Disease and medicine

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A major challenge for historians is the retrospective diagnoses of diseases on the basis of recognizable symptoms. “Disease” is an equivocal term: in different historical and cultural settings diseases have been understood and described in very different ways. Chinese and Ayurvedic medical systems, for example, are organized on principles different from conventional Western nosology. Social circumstances, cultural assumptions, and political institutions have also shaped the way diseases are interpreted and managed. Similar symptoms may be caused by different pathological agents, making diseases of the past problematic to identify.

In Western biomedicine, human infectious diseases are understood as particular disorders caused by pathogenic micro-organisms, including bacteria, viruses, parasites, and fungi. While such diseases may be communicated from person to person, others may be transmitted to humans via animals or insects, or through the ingestion of contaminated foods and water. “Medicine” is understood as the diagnosis, treatment, and prevention of disease, extending from clinical practice to sanitation and hygiene. Until the advent of germ theory in the 19th century, however, many infectious diseases were not recognized as such by physicians. Instead, their causes were attributed to an imbalance of the “humors” – the four vital fluids which made up the human constitution. While some diseases, notably leprosy and smallpox, were understood to be contagious, a wide variety of factors were educed to explain infection.

According to “miasmic” theories, for example, disease was produced by the noxious emanations of decaying vegetable matter and filth.

By linking territories in an often loose agglomeration, empires brought into contact divergent and often conflicting ideas about the nature and identity of disease. Studies of empire may thus furnish invaluable insights into “disease” as a comparative cultural phenomenon. By the same token, examining diverse responses to disease in the past may further our understanding of the processes that produced and underpinned empire.

DISEASE AND ECOLOGIES OF EMPIRE

Historically, empires created conditions for the emergence and diffusion of disease, just as disease events profoundly shaped imperial histories. The subjection of territories around the Mediterranean to imperial Roman rule from the first century BCE, greatly facilitated the spread of infections. It is likely, for example, that a “plague” – possibly of smallpox – brought to Rome from Mesopotamia during the reign of Marcus Aurelius (161–180 CE), compounded with internal conflicts to destabilize the imperium. The first recorded plague pandemic to afflict Europe, known as the Justinian Plague, occurred in the mid-6th century CE, when Constantinople was devastated. The historian Procopius, who lived through the pandemic, claimed that the disease spread across the Mediterranean from the mouth of the Nile. In his History of the Wars (c.550), he described it in apocalyptic terms as a pestilence that threatened to eradicate the human race. Evidence indicates that the accession of territories and the
movement of troops, in conjunction with environmental transformations such as deforestation, created conditions for diseases to emerge, proliferate, and spread. Internal conflicts and pressures from without amplified the disruptions caused by disease with consequences for the coherence of the imperial order.

The turbulence caused by the plague within the Eastern Roman Empire may have played a role in precipitating the decline of the Persian Sasanian Empire to the east, and was also a likely factor in the rise of the Arab Empire during the 7th century. Following the establishment of Islam in Arabia by the Prophet Muhammad (c.570–c.632 CE), large swathes of territory were conquered by the Arabs around the Mediterranean. The Umayyad Caliphate, founded in 661, extended at its apogee from present-day Iran to the Atlantic shores of the Iberian peninsula. In the initial phase of conquest, the traditional nomadic existence of the Arab tribes may have spared them from the worse effects of infection. However, as the invading populations became progressively sedentarized, epidemics were to pose increasing challenges. The experience of disease was to lead to the development of scientific and medical thinking, particularly under the Abbasids who seized power in 750, when advances were made in a broad range of medical areas, including anatomy, surgery, and hygiene. In the 11th century, the polymath scholar Ibn Sina (known by his Latinized name Avicenna) compiled The Canon of Medicine (1025), a medical encyclopedia which describes the contagious nature of certain diseases – as well as identifying their likely routes of transmission – and which became a prescribed medical text in the universities of Europe for centuries.

Historians have conjectured that diseases spread along the long-distance trade routes of the classical world, including the Silk Road to Asia. In China, epidemics seem to have been a contributory factor in the fall of the Han dynasty (206 BCE–220 CE), acting as a spur to the development of Chinese medical thinking. It was during this period that the physician Zhang Ji (c.150–219 CE) compiled his Treatise on Cold Damage and Miscellaneous Disorders, examining the different clinical manifestations of “febrile epidemics,” the likely climactic factors which he suggested had caused them, and appropriate treatments. However, given changing disease concepts and the paucity of demographic evidence, it is impossible to determine with any certainty what microbial agents were responsible for these epidemics and how severe they may have been.

Trade across Eurasia certainly played an important role in the transmission of bubonic plague in the medieval period. The establishment by Genghis Khan (c.1162–1227) of the Mongol Empire – which at its furthest extent in the 13th century stretched from the Sea of Japan to the borders of Europe – intensified the traffic of peoples and commodities along overland communication networks. Although the origins of the Black Death, which was to ravage much of Europe between 1348 and 1350, continue to be debated, it has been speculated that the extension of the caravan trade under the Pax Mongolica led to the diffusion of bubonic plague from the steppes of Mongolia to China, the Crimea, and from thence to Europe. Mongol conquests may have upset ecological and epidemiological balances, intermeshing disease pools with momentous consequences for human societies.

Evidence from a number of different imperial contexts has thus underlined the role played by proliferating imperial networks in the diffusion of disease. The extension of the Ottoman Empire (c.1299–1922) during the 15th and 16th centuries from the Persian Gulf to the Atlantic, for example, appears to have changed the epidemiology of disease
transmission. Expanding communication and trade routes connecting the newly conquered territories, as well as the growth of cities, amplified and accelerated the spread of disease, notably plague.

Undoubtedly the most striking illustration of the critical role of disease in the development of empire, however, is provided by the Spanish and Portuguese conquests of the Americas from the end of the 15th century. In explaining how so few Europeans succeeded in subjugating such large Aztec, Inca, and Mayan populations, historians have reasoned that disease was a decisive factor. Following Christopher Columbus’ second expedition to Hispaniola in 1493 – where the Spanish established their first colony in the Americas – an epidemic of influenza appears to have decimated the native Indian population of the Antilles. Studies of the impact of the Spanish conquest and colonization after 1518 on the populations of Central Mexico (New Spain) have suggested that between the early 16th century and the mid-17th century the indigenous population fell by an estimated 90 percent. This implosion may be attributed in large part to the importation of Old World infectious diseases onto “virgin” soils, where there was no immunity.

The “discovery” of the Americas led to a mingling of Old and New World plants, animals, and micro-organisms in a process that has been termed the Columbian Exchange. The migration of new species exposed indigenous populations to novel pathogens, including smallpox, measles, chickenpox, typhus, and influenza. These were infectious diseases associated with the dense human populations and domesticated animals of the Old World. The dramatic depletion of indigenous populations as a result of their lack of natural resistance to new diseases fundamentally shifted the balance of power in favor of the Europeans.

The slave trade from West Africa to the Americas and the Caribbean from the 16th century was also a crucial driver of disease, creating a lethal admixture of African, European, and New World diseases, including malaria and yellow fever, both transmitted by mosquitoes. Some 12 million African slaves were transported to the New World by the Portuguese, British, French, Spanish, Dutch, and Americans. The vast majority of slaves were brought to work on plantations. The institution of slavery became central to the development of an imperial economic system based on commercial crops such as sugar, as well as on gold and silver, and the production of goods bound for Europe. Disease and empire were closely connected to the growth of global capitalism and to the expansion of a market economy supported by new forms of production. During the Middle Passage – the journey from Africa to the Americas – slaves and crew were particularly susceptible to infectious diseases, most commonly dysentery. By one estimate some 1.5 million died at sea, a statistic that does not include those who perished in the port factories before embarkation or during the slave raids, as well as those who died upon arrival.

Biological and geographical explanations, in addition to the development of technologies such as firepower, may account for how Europeans established empires with comparative ease, particularly in the Americas. Other regions of the globe were also to experience the catastrophic consequences of virgin-soil diseases. In the Pacific, infections such as measles killed off many indigenous islanders. Following James Cook’s “discovery” of Hawaii in 1778, the native population may have plummeted by 90 percent. Similarly, a sharp decline of the aboriginal population of Australia occurred after settlement by the British in the late 18th century. The first outbreak of smallpox in 1788–1789 may have killed some 50 percent of the aboriginal
population in Sydney. Comparative, global perspectives on historical events thus underscore the importance of disease and related environmental factors in the formation of empire in the modern period. They also demonstrate the degree to which empires themselves may be thought of as ecological systems, characterized by a complex interplay of politics, economics, and nature.

Ecological approaches to world history have increasingly gained popular currency. The historical dominance of Eurasian civilizations, for example, has been ascribed to environmental variances: geography, access to raw materials, and, crucially, disease, created specific advantages for Eurasians, setting in motion a positive feedback loop. The exclusive focus on environment and disease ecology in such works, however, reflects an overtly deterministic approach to world history, one in which the role of human agency, as well as social and cultural forces, may be sidelined and sometimes even overlooked. At the same time, a racial theory of disease susceptibility and immunological deficiency is perhaps inadvertently introduced. The exclusive focus on immunity may downplay the contributory roles of poverty, social disparity, and malnutrition, as well as consideration of the specific social and environmental contexts of mortality and morbidity.

There are undoubtedly practical reasons why the role of epidemics has been accentuated by historians since the archives often contain little information about less dramatic and more protracted conditions, such as diarrheal infections – which continue to be a major cause of mortality in the world today – or, for that matter, about non-communicable and endemic diseases. The exclusive focus on disease crises may skew our perception of the past, relegating other more constant and debilitating but less conspicuous diseases to subsidiary, “background” events. Notwithstanding these reservations, however, the evidence strongly suggests that empire-building resulted in ecological changes with consequences for disease emergence, while the mingling of populations and the creation of new trans-continental channels of interconnection facilitated the spread of infection, creating an expanding global pool of disease.

While the emphasis in imperial historiography tends to be on the epidemiological shock and calamitous demographic impact of imported diseases on indigenous populations, colonizing societies (the metropole) were also affected by new diseases. Although the existing evidence remains inconclusive, many historians have identified the Great Pox, which swept through much of Europe in the 1490s, with the bacterial disease syphilis, contending that it was brought back to Europe from the New World. From the 1820s, “Asiatic” cholera dispersed through much of Europe and North America, killing many thousands and precipitating far-reaching sanitary reforms. European settlers, colonial officials, and troops dispatched overseas to defend empire were themselves susceptible to new diseases. Statistical analyses of the death rate of British and French soldiers sent to the tropics in the 19th century has suggested, for example, that it was at least twice that of soldiers who stayed at home.

TOOLS OF EMPIRE

Some historians have argued that European vulnerability to new diseases diminished from the mid-19th century as sanitary engineering and new industrial technologies became indispensable “tools of empire.” According to this view, European imperialism was transformed by a technological revolution. Gunboats and increasingly sophisticated weaponry, including single-shot breechloaders and machine guns, as well as innovations
in communication from steamships to railways and submarine cables, gave Europeans overwhelming superiority, enabling them to consolidate and extend their empires in Africa and Asia. Another key innovation in this armory was the development of quinine as a prophylaxis against malaria, a disease endemic to tropical Africa – and the principal cause of European mortality – which had been a deterrent to further penetration and domination of the continent. The prophylactic use of quinine, which derives from a toxic alkaloid extracted from the bark of the cinchona tree, a native of the Andes, allowed Europeans to endure the deleterious effects of tropical environments: medicine made the exploitation of new territories viable in both financial and human terms. According to this narrative, later breakthroughs in germ theory, bacteriology, and parasitology from the 1880s and 1890s would be responsible for effecting a “health transition” which, in turn, propelled the “scramble” for empire.

The development of tropical medicine as a specialty and the identification of the causative agents of many diseases between the 1880s and the 1920s buttressed the cause of empire. In 1883, the German bacteriologist Robert Koch identified the *Vibrio cholerae* in Egypt and India; Alexandre Yersin and Kitasato Shibasaburō isolated the bacillus responsible for bubonic plague in Hong Kong in 1894; although Alphonse Laveran had discovered the protozoan responsible for malaria in Algeria in 1880, it was Ronald Ross, working for the Indian medical service, who identified the female *Anopheles* mosquito as the disease vector in 1897; and Aldo Castellani established *trypanosomes* as the cause of sleeping sickness (*trypanosomiasis*) – a parasitic disease carried by the tsetse fly – in Uganda in 1903. In 1900, following the 1898 Spanish American War in Cuba, the cause of yellow fever (a virus transmitted by the *Aedes aegypti* mosquito) was discovered by the US Army Yellow Fever Commission, headed by Major Walter Reed.

Until at least the mid-19th century, colonizers were primarily concerned with safeguarding the health of the colonial community. While this enclavist approach persisted and led to policies of enforced segregation in many colonial contexts (notably South Africa), there was arguably a shift at the end of the century towards a more expansionist but nonetheless authoritarian public health approach, with a focus on sanitary reform. The so-called founder of tropical medicine, Sir Patrick Manson – who discovered that the mosquito was the host of the parasitic filarial worm that causes elephantiasis – founded the Hong Kong College of Medicine for Chinese in 1887 (subsequently helping to establish the London School of Tropical Medicine in 1899). In his inaugural address as dean of the college, Manson outlined a vision of empire in which the British crown colony was to serve as an enlightened hub for the global dissemination of scientific knowledge, which was destined to transform East Asia.

Although medicine and science could be invoked by contemporaries in this way as instruments of enlightenment and tools of empire, there was a wide discrepancy between theory and practice, rhetoric and policy. Hong Kong, for example, despite the pivotal role envisaged for it by Manson, did not have a purpose-built bacteriological laboratory until 1906. Indeed, the notion of medicine and science as “tools of empire” has been critiqued by many scholars on the ground that it flattens the complexity of empire, intimating an imperial homogeneity and coherence that did not exist. It also assumes a diffusionist dynamic wherein resilient technologies produced in the metropole are shipped out to the imperial peripheries, with little reverse traffic.

Evidence suggests that there was great variation in the take-up and application of new
technologies across the diverse terrains of empire. The transfer of technologies was highly mediated. Whereas white settler colonies within the British Empire, such as Australia, strove to reproduce the infrastructures of metropolitan institutions, in other parts of the Empire, such as Africa, the medical presence was negligible and geared predominantly to a dispersed military personnel. Medical practice and institutional arrangements differed markedly from place to place, just as they changed and were adapted over time.

Finally, other scholars have challenged the exclusive emphasis on the modernizing state and the overriding importance placed on “national” politics. They have pointed to the role of missionaries and other non-state actors – individuals and collectives – who were crucial to the formation of colonial medicine and public health. And while highlighting the locally mediated nature of colonial medical practice, they have accentuated the trans-national and trans-colonial contexts which shaped the development of biomedical institutions.

The efficacy of specific “tools of empire” such as quinine has also been called into question. It has been argued that quinine may not, in fact, have been so widely consumed as it is often claimed. In the case of French imperialism in Africa, for example, it has been shown that quinine was not widely adopted as a prophylactic until well into the 20th century, while it may have been far less efficacious than is sometimes alleged. Furthermore, despite the emphasis on malaria as a threat to empire, colonial policy often had other more pressing priorities. Colonial interventions designed to acclimatize unwholesome foreign environments and reduce the health risks of colonization could often exacerbate the situation they were intended to ameliorate. One example is the ecological transformation of western Bengal by the British in the second half of the 19th century, which was calculated to expand the efficiency of agricultural production with the construction of dykes and irrigation canals but which, conversely, served to spread malaria.

In many settings, European modernizing technologies created ecological crises, destroying indigenous social structures and environmental controls. In sub-Saharan Africa, for example, tribal communities were reorganized, ecologies transformed by commercial agriculture, and the continent progressively linked by rail, road, and shipping networks. African laborers migrated to the cities, swelling a new proletarian class in the urban slums. Such transformations helped to produce epidemics of sleeping sickness whilst amplifying the threat from other diseases and acting as a driver of tuberculosis, a new disease imported from Europe. Colonial interventions in Africa were also to create animal epidemics, such as the spread of rinderpest, a viral infection which decimated the cattle population of South Africa in the 1890s, with profound economic consequences for indigenous communities reliant on cattle for their livelihood.

There are many examples of such colonial interventions that produced unforeseen counter-effects: from environmental and infrastructural projects to public health responses. In French Indochina – part of a federation of French colonies and protectorates established in the 1860s – the construction of railways to open up the country and allow for a more efficient distribution of quinine backfired as the railways helped to spread disease. The British response to the Third Plague Pandemic, which diffused globally from China in the 1890s, killing some 15 million people worldwide, was also counterproductive. The plague reached Bombay in 1896, where it spread along the coast and inland. In order to avert the disease’s diffusion and minimize any impact on imperial
trade, colonial authorities implemented draconian sanitary measures, including enforced house searches, quarantining, and a suspension of pilgrimages. This colonial overreaction was to provoke resentment, lead to rioting and, ultimately, serve as a catalyst for Indian radicalization.

MEDICINE AND THE COLONIAL STATE

To an extent, colonial medicine functioned as a means of integrating colonized peoples into the institutions of the modern state. It served to standardize behavior and practice, making indigenous societies more tractable. Studies of empire have stressed this political economy of health and disease and, in particular, the role of medical science as an ancillary of empire.

A racial discourse of disease conflated biology with politics: anxieties about the threat of pathogenic microbes became inseparable from fears about the danger posed to white bodies by the colonized. Diseases acquired identities, which linked them to specific locales and the people who lived there. Thus, cholera was invariably racially profiled in 19th-century Europe as an “Asiatic” disease and its original “home” tracked back to Bengal. The diffusion of disease was mapped as a one-way flow from South to North or East to West, while medical knowhow circulated the other way: radiating outwards from the metropole. Indeed, this racial construction of disease as a menace from without argues that persist in contemporary Western histories of epidemic diseases (notably cholera and influenza) that focus wholly on the impact of infection in the West, while relegating the pandemic histories in Asia to a footnote.

In the 19th and early 20th centuries, so-called “filth-diseases,” such as the bubonic plague, were linked to the insalubrious living conditions and habits of native populations. Disease became an emblem of “backwardness” and an obstruction to progress. Local cultural practices and living spaces, associated with dirt and pollution, were pathologized, while science and medicine were racialized. Public health was used to warrant invasive public works as an imperative for security, while a paternalistic impulse to remold native societies in the name of hygienic modernity obscured fundamental health inequalities.

In examining this instrumentalization of colonial medicine, historians have explored the entanglement of knowledge and power, and the “disciplinary” nature of colonial medical and hygienic practices. Such scholarship has also stressed colonial medicine’s disavowal of biosocial differences and its role in the implementation of “governmentality” – the interpolative process by which subjects are produced and governed.

The use of quarantine measures in colonial Australia during the 19th and early 20th centuries demonstrates how disease became progressively entangled with social and political concerns. Disease surveillance functioned as a means, not only of ensuring “health,” but of policing racial boundaries to ensure the integrity of “white Australia.” Medicine’s disciplinary capacity and the progressive incorporation of medicine within the apparatuses of imperial administration were not solely the preserve of European empire-building states. In the Ottoman Empire, medicine was a significant instrument of imperial power, particularly from the 19th century. In East Asia, colonial medicine played an important role within Japanese imperial policy. Following the acquisition of Taiwan in 1895, the Japanese were intent on transforming their first overseas possession into a “model colony.” They sought to do so by mobilizing medicine as part of a progressive, “civilizing mission” which would induce the island’s native population to embrace colonization.

Similarly, US sanitation and disease-control activities in Cuba in the late 1890s
were undertaken not simply as a means of extending public health, but as a way of eliminating opposition to the US expansionist ambitions. One consequence of the US war with Spain (1898), triggered by the Cuban debacle, was the colonization by the United States of the Philippines. There, medicine was commandeered as part of an imperial effort to suppress indigenous beliefs and social practices. Race and biology became entangled, with medicine functioning as a means of “civilizing” and subduing the population of a geographically dispersed archipelago. Public health assumed the modality of a pacification campaign, while medical science was integrated into the machinery of what one historian has termed “the surveillance state.” According to this interpretation, colonial operations of counterinsurgency migrated back from the Philippines to the United States where they were instrumental in the development of a federal security apparatus during World War I and beyond.

MIXED MEDICINES

There is, perhaps, a danger that the interrelationship between medicine and the colonial state may be oversimplified: Western biomedicine and indigenous healing practices may be viewed in binary terms with an emphasis on colonial hegemony and indigenous resistance. Conceptualizing medicine in this way may lead historians to play down the complex interactions between colonial authorities and indigenous subjects.

For one, conquest and colonialism exposed Europeans to new medical knowledge. While the notion of an induced immunity to smallpox using smallpox “scabs” had been known in China from the 10th century CE, smallpox inoculation, known as “variolation,” was familiar in India and the Ottoman Empire, from whence it was successfully imported to Britain in the 1700s. Second, “traditional” medical practices proved remarkably resilient and adaptive. Indigenous knowledge and Western technology did not exist in stark opposition but rather interacted in a complex and evolving dynamic. Indeed, many historians have suggested that the boundaries demarcating one from the other were unstable, arguing that colonial medical knowledge was in part produced through encounters with other cultures.

Third, rather than being understood as a homogenous institution, the colonial state might best be viewed as an assemblage of institutions and agents – both professional and non-professional, formal and informal – with overlapping and often contradictory priorities. In this context, many scholars have pointed to the incoherencies and contradictions within colonial biomedical discourse which posited social and cultural explanations of ‘nature,’ even as it endeavored to naturalize its authority. At the same time, instead of viewing colonial medicine within a diffusionist framework (as an exportation from the metropole to the imperial periphery), recent research has indicated the varied and changing forms of colonial interventionism, stressing the manner in which technologies were negotiated, rejected, and absorbed in diverse settings – as well as acknowledging the influence of colonial medicine on metropolitan institutions and practices.

Medical services were not uniformly imposed upon colonized spaces; they were, in fact, highly mediated by local circumstances and produced through negotiation and contestation. This is, perhaps, particularly evident in the European colonies of Southeast Asia. There, geopolitical, ethnic, and cultural complexities frustrated attempts to superimpose categories and often led to compromise and accommodation. Colonial medicine in the French protectorate of Cambodia, for example, interacted with
indigenous cultural practices in an often frac-
tious process that led to the creation of hybri-
dized medicines. Similarly, in colonial Taiwan
(1895–1945) medicine was not exclusively
enlisted as a tool servicing Japanese national
interests and colonial rule. Instead, it was
mobilized for many competing purposes
by an array of actors, both colonial and
“native,” for often contradictory purposes.

SURVEILLANCE AND GLOBAL HEALTH

Empires thus helped to produce, extend,
and entrench global networks. Ideas, com-
modities, people, capital – and disease –
circulated in ever greater numbers, with
greater speed. By the turn of the 19th and
20th centuries, imperial flows were prompt-
ing the development of new forms of regula-
tory control. While it is certainly important
not to overemphasize the novelty of these
imperial networks – and ignore patterns of
trans-continental interconnection that long
predated European empires – nonetheless,
Western empires in the 19th century did
transform mobilities with the construction
of communication systems and the promo-
tion of new technologies, including the
steamship, telegraphy, railways, and mass-
circulation newspapers. Such networks also
enabled the implementation of transnational
disease surveillance mechanisms.

Telegraphic communication was to trans-
form imperial governance, with implications
for the monitoring of disease. Whereas previ-
ously information had traveled at the same
speed as infected bodies, from the mid-19th
century communication and transport were
progressively uncoupled. Messages sent
through the telegraph could forestall disease
by enabling, for example, the implementa-
tion of emergency prevention plans. One of the
earliest such uses of the telegraph occurred
during the 1889–1892 “Russian” influenza,
which appears to have spread along trans-
continental rail routes, circumnavigating the
globe in four months and leading to panic
in Europe. If the telegraph could serve as a
public health tool, however, it could also cre-
ate global volatility as news of distant epi-
demics reverberated around the world,
inducing panic on the global stock exchanges.

The 19th century also saw the beginnings of
transnational and trans-imperial knowledge
sharing. Cholera epidemics, which had
affected Europe from the 1820s, led to a series
of International Sanitary Conferences – the
first of which took place in Paris in 1851.
The meetings exposed deep-seated national
and imperial differences, underlining the geo-
political and economic issues at stake in the
implementation of quarantines. However, they
also reflected a new impetus for cooperation.
Delegates at the conferences sought to recon-
cile imperial economic interests with security
from the threat of disease which threatened
to undermine those interests. In many ways
this tension between the need to preserve prof-
itable flows while closing down other lethal cir-
culations is one that resonates in an ever more
interconnected post-imperial world.

LEGACIES OF EMPIRE

Although decolonization accelerated after
World War II, the colonial empire provided
a model for transnational health organiza-
tions in the aftermath of the conflict. From
the early 20th century, decolonization was
closely connected to the establishment of
new international institutions including the
World Health Organization (WHO) in
1948. The vision of global health in the 21st
century – underpinned, as it is, by increas-
ingly deterritorialized information networks –
is discernibly different from that of the
colonial period. Nonetheless, there are con-
spicuous continuities. Imperial forms of
hegemony may persist, sustained by – and perhaps even reinscribed within – new technologies. Corporate agendas may become entangled with the vested interests of Western states. According to this “imperialist” view, profitable Western biotech initiatives in the developing world serve to advance the interests of the metropole, often at the expense of the host communities.

Numerous health controversies at the beginning of the 21st century have reprised the tensions and conflicts of the colonial past. Indonesia’s decision in 2007 to withhold samples of avian influenza virus A (H5N1) from the WHO underscored the extent to which the legacies of empire continue to shape concerns in the present. While Indonesia – a Dutch colony until 1945 – framed the West’s demands as a denial of its sovereign rights and title to its own biological resources, the West viewed the issue of viral sample sharing within the context of global health security and international law. Similarly, opposition to the polio immunization campaign in Pakistan and Afghanistan and the killing of public health workers by the Taliban, reprise a history of indigenous resistance to colonial vaccination initiatives in the subcontinent during the 19th century.

Contemporary Western concerns about “emerging diseases” also echo earlier anxieties about the danger posed to the metropole by imported “Asiatic” and “African” diseases spreading through the multiplying circuits of empire. In *Emerging Infections: Microbial Threats to Health in the United States*, a scientific volume published by the US National Academy of Sciences in 1992 that did much...
to promote the notion of disease emergence, the editors declare that “there is nowhere in the world from which we are remote and no one from who we are disconnected.” Environmental change, new industrial processes, human behavior, political instability, and global interconnectedness are viewed as the critical drivers of lethal new diseases which emanate from the Earth’s dark places. The world depicted here is a world made and unmade by empire.

Infectious diseases continue to be represented in popular culture through the prism of an imperial history and in relation to colonial cartographies of power. Pandemic thrillers, such as Wolfgang Petersen’s Outbreak (1995), invariably locate the origins of novel infectious diseases in a violent, post-colonial developing world. Virulent pathogens, which emerge to threaten the stability of the West, are construed as the inevitable by-product of conflict, insalubrious cultural practices, and a tropical environment that propagates infection.

SEE ALSO: Decline of empires; Drugs and empire; Environment and empire; Globalization and empire; Humanitarianism and empire; Migrants and migration; Policing and colonial control; Science, imperial; Slavery, institution of; Technology and empire

FURTHER READING

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