

# Imperial Contagions

Medicine, Hygiene, and Cultures of Planning  
in Asia

Edited by Robert Peckham and David M. Pomfret



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# Introduction: Medicine, Hygiene, and the Re-ordering of Empire

Robert Peckham and David M. Pomfret

Fears of contagion played a critical role in the re-ordering of British and French colonial societies in Asia from the mid-nineteenth to the twentieth centuries. *Imperial Contagions* explores this key theme in the history of empire, investigating connections between the reconceptualization of disease and the construction of colonial cities in Europe's expanding empires. It shows how new, laboratory-based understandings of infection challenged and informed sanitary and environmental approaches to disease and health, and provided often contradictory rationales for the re-creation of colonial space. How were locales such as schools, clinics, and bacteriological laboratories—as well as apparatuses of governance such as censuses, sanitary interventions, and migration controls—implicated in this process? How did they connect with new meanings of disease? And to what extent was disease management intertwined with forms of social ordering, cultures of colonialism, and the disciplinary organization of new medico-scientific knowledge?

This book elaborates on the mutual idioms of medical science and empire, with their common focus on 'cultures' and 'colonies,' and examines the entanglement of medicine, public health, European overseas expansion, and entrenchment in the nineteenth and twentieth centuries. It explores this entanglement as a spatial predicament in Asia through a number of case studies that address intersecting themes in different settings and, in so doing, contribute to the "spatial turn" in the history of science and medicine.<sup>1</sup> The emphasis is on the emplacement of scientific and medical practices, the pathologization of colonized places, and spatial responses to colonial anxieties about contagion. Against this background, many of the chapters collected here demonstrate how colonial medicine and regimes of hygiene in Asia were constituted, not only to deal with infectious diseases, but to manage apprehensions that these 'tropical' afflictions induced in colonial communities.



To be sure, notions of empire had very different meanings in British, French, German, Spanish, and Portuguese contexts, as Nancy Leys Stepan has shown in her discussion of tropical nature, disease, and race.<sup>2</sup> The focus in this volume is predominantly on British and French colonial settings in Asia, ranging from the Indian Subcontinent to Indochina and Hong Kong. At the same time, *Imperial Contagions* contributes to current discussions about the extent to which, as Charlotte Furth has recently observed in the context of Chinese East Asia, “different regimes of empire [...] do not produce an overarching narrative of imperialism.”<sup>3</sup> Although medicine and public health tend to be understood as state-and nation-building projects, there is good reason, as Furth suggests, to “trace global genealogies of scientific practices in interaction with highly local situations.”<sup>4</sup> Consequently, *Imperial Contagions* seeks to explore the dynamics between local situations and transcolonial and metropolitan networks, thereby problematizing neat divisions between colonizer and colonized and challenging the idea of colonialism as “a coherent symbolic order.” As Nicholas Thomas has remarked, if colonizing projects were “frequently split between assimilationist and segregationist ways of dealing with indigenous populations,” so “colonizing constantly generated obstacles to neat boundaries and hierarchies between populations.”<sup>5</sup>

The book examines the contradictory impulses that informed colonial planning policies between approximately 1880 and 1949. Colonial administrators strove, on the one hand, to protect the integrity of colonial spaces from external and internal threats of contamination, while, on the other hand, facilitating mobility across and between colonial states with a view to safeguarding the economic vitality upon which empire was predicated. Each of the essays in the volume investigates the “frictions” and contradictions of empire through these themes, but from different vantage points.<sup>6</sup>

In the 1880s, the word ‘pathogen’ gained currency, reflecting a new understanding of disease and its etiology. The rise of germ theory and laboratory science informed the implementation of state-sponsored measures designed not only to protect public health, but to manage and make legible governed populations. The term ‘medicine,’ however, with its suggestion of internal coherence, continued to obscure the complex and often conflicting interpretations of disease that persisted well into the twentieth century, and the tendency for overlap between the new laboratory science, medical practice, and hygienic and sanitary approaches to health. Thus, in 1931, when the bacteriologist Aldo Castellani published *Climate and Acclimatization*, he felt able to condemn what

he saw as the “fashion” for denying that “climate has any injurious influence on the health of Europeans living in the tropics.”<sup>7</sup> Castellani—noted for his work on the cause and transmission of sleeping sickness—did not deny the role played by parasites and hygienic conditions in the dissemination of disease, but he reasserted the influence of telluric agents in contagion, arguing that “there have been signs in various quarters tending to show that the importance of climatic factors is again going to be generally recognised.”<sup>8</sup> This example is suggestive of the way in which older ideas and technologies continued to influence newer scientific particularities, even as they were being extrapolated into colonial policy. Beyond the new disciplinary and spatial infrastructures through which public health was advanced, this book considers the enduring significance, after the “bacteriological turn,” of older models of disease transmission and the hygienic enclaves they produced.<sup>9</sup>

An important focus in *Imperial Contagions* is on the contestation of colonial medical knowledge and on challenging assumptions that remain prevalent about medicine’s appropriation by colonial government as a critical “tool of empire.”<sup>10</sup> The book draws attention to the complex outcomes of the situated encounters between ‘Western’ medicine and non-Western contexts. It does so by showing how imperialist exploitation took a variety of forms, extending from coercive interventionism to outright neglect. Medicine and public health were never simply diffused from ‘center’ to ‘periphery’ or imposed upon colonies in any straightforward way. At the same time, as several chapters in the volume make clear, colonial authorities were acutely aware of the shortcomings of public health initiatives launched from within colonial states. Indigenous agents sometimes appropriated—but could also act as a brake upon—the professional practices being imported into their midst. Discourses and technologies of health used to delimit and define subject peoples’ identities and to manage urban populations also produced indigenous engagements with such framings.<sup>11</sup> This book thus moves beyond the dichotomies of dominance and resistance to illustrate how medicine and health, as key dimensions of European colonial culture, were transformed, re-oriented, and reproduced through contact with local agency and indigenous practice.

Laboratory science, as Bruno Latour has noted, provides a suggestive way for rethinking agency in a colonial setting. Bacteria, as agents of identifiable diseases, were never simply natural ‘objects’ to be studied; they were also in some sense ‘subjects,’ since they were construed as being equipped with a capacity and volition to infect. As such, following Latour, bacteria might be

deemed “quasi-objects.”<sup>12</sup> The ambiguous status of microbiological life, which underpinned scientific medicine, mirrored, it might be argued, the similarly equivocal status of the colonial subject within imperial planning policy, remaining at once a pliable object of government and a recalcitrant agent of disruption: in short, a “quasi-object” and “quasi-subject.” In developing this theme, which links colonial cultures of planning with notions of agency, the essays in the volume explore colonial economies of scale, which ranged from the microscopic bacterium to macroscopic realms of empire. In different ways, each contributor engages with such questions as: How did these different levels connect with one another? How were they studied, mapped, represented, and responded to? How were scientific particularities, from there, extrapolated into colonial policy—or, indeed, were they?

In existing scholarship on colonial medicine and public health, discussions of the shift away from enclavism have tended to be framed in teleological and exclusivist terms, but the essays collected here suggest that it was precisely as colonial authorities began to extend the scope of their policies outwards that enclavist ideals became most clearly articulated, in carefully controlled and purportedly ‘pure’ or ‘hygienic’ spaces: schools, clubs, hospitals, botanical gardens, hill stations, and laboratories. In other words, *Imperial Contagions* argues that no straightforward shift from enclavism to public health occurred. On the contrary, the institutionalization of health and the refashioning of the urban environment were coterminous with the creation of circumscribed spaces, exemplified by the laboratory, wherein privileged bodies—those of children, scientists, and administrators—were protected from the threat of contamination. From this perspective, *Imperial Contagions* maintains that the era of colonial public health should perhaps be understood, not in terms of the demise of enclavism, but rather as its radical reaffirmation.

The debates surrounding the establishment of public gardens in Hong Kong, first mooted in the 1840s, and the subsequent drive to extend the plantation with a comprehensive program of afforestation, illustrate the impetus to push the ‘enclave’ outwards into the colony at large. As the British Empire expanded, so satellite Kew Gardens were set up across its dispersed dominions, forming “a network that circulated living plants, specimens, and information across the globe.”<sup>13</sup> These botanical gardens were sites of scientific research, economic return (with the planting of valuable crops such as tea, sisal, and cinchona), as well as leisure.<sup>14</sup> They were also models of a ‘healthy’ environment and a reminder of the need for cultivation. As the colony’s governor, Hercules

Robinson, noted in 1861, the formation of “Public Gardens” would “contribute to the embellishment of the City of Victoria and the health and enjoyment of its inhabitants.”<sup>15</sup>

High rates of mortality in Hong Kong were attributed to the insalubrious tropical weather, particularly in the early colonial years, leading the government to afforest the island in the hope that this would reduce disease and improve health.<sup>16</sup> Charles Ford was appointed superintendent of gardens in 1871 and oversaw the afforestation of the colony.<sup>17</sup> Although the focus of *Imperial Contagions* is principally on the built environment, nonetheless the engineering of a hygienic ‘nature’ by colonial agencies and, more particularly, the extension of the ‘garden’ into the pathologized places of the colony, are reminders that the colonial ‘cultures of planning,’ evoked in the subtitle to this volume, involved the co-production of nature and society, and a complex interweaving of political, economic, and hygienic interests.

Empire was sustained, of course, by a fundamental mobility of people, commodities, capital, and information,<sup>18</sup> and by novel technologies of global communication.<sup>19</sup> Much has been written on the “web of empire,”<sup>20</sup> and the transnational or diasporic networks that formed within and between colonial cities.<sup>21</sup> Although the emphasis is often on the competitive nature of medical science, recent research has emphasized the collaborative, transnational network of researchers and clinicians who carried out drug therapy trials, for example, on sleeping sickness patients in African colonies at the turn of the century.<sup>22</sup> The theme of technological transference between colonial states and the metropole underlies many of the chapters in this volume. While the Contagious Diseases Acts (1864–69) were exported from Britain to its imperial dominions, the legislation to curb venereal disease had itself been profoundly shaped by Britain’s colonial experience. Similarly, Charles Booth’s survey of life and labor in London (1886–1903), which charted the ‘black’ areas of the metropole, was an important influence on the mapping of colonial cities.

A key focus of the chapters is on the ways in which colonial authorities sought to promote certain forms of ‘healthy’ circulations, even as they endeavored to restrict other forms of potentially ‘unhealthy’ trafficking, including the spread of infectious disease. Writing on the antecedents of contemporary globalization, Michael Hardt and Antonio Negri observe:

The horror released by European conquest and colonialism is a horror of unlimited contact, flow, and exchange—or really the horror of contagion, miscegenation, and unbounded life. Hygiene requires protective barriers.

European colonialism was continually plagued by contradictions between virtuous exchange and the danger of contagion, and hence it was characterized by a complex play of flows and hygienic boundaries between metropole and colony and among colonial territories.<sup>23</sup>

The Asian plague pandemic in the 1890s brought these issues of flow and counter-flow to the fore, as colonial authorities in Hong Kong and India sought to curb the movement of people, even as they strove to bolster trade. The report of the plague in Hong Kong published in *The Times* of London on June 13, 1894, is suggestive in this context:

Half native population [of] Hongkong left, numbering 100,000. Leaving by thousands daily; 1,500 deaths; several Europeans seized, one died. Labour market paralyzed. Deaths nearly hundred daily. Government anticipates failure of opium revenue; proposes taking over and destroying all unhealthy native quarters.<sup>24</sup>

Here, the colonial imperative to keep trade routes open at all costs ran up against colonial fears of microbial invasion. Economics—the “labour market”—was conceptualized in pathological terms (“paralyzed”), while disease was equated with economic deterioration and dislocation: the failure of the opium revenue. In short, the passage attests to a complex conflation wherein movements of the “native” population, the spread of disease, and the destruction of “unhealthy native quarters,” inscribe the connective and disruptive processes seen to lie at the core of empire.

*Imperial Contagions* is organized into three parts. In Part I, “Building for Health,” the focus is on colonial governmentality and planning. Contributors explore the extent to which the priorities of colonial medicine and planning began to shift during the final decades of the nineteenth and beginning of the twentieth centuries, away from an ‘enclavist’ approach—servicing colonial officials and the military—towards a more all-encompassing ‘public health’ approach that integrated indigenous populations and their spaces into a more centralized colonial regime. Cecilia Chu demonstrates the extent to which colonial sanitary measures and housing reforms were contested by the local Chinese population in Hong Kong in the aftermath of the 1894 plague. More specifically, she considers debates about property rights and argues that an analysis of “the convergence of interests between the Chinese and European property owners and their shifting allegiance to the colonial state also reveals the complex power relations between these agencies.” In his chapter on housing and sanitation in Singapore between 1907 and 1942, Jiat-Hwee Chang argues

that the colonial state, despite gestural efforts at housing improvement, left the native population alone, reinforcing forms of segregation. Finally, Richard Harris and Robert Lewis in their chapter on the 1901 census in Bombay and Calcutta suggest that “the plague called into question [European] strategies for separating themselves from the native population and from disease, both contagious and otherwise.”

The chapters in Part II, “Hygienic Enclaves,” consider the expansion of the colonial ‘enclave’ from the 1880s. David Pomfret adopts a comparative perspective to focus on the Victoria Peak Hill Reservation in Hong Kong and the hill station of Dalat in the French ‘protectorate’ of Annam (modern Vietnam). He shows how the histories of these hygienic spaces were interwoven with a moral imperative to safeguard foreign children in ‘tropical’ contexts and to (re)produce governing elites. The production of the ‘child’ in empire informed efforts to carve out hygienic spaces and to support their expansion into the pathologized field. These moves drew heavily upon nascent laboratory science and gave expression to latent “anxieties about racial and cultural reproduction in the tropics.”

Stephen Legg charts the “shift in the scientific episteme from that of contamination to that of contagion” as a conceptual underpinning for everything from medical practices to urban planning. Focusing on urban health and venereal diseases in interwar India, he demonstrates how new regulations concerning public health manifest “a contagionist but individualist concern with infection, as well as a newly internationalist concern both with imperial race and the potential of a postcolonial scientific modernity.”

Finally, Robert Peckham explores the history of Alexandre Yersin’s makeshift ‘matshed’ laboratory, constructed in Hong Kong in 1894 during the plague epidemic. Peckham investigates the properties of the improvised colonial laboratory and argues that they reveal a fundamental ambivalence about the constitution of ‘healthy’ and ‘unhealthy’ dwellings, throwing into relief the equivocal boundaries between colonial and indigenous spaces, as well as underscoring a colonial discourse that construed scientific research as a form of ‘exploration.’

Part III of the volume, “Circulations,” examines different forms of colonial mobility across and between colonies and the metropole. It considers public health and colonial medicine as a mult centered process connecting actors and forming bridges across borders. Sunil Amrith explores how the “mobile bodies” of Indian migrants to Southeast Asia gave rise to deep-rooted colonial anxieties about the threat of ‘contagion.’ He argues that new economic systems

emerged between the mid-nineteenth and mid-twentieth centuries requiring new forms of labor, which created new social networks as migrant labor moved “from the heartlands of India and China” into “Asia’s frontier zones.”

Professional ‘experts’ and the working and personal relationships that they developed were critical to the circulation of knowledge and the technologies it produced between colonies and metropole. Adopting a transnational approach to the history of contagion can shed new light upon the entanglements of these actors within the structures of colonial states.<sup>25</sup> In her account of Henry Vandyke Carter’s work on leprosy in India, Ruth Richardson explores how circulation was integral to the tensions and contradictions of colonial science and medicine on the ground. Carter was an imperial agent working across and between Europe and India. On the one hand, his efforts to map the distribution of leprosy—and thereby to make contagious native populations legible—helped to sustain the colonial state. At the same time, however, Carter was at pains to assert leprosy as a transnational phenomenon. Indeed, in many respects Carter’s contribution to the state was premised upon his ability to transcend its boundaries in what Richardson calls a new “humanitarianism.”

Sander Gilman considers the contemporary “obesity epidemic” in China within the context of nineteenth- and twentieth-century histories of China–West interactions, and particularly the ways in which circulations of Western medical and health discourses have helped to shape Chinese identity. Elsewhere, Larissa N. Heinrich has demonstrated the naturalizing powers of medical representations and argued for the role of Western medicine in the formation of Chinese ideas about the body and the nation.<sup>26</sup> Gilman here develops these ideas to consider obesity as both a ‘real’ condition and a construction produced by the circulation of medical and health discourses, as well as fears about the contaminating ‘invasion’ of Western products, such as tinned milk, into China.

Finally, Laurence Monnais considers the distribution of quinine as a cornerstone of the colonial state’s preventive public health policy against malaria in Indochina. Examining the history of the State Quinine Service, an institution invested with the task of distributing subsidized quinine, Monnais points to the failure of the program and argues that quinine cannot be considered an effective “tool of empire.” Her study reveals the fundamental disjuncture between the system of quinine distribution and the geographical diffusion of the disease. French colonials not only failed to curtail contagion but, through

the development of an infrastructure intended to support the *mise en valeur*, were complicit in spreading disease from the “modernizing front” into the native village. Concluding that under French rule “the development of natural resources was prioritised over the development of human resources,” Monnais offers an insight into a key theme: the devastating demographic impact of public health systems and colonial medicine.<sup>27</sup>

Notwithstanding the book’s thematic organization, the chapters intersect in terms of theoretical approach and focus. Chang and Peckham, for example, both deal with the historical evolution of architectural forms and their mobility between metropole and colonies and across empire. Many of the chapters explore the interrelationship between individuals—as agents of colonial scientific, medical, health and planning policy—and broader social, political, and economic processes. In so doing, they engage with recent scholarship on urban modernity, which has stressed the role of technologically savvy cadres of professionals in the construction of modern cities from Chicago to Tokyo.<sup>28</sup>

Moreover, this collection of essays engages with the racial segregation of colonial communities, a theme in the history of colonial urban planning currently being re-examined in relation to the transnational movements of professional experts and modern planning ideas.<sup>29</sup> Professional planners reveled in the relative freedom that colonial contexts seemed to afford for the realization of modern, hygienically informed city planning. Although ‘on the ground’ these freedoms proved to be chimeric, scores of experts drew inspiration from the notion of the colony as laboratory and compared and contrasted ameliorative interventions across empires. Professor W. J. R. Simpson, for example, as Chang shows in this volume, assessed sanitary conditions and advised British colonial administrations from East Africa to Singapore.<sup>30</sup> Similarly, Ernest Hébrard drew upon his knowledge of the hill station of Baguio (in the Philippines), the garden city in Welwyn, London, and his own earlier work in Thessaloniki, Greece, when formulating a master plan for Dalat in 1923.<sup>31</sup>

As Ilana Löwy has recently observed in the context of biomedical research in ex-colonial countries, “the visualization of plagues was at the same time antithetical to modernity and a symbol of modernization.”<sup>32</sup> Scientific technologies made visible ‘backwardness,’ even as scientists and colonial agents sought to represent themselves as embodiments of progress. Chapters in this collection expose the contradictions of empire in many places, particularly the ways in which colonial authorities created the very conditions that promoted the diseases they were seeking to eradicate. Thus, Legg shows how the British in India



attributed the spread of venereal disease to the behavior of local populations, even though it is generally recognized that the British colonial economy sponsored the cities and mobile labor that created modern prostitution in India. And Monnais suggests that French efforts to counter the spread of malaria in Indochina by promoting new technologies, notably the railway, were partially self-defeating, since the railways arguably facilitated the dissemination of infection.

These forms of colonial contradiction and their capacity to destabilize are highlighted within several studies in this volume, both with reference to actual epidemic and disease episodes and metaphorical representations of disease threats. For example, the impetus to control contagion prompted colonial authorities to devise strategies for managing colonized people in certain spaces and across certain boundaries—as Harris and Lewis argue in relation to the census of 1901—thus inadvertently producing the conditions within which colonized peoples acceded to a form of subjecthood (albeit one defined in terms of physical health rather than political rights) that was to herald proliferating and ultimately uncontrollable demands for political representation.

‘Colony,’ ‘culture,’ and ‘immunity’ have been loaded terms, particularly from the 1880s. The shifting meaning of this ‘colonial’ terminology points to the entanglement of imperialism, governmentality, public health, and laboratory-based science, as many of the contributors to this volume demonstrate. It also suggests a complex interrelationship between microcultures and macrocultures, microparasites and macroparasites. Thus, European colonies, ‘colonies’ of bacteria on petri dishes and leper ‘colonies’; immunity from the invasion of disease and diplomatic immunity;<sup>33</sup> resistance to disease and native resistance to colonial authority; the acculturation of the ‘child peoples’ of empire, and the inoculation of children of colonial subjects with vaccine cultures.

As one commentator has observed on the development of Kochian bacteriology in the Japanese colonial context:

It is possible to take this process as an analogy for the production of Japanese cultures in colonies such as Korea and Taiwan. There, analogous attempts were made to construct a transparent medium for cultivation with the establishment of Japanese education and standardized language. It was a process of selection and purification.<sup>34</sup>

In the Philippines, a Bureau of Government Laboratories was established in 1901 with the aim of finding scientific solutions that would, as Warwick

Anderson has noted, “transcend” the tropical environment and enable white colonizers to survive the tropics. At the same time, the laboratory was extended outwards so that the Philippine archipelago was itself increasingly conceived as an “incipient colonial laboratory.”<sup>35</sup>

At least from the 1870s, as scientist-investigators began to focus on the causal, bacteriological agents of disease, medicine began to move into the new sphere of public health. The resistance of British military and government elites to the laboratory on the grounds that it constituted a rarefied space for ‘bacteriological speculation’—one that was fundamentally cut off from the practical issues of managing society—sits at odds with the ambiguities in the very idiom of colonial governmentality, which suggest, on the contrary, a profound intertwining of biomedical research and urban management from at least the 1870s. How should we explain these apparently contradictory trajectories, particularly in the colonies—the contiguous move into the laboratorial ‘sanctuary’ and out into the teeming ‘pathogenic’ colonial city? The issue at stake is the extent to which laboratories—particularly colonial laboratories from the 1890s, and in the wake of the plague pandemic—contributed to the transformation of an enclavist approach to health into a more interventionist and expansionist public health. Or indeed, whether such a transformation ever took place. Certainly in Taiwan, Korea, and to a lesser extent in Japan’s ‘informal empire’ in China, epidemic episodes, notably the Manchurian plague outbreak of 1910–11, served as a spur to the development of sanitary infrastructures and a new focus on the “hygienic ‘uplift’ of the indigenous population.”<sup>36</sup> Public health measures were extended in the Dutch East Indies and British Malaya following World War I.<sup>37</sup> Within the French empire, in the specific case of Indochina, the scope and ambition of the colonial government’s efforts from 1905 to effect such improvements and to extend recognition of individual behaviors as part of a wider ‘public health’ was far greater, though the effectiveness of this drive (which was intimately informed by the Pastorian laboratory infrastructure) must remain in question.<sup>38</sup>

Whatever the extent of the expansion of public health, the laboratory represented an ideal of hygienic modernity and a locus of somatic regulation, as Pomfret and Peckham both argue in this volume. As such, the laboratory furnished a model for the colony writ large. Yet, the laboratory was only ever that: a model. The notion of the colony as a “laboratory of modernity,” the chapters in this volume suggest, is fundamentally flawed in that it presupposes a standardization of practice and a uniformity of disciplinary power within

empire that was often absent. As Peter Zinoman has argued in his account of the Indochinese prison system, regimes of colonial power were complex, heterogeneous, and often “ill-disciplined.”<sup>39</sup> Colonial space was fraught with tensions and contradictions between ideology and practical exigencies, between local and central government, indigenous resistance and colonial indigenization. Though administrators and planners referred to their work in colonial contexts as a kind of ‘experiment’ conducted upon supposedly neutral ‘testing grounds,’ these tensions and conflicts ensured that the implementation of plans (in which segregation remained a guiding principle) tended to be messy and, at best, partial.<sup>40</sup> As several chapters contend in this volume, exploring the shifting relationship between institutional spaces and the ‘field’ becomes a way of highlighting the unstable frameworks of colonial segregation.

Ironically, the conceptualization of the colony as a ‘laboratory’ for the production of new knowledges has been re-inscribed in much postcolonial theorizing of empire. On the one hand, it has been argued that, from the mid-nineteenth century, India was perceived as a laboratory for the creation of the liberal administrative state.<sup>41</sup> On the other hand, colonies have been construed as “laboratories of modernity”: places “where missionaries, educators, and doctors could carry out experiments in social engineering without confronting the popular resistances and bourgeois rigidity of European society at home.”<sup>42</sup>

In particular, the colonial city, whether French or British, has been viewed as a laboratory where Western rationalism could be imposed upon “rampant sensuality, irrationality, and decadence.”<sup>43</sup> Hanoi, for example, has been described as “an experimental laboratory for the demonstration of the latest planning ideas and regulations introduced in France . . . Hanoi was seen as an experimental laboratory for achieving the perfect colonial society.”<sup>44</sup> There has thus been an unconscious *re-inscription* of the term so that nineteenth-century notions of the colonial laboratory continue to be evoked as justifications for the study of the colonial and postcolonial city. Thus, Anthony D. King:

What insights or data can we derive from studying colonial cities? . . . It is a laboratory for testing hypotheses: for geographers, on the cultural variable in environments; for anthropologists, on the dynamics of social change and the ‘Westernisation’ of material culture; . . . for architects and planners, it demonstrates the distinction between ‘ethnic planning’ and the ‘rational professionalism’ of the Western capitalist city . . .<sup>45</sup>

Or Gwendolyn Wright:

The colonies provided more than the ideal laboratory so often evoked, and more than the mirror we might refer to today. They functioned like a magnifying glass, revealing with startling clarity the ambitions and fears, the techniques and policies that pertained at home, here carried out almost without restraints.<sup>46</sup>

The notion of empires, or individual colonies, as “laboratories of modernity” continues to be reiterated within postcolonial studies, even though such allusions inadvertently reaffirm a colonial discourse that sought to legitimate colonial rule in pseudo-scientific terms as ‘experiment.’ The essays in *Imperial Contagions* seek, in different ways, to dismantle the rhetorical construction of the “laboratory of modernity” in postcolonial theory by exploring how medico-scientific ideas of contagion were materialized in a variety of colonial settings. What has sometimes been understated in studies of transnational mobility, of course, is immobility and, particularly, the local.<sup>47</sup> The aim here is to demonstrate the ways in which, on a material level, medical knowledge was extended outwards to shape colonial cities and the governance of their populations, even as empire and its planning cultures migrated inwards to determine the spaces of medical research where the microscopic agents of disease were contemporaneously coming to be identified.

*Imperial Contagions* provides a comparative, transnational framework for rethinking colonial medicine, hygiene, and cultures of planning in Asia, thereby extending the scope of previous scholarship, which has tended to focus on discrete regions or single empires.<sup>48</sup> The geographical scope of the book encompasses a variety of colonial contexts, from South Asia through Southeast Asia, and along the China coast. By extending its focus within and across empires in Asia, the book provides comparative breadth, allowing it to shed new light upon the ways in which health and colonial medicine were implemented across borders and transregionally.<sup>49</sup>

The volume brings together scholars from the history of medicine and science, comparative urban planning, cultural geography, literary studies, and cultural history to re-orient debate about the ways in which medicine, public health, and planning were created by and helped to produce empire. At a time when the origins and meaning of pandemic disease are being hotly debated, the book will broaden understandings of contagion as a biological, cultural, and political phenomenon.<sup>50</sup> It provides new theoretical insights into the ways in which contagion worked as metaphor and practice through the development, planning, and segregation of colonial-era East and South Asian cities.<sup>51</sup> It also

complements and nuances recent studies of the tensions and ambiguities that have characterized colonial responses towards the problem of public health, and explores the gulf between discourses of power and the spatial practices that actually resulted.<sup>52</sup> By the same token, as Priscilla Wald observes in the afterword to this volume, each of the contributors illuminates, from a different perspective, the ways in which the re-ordering of colonial space in the nineteenth and twentieth centuries continues to have consequences for the ways in which we imagine and manage communicable disease today.

# Notes

## Introduction

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2. Nancy Leys Stepan, *Picturing Tropical Nature* (Ithaca, NY: Cornell University Press, 2001).
3. See Charlotte Furth, "Introduction: Hygienic Modernity in Chinese East Asia," in *Health and Hygiene in Chinese East Asia: Policies and Publics in the Long Twentieth Century*, ed. Angela Ki Che Leung and Charlotte Furth (Durham, NC: Duke University Press, 2010), 2. The volume focuses, for the most part, on towns and villages in Taiwan, Manchuria, Hong Kong, and the Yangzi River delta during the 'long' twentieth century from the late Qing reforms in the 1860s.
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8. *Ibid.*
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11. Biswamoy Pati and Mark Harrison, eds., *Health, Medicine and Empire: Perspectives on Colonial India* (Hyderabad: Orient Longman 2001); Sokhieng Au, *Mixed Medicines: Health and Culture in French Colonial Cambodia* (Chicago: University of Chicago Press, 2011).
12. Bruno Latour, *We Have Never Been Modern*, trans. Catherine Porter (Cambridge, MA: Harvard University Press, 1993). Latour borrows the concept of “quasi-object” from Michel Serres. In relation to Latour, bacteria, and colonial agency, Thomas Lamarre observes: “The hybridity of bacterial and national colonies begins with the agency of bacteria and peoples in the colonial network”; see “Bacterial Cultures and Linguistic Colonies: Mori Rintarō's Experiments with History, Science, and Language,” *Positions* 6, no. 3 (1998): 620.
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15. *Ibid.*, 60.
16. Fan, *British Naturalists in Qing China*, 65.
17. On Ford's annual reports, see Griffiths and Lau, “The Hong Kong Botanical Gardens,” 64–71.
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34. Lamarre, “Bacterial Cultures and Linguistic Colonies,” 620. On the relation between bacteriological and colonial cultures, see Heinrich, *The Afterlife of Images*, 155–56. On Korea and Taiwan as ‘laboratories,’ see Ping-hui Liao and David Der-wei Wang, *Taiwan under Japanese Colonial Rule, 1895–1945: History, Culture, Memory* (New York: Columbia University Press, 2006), 98, 203; and Ramon H. Myers and Mark R. Peattie, *The Japanese Colonial Empire, 1895–1945* (Princeton, NJ: Princeton University Press, 1987), 16, 84, 85.
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  40. Gwendolyn Wright, *The Politics of Design in French Colonial Urbanism* (Chicago: University of Chicago Press, 1991).
  41. Roy MacLeod, “Scientific Advice for British India: Imperial Perceptions and Administrative Goals, 1898–1923,” *Modern Asian Studies* 9, no. 3 (1975): 343–84. See also Thomas R. Metcalf, *The New Cambridge History of India, Vol. 4: Ideologies of the Raj* (Cambridge: Cambridge University Press, 1995). As Paul Rabinow has remarked, the colonies are a “laboratory of experimentation for new arts of government capable of bringing a modern and healthy society into being” (Paul Rabinow, *French Modern: Norms and Forms of the Social Environment* [Cambridge, MA: MIT, 1989], 289).
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  44. William S. Logan, *Hanoi: Biography of a City* (Seattle: University of Washington Press, 2000), 99–110.
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  47. Although, as James Clifford has argued, travel and “intercultural connection” are not the exception, but the norm; see *Routes: Travel and Translation in the Late Twentieth Century* (Cambridge, MA: Harvard University Press, 1997), 5.
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51. Nightingale, *Segregation Is Everywhere*.
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## Chapter 1 Combating Nuisance

- \* The author would like to thank Mishko Hansen and Marilyn Novell for their support and critical comments on this chapter.
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  7. For a discussion of the reception of Western medicine in colonial territories, see Roy Macleod and Milton Lewis, *Diseases, Medicine, and Empire: Perspectives on Western Medicine and the Experience of European Expansion* (London and New York: Routledge, 1988); and Myron Echenberg, *Plague Ports: The Global Urban Impact of Bubonic Plague, 1894–1901* (New York and London: New York University Press, 2007).

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