ottomans were in favour. During that period, Britain was viewed by other European countries and by others in the Mediterranean as a ‘nation of shopkeepers’ who did not care about the risks to the lives of Mediterranean people through the spread of disease, so long as British trade could continue unabated.³⁷ Slight, in a detailed study of the involvement of the British Empire in management of the Hajj, argues that this non-intervention approach changed after the 1865 outbreak of cholera among pilgrims, which led to considerably greater British involvement in attempts to manage and control the spread of disease to the Mediterranean through Hajj.³⁸ The development of steam ship travel and the opening of the Suez canal in the mid to late 1800s meant that people (and their diseases) could travel much faster than in previous years.

In any case, Baldwin notes that when it suited the British, they implemented the same quarantine rules as everyone else within their own territories in the Mediterranean region, even when they were anti-quarantine in general, in part because if they did not, they would not be accepted as trade partners with others, such as Marseilles, Istanbul and Genoa. As Baldwin points out, quarantine is

something that requires agreements across territories, and so nobody can 'go it alone'.³⁹ Yet again later, in 1881, there was an international agreement to carry out surveillance for diseases in the Red Sea area, particularly focusing on the routes to Mecca. This was broken when the British occupied Egypt in 1882, and completely loosened the rules to allow unhindered shipping of British goods from India.⁴⁰ The British complained that the previous arrangements were an 'affront to liberty', but others argued, again, that the motivation was selfish business interests and that everybody else was going to get sick as a result. It was only in 1892 that the British were deprived of their monopoly of the Alexandria Council that regulated such matters, and new sanitary regulations were added.⁴¹

Baldwin's overall argument is that during the period between 1830 and 1930 that he focuses upon, states were developing new techniques of governance and experimenting with what these meant in terms of control over territories and populations. For that reason, it is not surprising that a variety of different approaches towards trying to control the spread of disease were carried out. Baldwin suggests that some of the first areas where governments tested out these new governing techniques involved efforts to control the spread of disease, both within their own territories and at their borders. He goes so far as to conclude that, 'It was not the nature of the disease which specified how it would be prevented and limited, but the kind of political regime under epidemic attack'.⁴²

Many other studies have made a similar point about the impossibility of separating political and economic motivations from the efforts to control the spread of disease, and in the Mediterranean region, this has been a particularly marked argument.⁴³ That is not surprising, given the number of competing political and economic interests across that region. The Ottoman territories were almost entirely based in, or contiguously linked to, the Mediterranean region, and many others either had some stake in the region or had to pass through in order to move merchandise and other goods, as well as military and civilians, between disparate colonial territories. Among the most important of these political and economic powers were the British, the French (especially the port of Marseilles), the Venetians and the Genoese.

What all of the studies of the jostling between these powers show is that there was no consistency over time of efforts to control the

spread of disease across the Mediterranean by different political regimes. It depended in part on the kinds of political relations with others that were held at the time; in part on trade and other financial or economic interests; in part on military interests; and in part on contemporary knowledge about the nature of the disease that was being confronted. None of these motivations seem to have ever existed in isolation of one another, so it is not possible to identify any single cause or motivation for tackling the threat of the spread of disease in a particular way.

Moreover, while some regimes developed techniques that others later adopted (for example, lazarettos were developed in Venice and later spread to other Mediterranean areas, and the structured procedure for quarantine, implemented by the Ottomans in the nineteenth century, was modelled on those developed in places such as Marseilles, Genoa and Venice), the idea that any regime was 'passive' in the face of serious outbreaks of fatal disease, has been thoroughly debunked by more recent scholarship. This is important, as it underlines Baldwin's point that any one political regime's attempts to control the spread of disease was always carried out in the company of other political regimes, even if each party acted more or less selfishly. The Ottomans were never unaware of the actions of their trading partners and political allies and foes, and they almost invariably took those into account in how they attempted to deal with the matter.

That brings me to the third study of contagious disease that I want to discuss, Nükhet Varlık's *Plague and Empire in the Early Modern Mediterranean World: The Ottoman Experience, 1347–1600*.⁴⁴ The book deals with the period leading up to the beginnings of the Ottoman Empire and its rapid expansion during the 'long sixteenth century' (1453, when Constantinople was conquered, to 1600). This is considerably earlier than the periods covered by Bulmuş or Baldwin, though she makes many of the same points about the lack of evidence to support the orientalist claims being made against the Ottomans by the European powers. In particular, she carries out a detailed study of the concept of Ottoman 'fatalism' in the face of contagious disease, which she traces back to European travel writing in the sixteenth and seventeenth centuries, that she calls a form of 'epidemiological orientalism'.⁴⁵ She demonstrates that not only did the Ottomans regularly take action to try to avoid contracting

diseases when outbreaks occurred (especially in urban areas, and most particularly in Istanbul), but the accounts which suggested that they did not were systematically edited so that the belief matched what witnesses reported seeing.⁴⁶ She concludes that the ‘trope of the fatalistic Turk ... came to figure as an important difference, one that helped differentiate “West” from “East”’.⁴⁷ This particular trope defined ‘the East’ as being inherently and thus timelessly ‘plague-ridden’ and ‘the West’ as ‘plague-free’ except when contagion came in from the east.

The element of Varlık’s work that is most significant for my purposes is that she implies that the Ottomans understood the spatial aspects of their empire in a distinctly different way from the other colonial powers that had an interest in the Mediterranean region. This is linked to Varlık’s analysis of the way episodes of plague occurred in Ottoman regions, which was different from other Mediterranean and European areas. Instead of sporadic outbreaks every so often as occurred in British territories, for example, the Ottoman Empire had constant outbreaks of plague. She argues that the disease travelled along the same routes as the traded goods, animals and people to create what she calls ‘plague networks’.⁴⁸ This was the outcome, she suggests, of a very particular form of management of the Ottoman territories, which created certain kinds of interconnections between different parts of the empire, and in which Istanbul acted as the hub. Along with many others, she notes that the Ottomans had been seasonally mobile pastoralists before establishing their empire, and as such, they were peoples who travelled constantly, and their empire was built with that logic of mobility in mind. Lengthy studies of Ottoman economic and social history show that the Ottomans systematically developed an enormous network of trading roads and routes (often taking pride in strictly enforcing security along these routes). All kinds of international trade and commerce could travel along these routes, under a variety of controls by Ottoman authorities.⁴⁹

Varlık suggests that particularly from the time the Ottomans conquered Constantinople in 1453 (thereafter also called Istanbul) and up to 1600, the Ottomans systematically interconnected previously separated networks of routes – roads, caravan routes, sea routes – and secured them. While the empire was expanding, the Ottomans particularly focused on taking over border areas. Whereas

the British were travelling the globe and taking over far-flung chunks of the planet, which they were linking mostly through sea travel, the Ottomans were spreading out around the entire Mediterranean region and adjacent areas, closing the gaps between previously independently ruled areas, and thus creating links across networks of routes.

Varlık's argument is that this densely interconnected network created by the Ottoman approach towards developing and managing its empire, created a secure meshwork, to borrow a word from Ingold,⁵⁰ across which plague and later cholera could constantly travel. And since Istanbul was the hub of this dense network, it was also the city, she argues, that became the hub for infectious disease. This implies that, unlike the idea of Roman empire, in which the aim, as noted by Malkin, was that all roads should lead to the centre, to Rome,⁵¹ in the case of Istanbul, it seems the aim was that all roads should lead *through* Istanbul, or at least be connected to a road or route that leads through it.

Note that this is quite different from Keck's concept of the sentinel. In that metaphor, there is a body–place vector across which an infection travels, and the sentinel is capable of warning of its presence. In Varlık's account of Istanbul and the Ottoman territories, the coexistence was much closer: everything and everyone travelled along the same routes, constantly.

Varlık's work implies that the Ottomans, despite developing in dramatically different ways across the centuries, consistently structured, managed and understood their territories in terms of routes and borders – roads, paths, seaways and crossing points. This confirms an argument I have also made in earlier work, that Ottoman territorial logic was distinct.⁵² In particular, Varlık's study implies that Ottoman statecraft was guided by an underlying understanding of their territories as a network of routes, rather than blocks of land, as such. In contrast, most other political powers with an interest in the Mediterranean appear to have been guided in managing their colonial territories through an underlying understanding of them as bordered areas of land which are interconnected, both externally and internally, via routes. For example, the French approach towards managing their colonial territories was based on the idea of fixed lands that had specific characteristics (flora, fauna, peoples, etc.), that could be divided according to clear borders. The

implicit assumption of this model is that people mostly remain within each bordered area. This caused problems in the Chad Basin region, for example, where that model simply did not match most local people's practices.⁵³ In the Maghreb region of North Africa, a strongly pastoral area, the problem for the French colonial authorities was much the same.⁵⁴

As I have already outlined, official Ottoman responses to the outbreak of disease over the centuries were as varied as the British, French or Genoan responses, for these were usually carried out with the other political powers in mind; yet the Ottomans were always, it appears, acting with the idea of a network of routes and roads in mind, rather than one of blocks of territories or the classification of different kinds of bodies according to their assumed eugenic/territorial characteristics, as was done by the Nazis. The network of routes logic of location that appears to have informed the Ottoman approach was not necessarily any less hierarchical than any of the others that were around at the time, but it did not create a fixed, bodily or material, connection between people and place that the eugenic and nationalist approaches towards territory that replaced it in the twentieth century.

Beyond sentinels

This brings me, finally, to the question of what might be happening in the contemporary moment in relation to location and disease, given moves towards defining disease in terms of biosecurity,⁵⁵ in which supra-state political entities such as the European Union and transnational organizations such as the World Health Organization (WHO) are increasingly important in attempts to manage the spread of disease. What can the approach suggested here, which focuses on how the space across which disease spreads is understood and defined, contribute towards understanding how the response to outbreaks of disease works in today's Mediterranean? I have three answers, which are all necessarily brief.

First, it is clear that most contemporary official responses are attempting to align more closely to the concept of location as network. This replaces the earlier approach of fixed territories that are interconnected via routes, and it comes a little closer to the former

which understands location as a

enclosed by a
clear border

Ottoman understanding of territory. Second, the nation state, fixed territory as a bordered chunk of land kind of understanding of location has not disappeared; it coexists with that more networked approach. This can be seen to be at work in the tensions between the WHO and a number of states' responses to the COVID-19 pandemic. And third, the concept of location as a virtual space has been introduced, or perhaps more accurately, re-introduced. In earlier centuries, people around the Mediterranean spoke of miasmas and evil spirit worlds through which disease would be visited upon mortal people. The more contemporary versions, one of which I discussed earlier drawing on Keck's work, in which there is a vector across which infection travels, appear to be more like abstractions than unseen places or bad substances in the air; but they are nevertheless increasingly acted upon as if they are there. This is particularly when scientific research redefines a place (Hong Kong) as a sentinel, the gate between one kind of diseased body-place (birds in the air) and another kind of diseased body-place (humans in Hong Kong). In accounts of attempts to prevent the spread of disease in the Mediterranean over the centuries, nobody has yet defined Istanbul as a sentinel. Instead, as Baldwin, Varlik, and many others have demonstrated, an orientalist logic was imposed on the Ottomans, most particularly from the mid-nineteenth century onwards, in which a clear separation was asserted between Ottoman peoples and territories, and places and peoples outside of that realm. Within that logic, Keck's cynegetic (hunter/hunted) metaphor, in which both hunter and hunted inevitably coexist in the same place, is replaced by a binary metaphor of absolute difference, in which the location of one must exclude the location of the other, and there can be no overlap between them. More recent historical studies of how things were organized in practice in the Mediterranean region demonstrate that even while racist and later nationalist spatial logics were developing, other logics coexisted and cross-cut them. Not only have orientalist accounts of 'fatalistic' Ottoman responses to contagious disease been shown to be highly inaccurate, this chapter has tried to demonstrate the importance of understanding both the engagement between different political, commercial and ideological interests in the region, and how different ways of understanding location informed diverse responses to the threat of the spread of disease. This might have something to teach us today about how to

the case

approach the idea of the spread of disease. It might require an acknowledgement of the coexistence of different understandings of location, which means that closing some kinds of borders is never going to be effective in closing all of them.

NOTES

- 1 The research for this chapter has received funding from the European Research Council (ERC) under the European Union's Horizon 2020 research and innovation programme (grant agreement no 694482).
- 2 My grandfather both knew H. W. Florey, who worked on Fleming's original finding that some organic materials had anti-bacterial properties, and had read results of experiments Florey's team had carried out on penicillin in E. Chain, H. W. Florey, A. D. Gardner, N. G. Heatley, M. A. Jennings, J. Orr-Ewing and A. G. Sanders, 'Penicillin as a chemotherapeutic agent,' *The Lancet* 236:6104 (1940).
- 3 H. V. Wyatt, 'Robert Pulvertaft's use of crude penicillin in Cairo,' *Medical History* 34:3 (1990); R. J. V. Pulvertaft, 'Local therapy of war wounds I: with penicillin,' *The Lancet* 242:6264 (1943).
- 4 Pulvertaft, 'Local therapy of war wounds I', 339–48.
- 5 Wyatt, 'Robert Pulvertaft's use of crude penicillin, p. 324.
- 6 I. Harper, T. Kelly and A. Khanna (eds), *The Clinic and the Court: Law, Medicine and Anthropology* (Cambridge: Cambridge University Press, 2015); R. Richardson, *Death, Dissection and the Destitute* (Harmondsworth: Penguin, 1989); M. Foucault, *The Birth of the Clinic* (tr. Alan Sheridan) (London: Tavistock, 1986).
- 7 P. Weindling, *Epidemics and Genocide in Eastern Europe, 1890–1945* (Oxford; New York: Oxford University Press, 2000).
- 8 As Peter Baldwin noted, 'Bacteriology is routinely identified as a conservative doctrine that shifted the blame for disease from social conditions to microbes, requiring only limited statutory intervention' and the same kind of logic allowed a link to racism, through 'bacteriologically inspired imagery of interwar racist thought and especially analogies drawn by Nazi ideology between pestilential microbes and Jews': P. Baldwin, *Contagion and the State in Europe, 1830–1930* (Cambridge: Cambridge University Press, 1999), p. 33.
- 9 F. Keck, 'From purgatory to sentinel: "forms/events" in the field of zoonoses.' *Cambridge Anthropology*, 32:1 (2014), 47–61; F. Keck, 'Sentinels for the environment. Birdwatchers in Taiwan and Hong Kong.' *China Perspectives*, 2 (2015), 41–50.
- 10 A. Bashford (ed.), *Medicine at the Border: Disease, Globalization, and Security, 1850 to the Present*. (Basingstoke: Palgrave Macmillan, 2006), p. 2.

- 11 P. Zylberman, 'Civilizing the state: borders, weak states and international health in modern Europe', in Bashford, *Medicine at the Border*, pp. 21–40.
- 12 The idea of the coexistence of more than one way to define the relative value of a place (leading to several locations coexisting in the same place) is one that I am currently working on, along with a team of researchers, within a research project called *Crosslocations*. See www.helsinki.fi/en/researchgroups/crosslocations. A nascent version of it can be seen in S. Green, 'Making grey zones at the European peripheries,' in I. Harboe Knudsen and M. Demant Frederiksen (eds), *Ethnographies of Grey Zones in Eastern Europe: Relations, Borders and Invisibilities* (London; New York: Anthem Press, 2015). I have been working on the concept of relative location for quite a bit longer than that. See S. Green, 'Performing border in the Aegean: on relocating political, economic and social relations', *Journal of Cultural Economy*, 3:2 (2010), 261–78; S. Green, 'A sense of border,' in T. M. Wilson and H. Donnan (eds), *A Companion to Border Studies* (Oxford: Wiley-Blackwell, 2012), pp. 573–92; S. Green, 'Money frontiers: the relative location of euros, Turkish lira and gold sovereigns in the Aegean,' in P. Harvey, E. Casella, G. Evans, H. Knox, C. McLean, E. Silva, N. Thoburn and K. Woodward (eds), *Objects and Materials: A Routledge Companion* (Abingdon: Routledge, 2013), pp. 302–11.
- 13 On the historical development of this understanding of territory, see S. Elden, *The Birth of Territory* (Chicago: The University of Chicago Press, 2013).
- 14 Keck, 'From purgatory to sentinel, at 51.
- 15 *Ibid.*, at 58.
- 16 Keck 'Sentinels for the environment, at 48.
- 17 Weindling, *Epidemics and Genocide*, pp. 200–3, 232.
- 18 Donna Haraway has studied issues of biological miscegenation and the way that transgression of bodily boundaries between species generates a sense of category transgression that deeply concerns many people: D. Haraway, 'Mice into wormholes: a comment on the nature of no nature,' in G. Lee Downey and Joseph Dumit (eds), *Cyborgs and Citadels: Anthropological Interventions in Emerging Sciences and Technologies* (Santa Fe, NM: School of American Research Press, 1997); D. Haraway, *Modest_Witness@Second_Millennium. Femaleman@_Meets_Oncomouse™. Feminism and Technoscience* (New York; London: Routledge, 1997). What I am focusing on here is the spatial transgression combined with the coexistence of diverse logics of connection and disconnection, not the transgression of identities implied in the language of miscegenation.

- 19 R. Willerslev, *Soul Hunters: Hunting, Animism, and Personhood among the Siberian Yukaghirs* [in English] (Berkeley, CA; London: University of California Press, 2007).
- 20 Notable examples include Baldwin, *Contagion and the State*; A. Bashford (ed.) *Quarantine: Local and Global Histories* (New York: Palgrave Macmillan, 2016); B. Bulmuş, *Plague, Quarantines and Geopolitics in the Ottoman Empire* (Edinburgh: Edinburgh University Press, 2012); N. Varlık, *Plague and Empire in the Early Modern Mediterranean World: The Ottoman Experience, 1347–1600* (Cambridge: Cambridge University Press, 2015); and T. Mitchell, *Rule of Experts: Egypt, Techno-Politics, Modernity* (Berkeley, CA; London: University of California Press, 2002): Chapter 1 – ‘Can the mosquito speak?’
- 21 Some examples include Baldwin, *Contagion and the State*; A. Chase-Levenson, ‘Early nineteenth-century Mediterranean quarantine as a European system’ in Bashford, *Quarantine*; Varlık, *Plague and Empire*; Bulmuş, *Plague, Quarantines and Geopolitics*.
- 22 M. Douglas, *Purity and Danger: An Analysis of Concepts of Pollution and Taboo*. (London: Routledge & Kegan Paul, 1976).
- 23 Bashford, *Medicine at the Border*, p. 14.
- 24 Bashford, *Quarantine*, p. 9.
- 25 L. Malkki, ‘National geographic: the rooting of peoples and the territorialization of national identity among scholars and refugees’, *Cultural Anthropology*, 7:1 (1992), 24–44; A. McClintock, *Imperial Leather: Race, Gender and Sexuality in the Colonial Contest* (New York; London: Routledge, 1994).
- 26 Baldwin, *Contagion and the State*, pp. 141–2.
- 27 J. Caplan, ‘“This or that particular person”: protocols of identification in nineteenth-century Europe’, in J. Caplan and J. C. Torpey (eds), *Documenting Individual Identity: The Development of State Practices in the Modern World* (Princeton, NJ; Chichester: Princeton University Press, 2001), pp. 49–66.
- 28 A. L. Fairchild, *Science at the Borders: Immigrant Medical Inspection and the Shaping of the Modern Industrial Labor Force* (Baltimore, MD: Johns Hopkins University Press, 2003).
- 29 *Ibid.*, p. 253.
- 30 *Ibid.*, p. 18.
- 31 John Slight’s highly insightful book about the British Empire’s involvement in the Hajj in the late nineteenth century argues that British direct management of the event was partly triggered by the outbreak of a major cholera epidemic among the pilgrims in 1865: J. P. Slight, *The British Empire and the Hajj, 1865–1956* (Cambridge, MA: Harvard University Press, 2015).

- 32 Bulmuş, *Plague, Quarantines and Geopolitics*.
- 33 Ibid., p. 98.
- 34 Baldwin, *Contagion and the State*.
- 35 Ibid., p. 229.
- 36 Ibid., p. 230.
- 37 Ibid., p. 208.
- 38 Slight, *The British Empire and the Hajj*. See also S. Mishra, *Pilgrimage, Politics, and Pestilence: The Haj from the Indian Subcontinent, 1860–1920* (Oxford: Oxford University Press, 2011).
- 39 Baldwin, *Contagion and the State*, p. 205.
- 40 Ibid., p. 207.
- 41 Ibid., p. 208.
- 42 Ibid., p. 13.
- 43 See, for example, Bulmuş, *Plague, Quarantines and Geopolitics*; Bashford, *Quarantine*; A. Smart and J. Smart, 'Biosecurity, quarantine and life across the border', in Wilson and Donnan, *A Companion to Border Studies*; M. I. Ticktin, *Casualties of Care: Immigration and the Politics of Humanitarianism in France* (Berkeley, CA; London: University of California Press, 2011); J. Booker, *Maritime Quarantine: The British Experience, c.1650–1900* (Aldershot: Ashgate, 2007).
- 44 N. Varlık, *Plague and Empire*.
- 45 Ibid., p. 71.
- 46 Ibid., p. 72–88.
- 47 Ibid., p. 88.
- 48 Ibid., pp. 8–10.
- 49 H. Inalcik and D. Quataert (eds), *An Economic and Social History of the Ottoman Empire* (Cambridge: Cambridge University Press, 1997), pp. 195–217.
- 50 T. Ingold, *Lines: A Brief History* (London: Routledge, 2007).
- 51 I. Malkin, *A Small Greek World: Networks in the Ancient Mediterranean* (Oxford: Oxford University Press, 2011), p. 7.
- 52 S. F. Green, *Notes from the Balkans: Locating Marginality and Ambiguity on the Greek–Albanian Border* (Princeton, NJ: Princeton University Press, 2005).
- 53 J. L. Roitman, *Fiscal Disobedience: An Anthropology of Economic Regulation in Central Africa* (Princeton, NJ; Oxford: Princeton University Press, 2005).
- 54 F. Ben Slimane, 'Between empire and nation-state: the problem of borders in the Maghreb', in D. Bechev and K. Nicolaidis (eds), *Mediterranean Frontiers: Borders, Conflict and Memory in a Transnational World* (London: Tauris Academic Studies, 2010), pp. 35–55.
- 55 F. Keck, 'Feeding sentinels: Logics of care and biosecurity in farms and labs. *Biosocieties*, 10:2 (2015), 162–76.