

Introduction

In the wake of the COVID-19 pandemic, medical experts, especially in disciplines such as epidemiology and virology, have suddenly become protagonists on the mainstream media scene. Their contributions in newspapers and appearances on television, on radio, and at official press conferences have reached a status of ubiquity. Unexpectedly, technical concepts such as ‘basis reproduction number’ along with a wealth of graphs showing present and predicted developments of the pandemic have left their traditionally small scholarly audience to transform into issues widely discussed by the general public. Apart from medical experts, columnists and social scientists have also engaged in constructing countless scenarios that attempt to gauge the possible outcomes of COVID-19 on societies, connecting the effort to understand the present with the will to predict the future.

This Element has been written in the context of this essential need to grasp the current issues of COVID-19 while forecasting outcomes; the question concerning the specific contribution of history and especially the history of epidemics can legitimately be raised at this juncture. How can historians of epidemics contribute to discussions of present and perhaps future epidemics by looking at the past? Historians are indeed united by their interest in the past, a feature that may well render them suspiciously dubious forecasters. As a result, their scientific contributions can address neither the present nor the future but can be of relevance nonetheless. Historians cannot take part in current debates by providing answers, but they can certainly pose important and stimulating questions that can change the perspective on current events. As the historian Achim Landwehr argues in an essay on the critical impact of history, it is the distance between past and present that enables historians to shed light on central issues and thus question what exists (Landwehr 2012). By showing the varied impact of past epidemics on demographics, the environment, and urban space, for instance, historians can inspire questions that illuminate underexposed aspects of the present. Indeed, history provides an informed basis from which to interrogate the present, thereby influencing the future (Birn 2020; Green 2020a).

The historian of epidemics Jo Hays remarked that, despite the perceived simplicity of the questions historians ask when analysing past epidemics, the answers that follow are invariably complex and may even appear hesitant (Hays 2007). In fact, the kind of influence epidemics have had on past societies has been almost as varied as the number of the single epidemics and of contexts in which they broke out. To provide an example, answers to a classic question concerning the way in which epidemics have affected public authorities might

sound rather indecisive. As Jo Hays convincingly reports, major epidemics have nearly always had an impact on public authorities, but the quality of this impact has greatly depended on a number of variables that are extremely challenging to account for. At times, epidemics reinforced the power of public authorities, such as instances in which they assumed extra powers to carry out more invasive forms of social control. On the other hand, epidemics have also destabilised public authorities, whose actions inspired fierce popular resistance after they enforced strict containment measures. In other settings, epidemics have given rise to power struggles between different authorities, such as disputes between local and national as well as religious and political authorities. What is more, these three possible outcomes on public authorities are not mutually exclusive and can occur in the same place at the same time. As with the example concerning the impact of epidemics on public authorities, many other issues in the history of epidemics cannot be tackled with straightforward answers.

However, historians can point to issues that have been relevant in past epidemics that could be overlooked in the present. For instance, again concerning the example of the influence of epidemic crises on public authorities, historians can highlight the fact that nearly all of the major epidemics in history have had a decisive impact on the development of public authorities. A similar argument can be made to gauge the influence of epidemics on cities. Their influence on densely inhabited human settlements is varied and depends on innumerable variables; nevertheless, it is possible to affirm that epidemics have had an almost invariably significant impact on urban centres. This may not allow for any noteworthy future predictions, but it does enable the formation of more informed questions. Against this backdrop, this Element aims to provide readers with a brief guide that serves as a starting point to explore the rich literature on the history of epidemics in cities and, albeit indirectly, to engage in a critical questioning of the present from this vantage point.

The overview provided in this Element is intended to highlight certain salient trends of the impact of single epidemics on a wide range of cities in the past two centuries. In some cases, an analysis of a single epidemic therefore focuses on a short time frame and on the reconstruction of the events and certain changes those events inspired. The idea behind this way of regarding epidemics is essentially their framing as moments that trigger exceptional, decisive, and long-lasting changes in societies. However, epidemics are not only catastrophes that can spur sudden and surprising reactions. They are also, as several social historians have noted (Briggs 1961; Evans 1988; McGrew 1965), crises that '[unsettle] the normal functioning of society and [bring] to the surface latent social antagonisms' (Durey 1979, 1). Analysing epidemics from this perspective, conceiving them as moments that have exacerbated already existing

conflicts, also facilitates the identification of central structural traits of societies which are otherwise rendered almost invisible in their normal functioning. In other words, as Charles Rosenberg puts it, epidemics constitute for the social scientist ‘an extraordinarily useful sampling device’ (Rosenberg 1989, 2). If some of the cases presented in this Element rely mostly on the first idea, of epidemics as decisive events, others prefer to use the approach of framing epidemics as revealing moments that enable historians to focus on conflicts concerning long-lasting processes. Though they may appear to varying extents in the cities examined here, these two ways of framing epidemics are present in every case analysis in this Element as it attempts to bring together these non-contradictory forms of conceiving epidemics.

Cities – the other big focus of this Element – as much as epidemics provide an especially fruitful vantage point to look at questions concerning global history. If epidemics can be conceived of as a temporal ‘sampling device’ that enables identifying in a compressed time frame some central tenets of societies as well as moments of decisive change, I regard cities as spaces where various central discussions and conflicts played out. Cities were not only often the gateway from which epidemic diseases entered larger territorial units or not. They were also ‘critical junctures of globalization’ where processes happening at different scales – for instance, on the global, regional, national, and local levels – intertwined and clashed (Middell and Naumann 2010, 6). This is not meant to deny rural spaces – as opposed to urban ones – their role as places of (dis)entanglement. However, cities played in many cases a specific role in the history of globalisation. As Frederick Cooper argues, ‘the world has long been – and still is – a space where economic and political relations are very uneven; it is filled with lumps, places where power coalesces surrounded by those where it does not’ (Cooper 2001, 190). Cities functioned often as these very spatial ‘lumps’ (Goebel 2018) where power concentrated, making them a spatial ‘sampling device’. This allows looking not only at the processes of connection and entanglement, which global historians have often highlighted in past decades, but also at the frictions and sometimes the processes of disentanglement that arise from the uneven and conflictual nature of globalisation and crystallise at the ‘small’ urban scale.

The specific impact epidemic crises have had on cities is mainly filtered through the way in which they were interpreted by those who experienced them. The first section of this Element therefore deals with the ever-changing array of viewpoints from which epidemic diseases have been conceived and with the ways in which these conceptions acted on the responses of cities, their authorities, and inhabitants to epidemic outbreaks. Medicine has played a central role in defining the evolution of conceptions of epidemic diseases,

and the first section reconstructs certain key turning points in the history of the relationship between medicine, epidemics, and cities. It opens with the theories of Hippocrates, which substantially influenced the understanding of disease well into the nineteenth century, and ends with the rise of the germ theory of disease in the late nineteenth century.

The following three sections focus on cholera, the plague, and tuberculosis, three major epidemic diseases at the root of a series of pandemics that affected several cities across the globe during the nineteenth and twentieth centuries. Emerging for the first time at the beginning of the nineteenth century, cholera was the first epidemic disease to be clearly viewed by contemporaries as being of a global magnitude. The second section of this Element begins with a general introduction on cholera, the salient traits of its history, and certain essential features of the disease's historiography. Following this introduction, the section focuses on the cholera outbreaks in Paris and Buenos Aires. The core of the analysis of the Parisian epidemic revolves around the riots that took place during Paris' first cholera outbreak in 1832. In its conclusion, the analysis of the Parisian case suggests that these riots represented a novelty with an outcome that was relevant for the approach to the reform of the French capital in the following decades. The case of the cholera epidemics in Buenos Aires during the late 1860s shows how the disease triggered a far-reaching debate on the presence of meat factories in the city, on the future of the city itself, and on its position in the Atlantic world. Facts aside, a range of fantasies concerning the strategies adopted by Western European cities such as Paris and London to tackle cholera were among the elements at the root of this debate. The Parisian experience in tackling cholera influenced the elites of Buenos Aires, but only after extensive filtering and mediation through the constellation of local values and interests. The central tenet connecting the two examples revolves around an analysis of the influence, in a rather unexpected fashion, of the first case, Paris, on the more recent one, Buenos Aires.

The third section, on the plague, resembles the preceding section on cholera in terms of structure. The section begins with a general introduction to some key themes discussed in the huge corpus of historiography on the plague, which focuses, however, mainly on the Black Death in the fourteenth century and plague epidemics in early modern Europe. The section then presents further plague epidemics at the turn of the twentieth century in Hong Kong and Bombay, both under British colonial rule at the time. The sections on these two cities highlight similarities and contrasts between both cases. The symbolic investment in Hong Kong and Bombay by the British empire differed somewhat; whereas Hong Kong was establishing itself as a commercial hub, Bombay was portrayed as a showcase of modernity in British India. A disease considered

a shameful relic of the past, the plague was blamed squarely on the local populations in both cases, among which most of those who perished were to be found. In both cases, the local populations reacted to the measures ordered by the colonial authorities with protests. Forced to confront such opposition in Hong Kong and Bombay alike, the British authorities backed down and acknowledged the demands of the local population. When the height of the crisis had passed, however, they proceeded to carry out violent slum clearings, which mainly targeted the poor among the urban population.

While the previous sections focus on diseases that were characterised by both an immense emotional impact and comparatively short temporalities that ranged between a few months and a few decades, the fourth section, on tuberculosis, presents a disease that had been virtually continuously present for thousands of years and inspired varying reactions in a range of societies. Throughout most of the nineteenth century, tuberculosis was widely perceived as an individual non-contagious condition and therefore failed to inspire far-reaching emotional and political reactions. As new theories concerning the contagious nature of the disease rose in the 1880s, tuberculosis gradually transformed into an epidemic that was viewed with great concern at the beginning of the twentieth century. After the general introduction, the section highlights the cases of Baltimore and Buenos Aires, assessing the ways in which the fight against tuberculosis intersected with traditions and tendencies towards urban racial and ethnic segregation. In the case of Baltimore, the racial segregation of African Americans intensified the outbreak of tuberculosis, while being simultaneously used to further underpin the existence of racial boundaries. In the case of Buenos Aires, a city that was not segregated along similar ethnic and racial lines at the outset of the emergence of tuberculosis, the disease did not have a great influence on the distribution patterns of the population.

The dual focus of this Element on global epidemics and specific cities facilitates greater insight into transnational processes such as pandemics and their localisation in a variety of contrasting settings. This study creates possibilities for comparative analyses between different cities, such as the cases of Hong Kong and Bombay, and Baltimore and Buenos Aires. Furthermore, it shows how cities could influence each other; in the case of Paris and Buenos Aires, the former mostly influenced the latter, though in a somewhat unexpected and indirect fashion. In the context of phenomena such as pandemics, a focus on cities can give rise to a gauging of the uneven impact of global processes in different local contexts. By simultaneously concentrating on global phenomena and globally connected cities, this Element highlights similarities and differences in global connections while also underlining their non-linear and asymmetrical character, deliberately muddying the waters of what can at times be an

oversimplified narrative of global history. In fact, if the success of global history has spurred historians into looking beyond the framework of the nation, the enthusiasm for the global has occasionally developed into a scholarly mannerism that is often satisfied with the detection of ubiquitous entanglements, often underplaying both the absence of connections and their rather conflicting nature (Goebel 2016).

1 Epidemics, Medicine, and Cities

Before the emergence of the social sciences between the end of the nineteenth century and the beginning of the twentieth, a development which gave rise to specific urban disciplines such as urban sociology and planning, medical doctors and hygienists were the central experts in the field of the urban. Medicine had become the pivotal knowledge system that people relied upon both to make sense of disease and to envision anti-epidemic reforms, especially concerning epidemic outbreaks in cities, a circumstance that was certainly not uncommon. Even after the rise of specific urban disciplines, medicine has been a central scientific arena in which not only disease and its causes were discussed; regulations were also drafted regarding the way people should live and construct their environment in order to prevent disease. This section focuses on how different medical traditions and schools, which are typically identified as the Western predecessors of today's hegemonic biomedicine, viewed the epidemics and the relationship between disease and the ways in which human beings lived in cities. The Element focuses on a specific genealogy of modern biomedical thought that gravitates towards the Western history of thought and starts its narration with the humoral medicine of the ancient physicians Hippocrates and Galen, which served as the dominant medical thought in Europe until the nineteenth century.

Prior to analysing the history of these medical schools and conceptions, important clarifications must be made concerning the concept of modern biomedicine and especially its relationship with the Western medical tradition. Providing a clear definition of modern biomedicine is a daunting task because biomedicine does not exist as a coherent and homogenous body of knowledge. In fact, numerous medical traditions from different world regions have conflicted, juxtaposed, cooperated, and intermingled in creating today's hegemonic, even though highly disputed, biomedical understanding (Cook 2018; Jackson 2018). For instance, looking at Europe in the early Middle Ages, it is impossible to distinguish 'Western' medicine from an alleged 'Islamic' counterpart: Islamic physicians studied and translated the work of ancient Greek physicians and also drew from a number of other traditions, eventually

spreading this knowledge throughout the Mediterranean region and well beyond (Ebrahimnejad 2018). More recently, ‘Western’ and ‘Chinese’ medicine have constructed a deep relationship of exchange; modern Chinese medicine results from a conflation of Chinese and Western practices and knowledge. Conversely, in numerous regions across the world, traditional East Asian practices such as acupuncture are widely accepted and applied (Lo and Stanley-Baker 2018). Not only are regional boundaries between medical traditions often rather artificial, but medical epistemologies can also vary consistently. For instance, what we might understand as Western medicine has also been contested from within the controversial boundaries of the Western tradition: homeopathy, for instance, a medical school established in Germany in the eighteenth century, has opposed scientific Western medicine and managed to survive and thrive to this day (Volf and Aulas 2019). Therefore, as these examples show, modern biomedicine is the result of long-lasting processes of entanglement and exchange between different medical traditions at different levels. When using the terms ‘medicine’ or ‘Western medicine’ in this Element, I tend to endow them with more consistency and coherence than they have ever really possessed. The reader should bear in mind that I use these terms as a type of shortcut to illustrate an otherwise rather chaotic set of ideas.

As a result of these clarifications, the reader might question why I include a section on the history of Western medicine and its interpretations of the relationship between epidemic disease and the urban environment. The answer lies in the specific time frame and range of cities considered in this Element. Even though medicine developed through ‘trials, encounters, and appropriations overseas’ and has always been a field of hybridisation and contestation (Arnold 1996, 11), in the cases analysed in this Element, Western medicine represented the common language of the ruling elites and functioned as a contested but nonetheless hegemonic language. In fact, notwithstanding the constant contaminations between different medical traditions, the language of Western medicine has progressively risen to occupy a position of dominance among other systems of medical knowledge. A central reason for this path certainly lies in the history of colonialism: as the European empires came to dominate vast swathes of the globe, they developed knowledge systems, medicine among them, that played a fundamental role in colonial rule. The specific focus of this study lies on cities that largely maintained a direct connection with colonialism and imperialism. For instance, Paris as a metropolitan capital, Bombay as a colonial centre, and Buenos Aires as the capital of a postcolonial nation, Argentina, all formed part of an entangled colonial world, albeit with evidently contrasting roles, in which the language and practices of Western medicine served as tools of colonial knowledge and power.

This does not mean that medicine was a mere imposition from the centres to the imperial peripheries; it was in fact a hybrid construction. However, it is also important not to overlook that the processes of mutual appropriation and contamination took place in the context of asymmetrical power relations in which imperial agents often occupied positions of power. Leaving aside the ambition of writing an '*histoire totale*' of medical knowledge, epidemics, and cities, in the following sections I explicitly deal with a Western genealogy of medical knowledge and nevertheless highlight, starting from this vantage point, the constitutive character of colonial encounters for the formation of medical thought and practices.

1.1 Humoral Medicine and Miasma

An analysis of the history of medicine, its conceptions of disease, and their relationship with cities begins here with humoral medicine. This is not the case because all conventional histories of Western thought commence in ancient Greece, but rather because this form of medicine was the main reference point for physicians in Europe, South Asia, and the Mediterranean region for thousands of years and played a central role as the basis for explanations of epidemic disease that did not revolve around the idea of contagion. Humoral medicine dominated the scene for an impressively long period from the fifth century BCE well into the nineteenth century CE, despite being the object of a great number of differing and contrasting interpretations such as that of Galen, who became its main interpreter during late antiquity. Its origin goes back to the sixty treaties written by the Greek physician Hippocrates and his followers. The corpus of Hippocratic texts is organised around a central principle, namely that disease is an event of nature that can be explained and treated through natural means. Hippocratic physicians did not resort to supranatural and divine powers to explain the body, its health, and its afflictions. Following the view of the natural origin of the human body, Hippocratic medical philosophy conceived a system of analogies and correspondences between what was then understood as the macrocosms of the universe and the microcosm of the human body.

According to Hippocrates, universe and body were made of the same elements and governed by the same natural laws. The Hippocratic conception of elements of nature was directly borrowed from the teachings of the ancient Greek philosopher Aristotle. They regarded the body as being governed by four fluids – the 'humours' – which corresponded to the four 'terrestrial' elements theorised by Aristotle. The black bile matched earth, the phlegm corresponded to water, the blood denoted air, and the yellow bile represented fire. In accordance with this doctrine, health was viewed as a balance of the fluids in the body. Disequilibrium

or corruption of these bodily components resulted in disease. In keeping with such ideas, discrete diseases such as tuberculosis or influenza did not exist. On the contrary, each different manifestation of the body was a symptom of the essential condition of imbalance in the ratio of bodily humours (Nutton 2013).

The conception of illness as an imbalance of the single body lay at the root of the idea that disease was a non-transmittable condition of the individual, which in turn required an ad hoc therapy. Hippocratic medicine therefore did not regard epidemics as the result of a disease spreading through contact between individuals and instead provided other explanations for such events. In Hippocratic medicine, a defined set of causes had been established that could result in an imbalance of the humours and therefore disease. Certain causes only concerned individuals and their regimen: the intake of food and drink, the passions of the soul, and the quality of sleep and physical exercise. However, when an entire population became ill simultaneously, individual regimens could hardly be responsible and humoral physicians saw environmental factors as the primary causes. The environmental or external influences were mainly identified through the weather and air quality. In fact, air could become corrupted and poisonous according to the – using a modern term – ‘humoralists’, a so-called miasma. These miasmas, which could descend or rise in an entire city, caused the outbreak of epidemics. The source of the poisoning of the air had to be found in ‘unpleasant smells descending from the stars, rising odours (from the earth or marshes), or fumes coming from decomposing cadavers’ (Jouanna 2012, 125).

The fact that epidemic disease was intimately tied to certain locations in which these poisoning fumes descended, rose, and concentrated had important consequences for cities. Throughout the long period in which humoral medicine played a pivotal role in explaining disease, the conception that epidemics were elicited by a locally concentrated poisoning of the air meant that, as soon as an epidemic broke out, people were required to leave the contaminated area immediately. This also applied to cities, and Hippocratic physicians recommended that their patients leave the city and find a place with uncontaminated air. Sanctioned by humoral physicians, fleeing cities was a common reaction when major epidemics broke out, as in the so-called Plague of Athens in the fifth century BCE and, a thousand years later, in the Plague of Justinian (Little 2007). After antiquity, similar phenomena also occurred, such as in many cities during the fourteenth century CE, when bubonic plague swept across Eurasia, earning in Europe the name Black Death.

1.2 Contagion and Quarantine

The humoral idea of poisoned air as the source of disease was, however, not the only assertion in circulation. For instance, during classical antiquity, the

tradition of magic-religious medicine viewed epidemic disease as the result of contact with contaminated people and objects, in partial opposition to Hippocratic medicine. Both regarded miasma as the origin of epidemic disease but perceived it in contrasting fashion. In religious tradition, miasma was not poisoned air but a ‘stain’, a fault of the individual or the community. This kind of miasma was highly contagious and, for instance, even the ritual instruments used for the purification of the sick were believed to carry the miasma and needed to be taken as far away from the community as possible (Jouanna 2012). Furthermore, the strict isolation reserved for lepers as described in the Bible, for instance, points to a notion of epidemic disease as the result of contact between human beings. Despite their opposing positions on the subject, the humoral-miasmatic and religious-contagious conceptions of epidemic disease nonetheless had similar effects on cities. For humoral physicians, epidemics were tied to given places and fleeing from cities was therefore a sensible solution; likewise, for religious medicine that viewed cities as possible breeding grounds of contagious people and objects, leaving was a viable way for the individual to avoid infection. A relevant difference was notable, however; following the religious ‘contagionist’ notion, miasma could be erased through acts of purification and, more importantly, both humans and objects carrying the ‘stain’ could be isolated or kept outside the community, a procedure that became essential during the late Middle Ages, when bubonic plague hit Eurasia.

The simultaneous existence of different theories on the causation and spread of epidemic disease, as in the case of humoral-miasmatic and religious-contagious ideas, withstood the end of antiquity and became a constant of European medicine until the end of the nineteenth century. Even before the idea of contagion was scientifically revived in the sixteenth century by the physician Girolamo Fracastoro, cities on the European continent, which were regularly affected by bubonic plague from the fourteenth to the late eighteenth century during the so-called second plague pandemic, devised a system of preventive measures based on a mix of ‘contagionist’ and ‘miasmatic’ viewpoints (Harrison 2012). One of the key ideas lay in the consideration of disease as an external invasion, and anti-plague measures were primarily designed to prevent the penetration of disease into ports or cities. This conception was also intimately connected to the scale and structure of the commercial and port cities of the Italian peninsula, which were the hardest hit by the plague and therefore at the forefront of the establishment of anti-plague measures. The institutions of maritime quarantine, lazarettos, and sanitary cordons – words and concepts still widely in use today – represented the backbone of anti-plague systems. In what became an influential model, the city authorities in Venice ordered the construction of two institutions (Lazzaretto Nuovo and Vecchio) during the fifteenth