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The Modern Period

Edited by Anna Winterbottom and Facil Tesfaye

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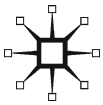

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These volumes are dedicated to medical workers around the world who risk their lives to help others in situations of conflict.

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1

Making Medical Ideologies: Indentured Labor in Mauritius*

Yoshina Hurgobin

Introduction

This chapter investigates how and why sugar estate owners in one Indian Ocean[1] context—Mauritius—contributed to the making of a medical ideology[2] that regimented the "body" of labor. While existing historiography of the relationship between colonial India and the British Empire in the tropics emphasizes the role of India as a center of sub-imperialism,[3] this chapter argues that plantation colonies with their regulative security state apparatus, in collaboration with the Indian colonial state, acted as the source of particular medical ideologies and practices concerning indentured workers. By drawing on the experiences of health administration of indentured immigrant workers in Mauritius, a sugar colony in the Indian Ocean, this chapter highlights how medical ideologies concerning workers' health and the control of pandemics among workers were contingent on various factors (such as cost-cutting measures, perceptions, and physicality of climates) and were formed diversely either in Mauritius or in medical circles in Calcutta.

Labor Historiography of India

Labor history is often viewed through the lens of class formation. Subaltern Studies scholars sought to replace the issue of class formation with the notion of a given static idea of community in order to explain the continuity of a peasant consciousness among working classes. In

this context, it has been argued that community acted as a conceptual category, which could not be subsumed within the capital's hegemony. According to Subaltern Studies historian Dipesh Chakrabarty, in predominantly precapitalist societies, workers' mentalities could not be distilled out of the ties they were born into, namely, caste, region, religion, and language.[4] Such ties thus entrapped workers in a hierarchical culture, which, in the case of Bengal, allowed *bhadralok* (literally meaning "gentlemen") trade union leaders to pave the political way for workers.[5] Thus the nebulous process of the emergence of class consciousness was stymied by the very existence of precapitalist peasant community consciousness. In contrast to this "subaltern" perspective, Rajnarayan Chandavarkar's history of labor politics in Bombay argues that working classes did not constitute a homogeneous entity and that class was not a given category but a social formation that was constantly in the process of making and unmaking itself through interaction and conflict between different political forces. Such political conflicts informed social relations among diverse socioeconomic groups and, in turn, shaped the responses and perceptions of dominant institutions toward historically subordinated socioeconomic groups.[6] Chandavarkar further refused the primacy of cultural norms and structure as unchanging notions. While these historical debates between votaries of class and community provide insights into labor history, they tend to marginalize, and, on several occasions, erase the pivotal role of capital and the colonial state in disciplining and shaping labor processes in relation to the worker's body and health.

Disease in South Asia

Historians of colonial medicine, such as David Arnold, have indicated the wider possibilities of colonizing the body in colonial enclaves in South Asia and demonstrated how tropics came to be equated with high rates of diseases.[7] Mark Harrison has further argued that preventive medicine was not as central to empire building as was earlier believed and that the practice of medicine and everyday local realities surrounding such practices often clashed with imperial motives.[8] He counters Philip Curtin's and Daniel Headrick's arguments that medicine was a straightforward "tool" of empire.[9] While Curtin's work underlined how improvements in medical and sanitation systems reduced mortality rates of Europeans in colonies, Headrick's work showed how medical technologies supported European medical projects. More recently, Ryan Johnson and Amna Khalid have focused

their attention on how intermediary and often-subordinated entities implemented public health measures on the ground.[10] These historiographies of colonial public health and epidemics have tended to focus on medical practitioners, the higher rungs of colonial sanitary officials and municipal *bhadralok*, and other subordinate sanitary staff. Such historiographies also tended to frame medical questions only in relation to medical circles or to the interaction between medical circles and the colonial state.[11]

Social Histories of Medicine

Meanwhile, social historians of medicine had been paying attention to workers' health in relation to industrial and occupational hazards. However, such studies focused on work-related diseases in Britain and the United States and reproduced professionals' view of workers' health.[12] Even though debates around workers' bodies emerged, Christopher Sellers argued that the "'body' focus of worker history artificially sever[ed] 'the body' from its physical surroundings, in as complete a manner as modern medicine—and its historians—have done."[13] While not entirely focusing on the role of physical and geographical place in connection with workers' health, Indian indentured labor historiography did highlight how poor living conditions in coolie depots, on board ships, and on sugarcane plantations contributed to the even poorer health of indentured workers.[14]

Indian Ocean Studies

While the above historiographies approached the worker's body in a segmented manner, Indian Ocean studies have tended to center on trade and commerce.[15] However, more recently, as Kären Wigen's *Oceans of History* has highlighted, a sudden interest in seas has permeated historical fields as diverse as labor history, the history of ideas, environmental history, and business history.[16] Wigen's piece underlines how the Mediterranean was "the original maritime region in the Euro-American imagination" and remained a sea basin characterized by "round-trip exchange."[17] The Braudelian influence is undeniable here, with a focus on human-environment interaction. Fernand Braudel, a French historian of the post-1945 era suggested that empires, nation-states, and other bounded entities were insufficient in themselves in providing and producing historical processes.[18] Rather, human-environment interaction could indicate larger connections.

New waves appeared in Indian Ocean historiography as the Indian Ocean was touted as "the coming strategic arena of the twenty-first century."[19] Thomas R. Metcalf's and Sugata Bose's recent works have sought to insert this understanding into Indian Ocean history by examining governmentality and cultural interaction of political ideologies within this sea basin.[20] By borrowing Tony Ballantyne's conceptual frame of "a complex web…of horizontal filaments that…connect various colonies in addition to 'vertical' connections between the metropole and individual colonies," Metcalf demonstrated how British India could be considered a "sub-empire" in its own right.[21] Flows of ideas, institutions, policies, and practices poured out of India to areas as diverse as Zanzibar, Singapore, Durban, Basra, and Penang. [22] Sugata Bose has attempted to cover similar flows circulating through the Indian Ocean while characterizing the sea basin as an "interregional arena" rather than a "system" and emphasizing the political and cultural relationships that existed within the region.[23] Similar to Metcalf, Bose examines the diffusion of colonial practices from the Indian subcontinent to the other British colonies of the Indian Ocean. Moreover, Bose elaborates on how the Indian Ocean allowed for an "extraterritorial identity and universalist aspiration."[24] As explained above, both phases of Asian-centric scholarship on the Indian Ocean emphasized trade, commerce, and governmentality. Less attention has been paid to labor connections and institutional frameworks controlling labor across the Indian Ocean. While Thomas Metcalf and Sugata Bose have approached Indian Ocean history from the nodal point of India, Gwyn Campbell has demonstrated how Madagascar was "an integral part of southern and eastern Africa" and how it was a crucial link in the Indian Ocean World economy namely because of its role as an importer and exporter of slaves to other Indian Ocean and Mascarene countries (La Réunion and Mauritius).[25]

Building on the above existing historiographies, this chapter engages in an analysis of how the colonial state[26] and its ally, colonial capital, intervened in relation to the worker's body. Often pandemics and moments of crises triggered the legislation of oppressive laws toward workers.[27] The colonial state viewed the worker's body as a crucial link to the regime of production processes since workers' health directly determined his or her[28] productivity. While colonial capital sought to control the "fitness" of the worker's body, it also developed a medical framework on sugar plantations and estates to control the type and frequency of medical care workers received.

While recent work provides an overview of hospitals and their institutionalization in "non-Western contexts," there is a marked lacuna regarding hospitals and dispensaries addressing workers' health in different locales of the Indian Ocean.[29] Moreover, while the body was central to Arnold's thesis, he divorced it from the rule of capital. In this regard, this chapter traces the medical ideology, which regimented workers' bodies from coolie depots in Calcutta, Bombay, and Madras, on board ships crossing the Indian Ocean, to land in the sugar estates of Mauritius.

By using the Indian Ocean as a framework of analysis, this chapter brings the nexus between two historiographies: labor migration and social history of medicine and diseases to bear on a hitherto unexplored topic: workers' bodies and health. While the worker's health was crucial to the functioning of the production process, it needs to be placed within the larger framework of particular environments and climates that produced diseases. The interactions of host, pathogens, and environment create diseases. For a disease to take on epidemic proportions, weather patterns were important. David Arnold has demonstrated how by the nineteenth century the Indian Ocean had become a site of epidemiological transfer. Arnold argues that the ocean was part of "a common Eurasian disease pool," which facilitated the outbreak of diseases.[30] Steamships contributed to an increased and quicker mobility through the Indian Ocean and this could have possibly led to a higher transference of diseases.

Finally, through a study of indentured labor migration, this chapter seeks to establish how the colonial state in its various roles as the surrogate mother of the laboring population pinned the population within an institutional framework. Thus medical ideologies overlapped with the physical and geographical form of the island, and used hospitals as an instrument for controlling pandemics involving working classes and to further prevent their mobility within the island. The selection of Mauritius is not accidental. Mauritius was considered the test case for implementing indentured labor in the rest of the British Empire. Not only did it receive the largest number of Indian indentured immigrants, but also it became a major producer of commodities such as sugar.

Beginnings of Indenture in Mauritius

The confluence of overlapping and interrelated factors led to the presence of indentured labor in Mauritius. Sugar production, preferential tariffs from the British government, and the abolition of slavery

all created ripe conditions for the arrival of indentured labor on the island. During French colonization (1715–1810), Governor Mahé de Labourdonnais actively used slave labor for the cultivation of sugarcane. When the British fought and defeated the French in 1810, they sought to fructify this new addition to their empire. Sugar production saw an exponential increase. Sugarcane acreage increased from 58,500 in 1841 to 123,000 acres in 1861.[31] Global political and economic phenomena—including the Haitian revolution of 1804 and a dip in West Indies sugar production—also played a role in the sugar boom of Mauritius. Furthermore, the British government had removed preferential tariffs on West Indian sugar entering the British market in 1825. This propelled sugar cultivation on the island; as a result, revenue from sugar exports made up an increasing percentage of the island's economy: 29 percent in 1823 and 85 percent in 1829.[32] As the British enforced the 1807 parliamentary ban on slavery in Mauritius, Mauritian planters resorted to illegal means to bring more slave labor into the island between 1811 and 1827.[33] However, in doing so, planters had not accounted for the increasing death rates among the slave population and their declining health,[34] which affected available labor for the cane fields. To be fair, even before the formal abolition of slavery in Mauritius in 1835, planters had anticipated the abolition of slavery and had been seeking fresh supplies of labor.[35] As the illegal slave trade in the Mascarenes (Réunion and Mauritius) encountered its "demise" in 1827, planters turned their attention to India for "'free' agricultural labourers."[36]

Thus the booming sugar production and illegal slave trade in the Mascarenes as well as the abolition of slavery laid the foundation for the arrival of indentured labor in Mauritius. Often ignored among the above reasons is the decreasing health of slaves. The latter did not reproduce quickly enough to generate a new pool of labor, and several diseases had struck the Mascarenes in the early to late nineteenth century.[37] Between 1834 and 1839, in collaboration with the British metropolitan and the Indian colonial governments, Mauritian[38] planters organized themselves to introduce 24,300[39] Indians under a largely unregulated indentured system. Planters' investments in the growing sugar industry drove the demand for labor, and by extension dictated the conditions of the first indentured workers.[40] Such conditions in the early phase of indentured labor paid scant attention to immigrants' health. Furthermore, Mauritian planters were the ones shouldering the cost of the passage to Mauritius and the return passage to India; thus, at this point in time, they were not concerned by workers' health. The

cost factor was so prohibitive that it remained absent in discussions of workers' health.

Temporary End of the Indentured Labor System in 1838

A number of factors would coalesce to lead to the temporary end of the indentured labor system. Poor conditions and high mortality rates[41] on board ships, as well as poor conditions on sugar estates, increased. T. Parry Woodcock, from the Bengal Civil Service who traveled to Mauritius between March and May 1836, noted how "the lower decks [of the ship] were stowed with rice" and that coolies were "unprotected from change of weather and climate" and would have suffered much if not for the clement weather.[42] Once in Mauritius, the misunderstandings between workers and employers arose because a mismatch existed between the Indian indentured worker's expectations and those of the Mauritian planter. The latter, for instance, looked unfavorably upon "men unfit for work, from age and infirmity," while the former felt they had been deceived with a larger workload and a smaller wage than had been promised.[43] Woodcock further added that a number of misconceptions would arise because of the vague contract conditions. He underlined how it seemed emigrants had been fraudulently recruited, and were unaware of their contract terms. Meanwhile, on December 27, 1836, Sir William Nicolay, the then governor of the island, had encouraged estate owners to select workers more carefully, and that—inter alia—the chosen ones be "real agriculturalists" in India.

However, despite Nicolay's injunction and his attempt to prohibit the entrance of new immigrants, immigration did continue, thus indicating planters' outright disregard for the governor's order.[44] Outrage of British abolitionists and humanitarians recalled the bitter debates around the abolition of slavery. Not wanting to equate indentured labor to slavery, the British Parliament moved to stop migration on July 20, 1838.[45] A commission of enquiry was quickly established in Calcutta on August 1, 1838 to investigate emigration and its numerous consequences in Demerara and Mauritius.[46] It mainly concluded that "coolies and other natives exported to Mauritius and elsewhere were…induced to come to Calcutta by misrepresentation and deceit."[47] As coolies' conditions (traveling, living, and working) spurred British abolitionists' discontent, the same could be said of Indian industrialists.

The Calcutta Commission of Enquiry—1838

Interestingly enough, Russomoy Dutt, member of the committee appointed to investigate the circumstances behind the exportation of Indian Coolies to British colonies, was part of a Calcutta elite that had, for years, tried to protect the "landed property in Bengal" through the Landholders' Society and to "improve the position of the *zamindars*" (large landholders).[48] Dutt was highly self-interested in his decision to ban indentured immigration.[49] His strident criticism of hill coolies' recruitment for Mauritius was well known among members of the commission since, according to him, fraudulent practices were rife and because "hill coolies," according to him, were "incapable of understanding the nature of the contracts they were said to have entered into."[50] Dutt portrayed labor emigration still more negatively by arguing that emigration created dire conditions for immigrant workers' families in the "districts of Bancoorah and Maunbhoom" where most "vagrant" and "paupers" came from.[51] To better understand Dutt's vilification of immigration, it is important to examine Dwarkanath Tagore's testimony in front of the commission. Also a member of the Landholders' Society, Tagore's rationale for banning immigration was that coolies "would be easily induced…to leave their homes" and that "if they [the indentured workers] perfectly understood that they would be required to go [on] a voyage of a month or six weeks, it would be difficult to get their consent."[52] However, the more economic reason—and probably more accurate reason—given by Tagore was that labor emigration to Mauritius would drain catchment areas of labor for Indian industrialists' purposes. Since the late 1820s, Tagore had emphasized the importance of "indigo cultivation and a greater European presence" in that part of India.[53]

Climates and Perceptions of Climates

The medical ideology shaping indentured workers' lives was a nebulous process. While Mauritian planters' lack of concern about indentured workers' health resided in their cost-cutting beliefs, Indian industrialists, on the other side of the Indian Ocean, were concerned about "their" supplies of labor. On one hand, the Mauritian planter with the collaboration of the local island British administration drove the demand for indentured labor, established emigration agencies to recruit it, and was responsible for its transportation to Mauritius. On the other hand, the Indian industrialist scrambled to stop emigration

since it would drain catchment areas of labor for his own purposes (for indigo production). Acting as allies to the colonial state, both entities played a role in the formulation of the medical ideologies deployed to control indentured workers.

Besides concerns over the supply of labor, the Calcutta Committee of Enquiry had preconceived ideas about possible positive effects of the island's climate on indentured workers' health. While debating about testimonies that attested to the island's beneficial weather on indentured workers' "general healthy appearance and their apparent contentment, and…improved condition," the commission was intent on negating any such claimed benefits.[54] For instance, the commission stated that "any benefit derived from the superiority of climate at Mauritius or elsewhere may,…very reasonably be put out of question, as a mere European notion."[55] While Tagore had affirmed the need for greater European presence, this statement suggests the contrary sentiment. Thus the components of the medical ideologies went beyond medical practices and encompassed attempts to interpret the effects of climates. The commission, however, was inaccurate since the climate in Mauritius was far from superior. From the early nineteenth century, inhabitants of Mauritius had to contend with fevers (including a major epidemic in 1867, which was thought to have been malaria), and cholera from 1819 to 1821. Such colonial assumptions about climate were thwarted by the high death rates of coolies on board ships and in Mauritius between 1834 and 1837. Thus the making of a medical ideology concerning workers' health not only depended on medical conditions of workers but also was mediated through how apparently unhealthy certain regions of the Indian Ocean were perceived by Indian industrialists and, to a larger extent, by Mauritian planters.

Climates, Medical Circles, and Coolie Depots—At Ports of Embarkation

While Mauritian planters emphasized their need for healthy workers and those free from disease, certain discussions within the medical circles of Calcutta between the 1820s and 1830s facilitated the actions of coolie depot doctors. The dialectics of contestation over labor supply between Indian industrialists and Mauritian planters was but one element that informed the medical ideology regimenting coolies' lives. Preexisting medical concern with the growing presence of disease in deltaic and marshy Bengal formed another layer, which rendered the requests for labor of Mauritian planters even more potent.

The climates' importance amid medical circles had increased over time, and a possible link can be drawn between the increasing discussions about climates and constitutions on one hand, and medical treatment meted out to coolies traveling to Mauritius on the other. Since the 1820s, medical circles in Calcutta had been busy propounding the importance of climates in influencing the constitutions of the colonizers and the colonized. Mark Harrison has argued that debates over acclimatization of Europeans to Indian climates took a pessimistic turn in the nineteenth century.[56] Before 1770, medical texts reflected the belief that the Indian environment rendered people particularly prone to disease and that knowledge about tropical disease was needed to advance European medical knowledge.[57] According to Harrison, such discussions gave rise to further deliberations on "the need for a fundamental reappraisal of European medical knowledge."[58] Thus, the tropical environment came to be viewed exclusively as a trove of diseases.

While perceptions about climate were approached discursively, when the spread of cholera from Bengal in 1817–1818 happened, beliefs about the subcontinent's disease-provoking environment were solidified. Further, Harrison has argued how the "hostile climate" was considered to have ravaged soldiers with scurvy and dysentery during the First Burma War (1824–1826) and that, as a result, the rise of medical topography led to a vigorous search for healthy and unhealthy locales within India.[59] Topographers emphasized clear connections between the influence of climate and national or ethnic character. This pessimistic turn as to the adaptability of bodies to tropical climates determined colonial health policies.[60] On the other hand, certain diseases came to be seen as "man-made and, therefore as preventable."[61] As urban issues became more prominent in 1820s India, more sanitary measures to remove filth were implemented.[62] Such a sanitary mentality also diffused itself to coolie depots in Calcutta; thus sanitary measures, such as showers for coolies before their voyage, were made compulsory. A prominent measure that characterized this emphasis on sanitation and the removal of filth was the funding of the Calcutta Fever Hospital in 1835.

Calcutta Fever Hospital in 1835 and Coolie Depots

Dr. James Ranald Martin was a major proponent of the Calcutta Fever Hospital, appealing to Governor General Lord Bentinck for funds to build the hospital. The "purpose of producing and maintaining greater salubrity" was of utmost consideration for those who gathered on

June 18, 1835 to discuss the funding of the fever hospital.[63] Martin's words suggest that if the fever hospital was not constructed, the British in Bengal would suffer from further deterioration in their health. Discussions about the creation of the Fever Hospital started with Martin's letter of April 9, 1835 explaining how "the central part of the Native Town of Calcutta" was affected by "the constant universal and frightful prevalence of fever among the Native inhabitants."[64] He further condemned those "Native Doctors" who, he claimed, worsened the conditions of the "poorer classes of Natives." Already by 1834, Martin had drawn the topography of Calcutta, whereby he highlighted the importance of "removing defects of locality to remedy those of climate."[65]

Geographical and physical backgrounds and/or place thus played a central role in influencing how certain policies were implemented either in Mauritius or in Calcutta. Medical circles in Calcutta were impregnated with the fear of importing epidemics into the city and their ramifications for the city. It was no different in Mauritius where doctors and immigration officers sought to cordon off the island, and send sick immigrants to small islets around Mauritius.[66] It seems that a similar atmosphere of distrust about the Indian Ocean's epidemic climate reigned over two nodes of the ocean during the nineteenth century. Martin's focus on the hospital could also be tied to the sanitary conditions, which became common parlance amongst coolie depots in Calcutta. Recruited indentured workers were kept for at least five days at the Emigration Depot in Calcutta before their embarkation for Mauritius. They had to be examined by the surgeon and recommendations were made for them not to mingle with the local *bazaar* (market) populace. The influx of coolie labor to Mauritius followed the peaks and troughs of the sugar fortunes of the island and in years in which more labor was recruited, medical considerations were discarded at the emigration depots. For instance, in July and August 1865, medical examinations were eschewed so that the embarkation could start as quickly as possible.[67] While the above addressed Calcutta as a port of embarkation, indentured workers' conditions of fitness changed in other ports of embarkation (Bombay and Madras).[68]

On Board Ships—1838

The Calcutta Commission of Enquiry's investigations revealed much about conditions on board ships and how medical ideologies did not follow rigid patterns of beliefs and were bound by various conditions.

These discussions often highlighted the living conditions on board ships and on the sugar estates. Between 1838 and 1839, on board coolie ships, a host of actors—including ships' captains, master pilots, shippers, "native doctors," "European" doctors, and *sirdars*[69]—regimented coolies' health in a rather haphazard manner.[70] Far from being a well-oiled apparatus, medical practices were applied in an ad hoc manner and there was no general consensus about how the journey affected coolies' health. For example, Captain James Rapson felt most coolies died of "old age and sickness,"[71] while Captain A. G. Mackenzie underlined coolies' "generally good"[72] health. Most ships at that time had a "native doctor" rather than a "European surgeon" to treat coolies. However, the captains felt entitled to "[act] as…doctors."[73] Captain Rayne further reaffirmed this stance by suggesting that he knew "something of medical treatment" and that he "took…upon [himself] the direction of the native doctors." Ship captains tended to view the "native doctor" as incompetent or even "wholly ignorant," citing examples such as the "enormous doses of calomel"[74] that some would administrate to the coolies and, in one case, the inability to bleed a coolie properly. Moreover, native doctors could not do much in saving newborn babies or their mothers.[75] The overcrowding on board the ships noted by various parties was thought to contribute to the problem of coolies' health and the available medicines were often ineffective.[76] Coolies in pain could, at times, not tolerate it and jumped overboard but were then considered "deranged."[77] Abdoolah Khan, a "native doctor" traveling to Mauritius for a second time in early 1838, underlined how Captain Charles Edward forced him to administer specific doses to coolies. Khan blamed Edward for the death of five coolies at sea, even though the former had already noted their frail conditions while the ship was still at Kedgeree on the bank of the Hooghly River. Such power struggles between the captain and the "native doctor" often impinged on coolies' health. Besides such tugs of power, lack of drinking water[78] and space on the ship made the passage through the Indian Ocean excruciating. James Smart, master pilot on Edward's ship, noted that the space between "the fore to the main hatchway" was not enough for coolies.[79] Most other captains felt seasickness did not affect coolies as they spent most of their time in the "'tween decks" area.[80] In other cases, the "'tween decks were divided between the crew and space allotted for coolies' hospital on board the ship.[81]

The Calcutta Commission also interrogated three returnee immigrants—those who had traveled to Mauritius and returned to India

either after their five-year contract or before the end of their contract. The testimonies of these three immigrants highlight how conditions during the early phase of indenture (1825–1838) were detrimental to immigrant workers. Bibee Zuhoorun worked for a Mr. Boileau who sought to make her his mistress, which she "refused, and three times made complaints to the police."[82] Zuhoorun's testimony elaborates on the dire conditions in the early years of migration. Whenever coolies would complain of sickness, the estate doctor would accuse them of laziness. Zuhoorun recounts how, unable to cope with the "hardships of the life they led," some male indentured workers either "hung themselves" or, at times, died in the sugar estate hospital.[83] Estate doctors tended to be related to sugar estate owners or, at times, tended to be estate owners. As the questioning of Bibee Zuhoorun was done in Calcutta, Special-Justice Anderson visited 12 of the 31 establishments that had been visited by a special commission.[84] He concluded that coolies' lodgings "[were] either too confined or disgustingly filthy" and that "none of the establishments had sufficient hospital accommodation, and the expense of the public hospital was always urged as an excuse for not sending [coolies] there."[85]

Besides Zuhoorun, another returnee migrant would come forward complaining about Mauritius. Karoo, from Khurkotta in India related how after he received two months' pay he fell sick. While he did not specify his condition, Karoo explained how he ended up for four months in the hospital and that when he recovered "the police sent [him] to the house of correction for two months" to "break stones."[86] To add to Karoo's misfortune, at the "house of correction," he was struck by smallpox. Karoo was not sent back to the hospital[87] and when he was finally cured, the magistrate asked him whether he wanted to "return home." Because of his sickness and his inability to work on sugar plantations, Karoo's "master" refused to pay him his wages of eight rupees. When asked whether he would advise his fellow countrymen to travel to Mauritius, Karoo was categorical: "I would not advise my countrymen to go to the Mauritius."[88]

Another example of a returnee immigrant who left Mauritius with a bitter taste was Suboo, resident of Hazareebaug. A Mr. Stewart hired him but while he was "a good man," his "blacks," possibly former slaves, would beat him. He relates how "from the effect of the beating [he] fell sick, and was in the hospital for four months."[89] The hospital did not do much for the recovery of Suboo. He continues by saying how "from the hospital he was sent to the chief police" who informed him that he "was disabled by the fall of a tree on [his] wrist" and he

"had better return to [his] country."[90] As a result, Suboo received two months' pay of eight rupees, which were taken away from him by "the blacks." Suboo was as categorical as Karoo: "I would not go to Mauritius again, nor would I advise any of my friends to go there, I wish to go and live in my own country."[91]

Thus the early arrivals of Indian indentured workers to Mauritius saw several cases of indentured workers' sickness and of long stays in the sugar estate hospital. In his account to the commission, Ramdeen, a coolie *sirdar* (jobber), recounts how of the "80 men who went with [him]," five were attacked with fever, then headache, and were eventually sent to the estate hospital of Mr. Bordaille.[92] They died within ten or fifteen days of their admission despite the presence of a "European doctor."[93] Thus the institutional setup of hospitals on sugar estates did not necessarily mean the resolution of medical conditions for coolies. They were, in most cases, built because the colonial administration required it. Ramdeen also reports that dead bodies were dissected and probably used to experiment with. In contrast to Bibee Zuhoorun, Karoo, and Suboo, Ramdeen wished to return to the island, but added that had he not "been promoted to the rank of sirdar" he would not have been "anxious to return to Mauritius." This means that the status of sirdar allowed him a certain protection, one that was not available to other ordinary indentured workers.

More than the physical presence of hospitals, prolonged stays in the hospital entailed a lower wage. Before being sent to Mauritius in March 1835, coolies had signed a contract that specifically stated that "while in hospital from sickness or any other cause, the pay is stopped during such time."[94] As discussed earlier, such arbitrary rules contributed to allegations of abuse against Indian indentured workers. This led to the prohibition of indentured immigration from 1838 to 1842.

Indentured Labor Resumes

Mauritian planters' "urgent and imperative demand" for "agricultural labor" made the English metropolitan colonial state reconsider its position on Indian indentured labor.[95] Charles Anderson, judge of the court of peace and of police in Mauritius, thus drafted a report suggesting revisions in the contract length. Should indentured recruits reach the island in poor health, medical treatment would be free.[96] Lest indentured labor be compared to slavery, the metropolitan colonial government would also pay more attention to indentured workers' health and medical attendance during the voyage.[97]

When indentured workers were reintroduced in 1842, utmost attention was paid to their health and fitness to work. However, the predominant concern for workers' health now was not so much the actual worker's health but how crucially the body fitted within the production process. The following only reaffirms the importance of a sturdy body. The "emigrant" had to be "in good health and not incapacitated by old age, bodily infirmity or disease."[98] Sugar estate owners and estate doctors now complained about the "unfitness" of the migrant sent, or of ploys by the recruiting agent and the medical officer in Calcutta to alter the route of migrants. While Indian industrialists sought to retain labor in India, at times, doctors in charge of examining coolies at coolie depots in Calcutta reacted randomly, sometimes sending workers to a different destination than the one agreed upon. For example, Dr. Nilmany Biswas, a depot doctor at the Calcutta coolie depot, and Taylaknauth Mitter sent migrants to Demerara instead of Mauritius, claiming that there were no available migrants for Mauritius.[99] These ploys to alter the route of indentured workers could be explained by how networks within the empire were highly enmeshed. Oftentimes, emigration agents working for different sugar estate owners (based in Trinidad, Demerara, or Mauritius) would compete with each other to send indentured immigrants first. In the present case, it is possible that Drs. Biswas and Mitter may have received bribes to send immigrants to Demerara instead of Mauritius. Complaints from Mauritius about such fraudulent actions informed the stricter medical controls that were imposed at the depot in Calcutta.

However, the institution of new rules concerning workers' health did not necessarily equate with improved conditions for indentured workers. Rather, when a gratuity was paid for the return passage of indentured workers, the Protector of Immigrants' note seemed to suggest that the return of the immigrant to his native land was for his good. Such was the case of Kinaram, No. 75,332.[100] The latter had reached Mauritius on April 14, 1849 but by February 22, 1856, he was considered "unfit for labour" and a Dr. Rogers had further provided a certificate verifying his medical condition and had recommended a gratuity of 10 shillings.[101] The more telling case was that of Fareed, No. 88,741. After six years on the island, Fareed was sent to hospital twice for paralysis. After having been in the estate hospital from August 24 to November 12, 1855, he was considered "incurable."[102] Dr. Rogers, the treating physician, added that Fareed came to the hospital again between November 19 and 30 but "with no better result."

He concluded by saying that if Fareed's case was not paralysis, then he was probably "an accomplished impostor." Dr. Rogers's comment exemplifies the power that he exercised in the notes he issued about indentured workers' fitness for labor. The resumption of indentured labor did not necessarily mean better conditions on board ships. On some occasions, doctors were even complicit in the mistreatment of coolies. For instance, a Dr. Basu "assaulted seven immigrants so severely that [as a result] one woman miscarried."[103]

Malaria Epidemic in 1866–1867

As indentured workers' health faced threats aboard ships, the weather and climate conspired to make things still worse between 1866 and 1867. In the second half of the nineteenth century, doctors and scientific practitioners believed that the idea of miasma—"poisonous vapours from putrefying organic mater and stagnant water"—caused certain diseases. However, the miasmic theory also interacted with the combined relationship between geography and climate. In December 1866 when malaria broke out, the largest hospital on the island, the Civil Hospital, was "crowded [as] early as February 1867."[104] Malaria triggered the construction of 11 more hospitals.[105] The major epidemic of 1867 was to mark the island for a long time to come. The massive number of deaths also affected how sugar estate owners would incorporate already existing medical practices. Indian immigrant workers were particularly prone to malarial fevers and started spending more time in sugar estate hospitals.

Since indentured labor had become crucial for the country's economy by the late 1860s, more attention was paid to their treatment. In 1871, William Edward Frere and Victor Alexander Williamson, two London-based lawyers, were sent to Mauritius to investigate the living conditions and treatment of immigrants. They noted that not much had changed in terms of loss of wages because of hospitalization: "For each day in hospital [the migrant] forfeits the pay of that day, but for each day that he is absent from his work he forfeits two days' pay."[106] As required by law, all estate owners had to provide hospital accommodation based on the number of workers on the estate and to pay a doctor "4s. per head per annum for his attendance."[107] However, as noted by Frere and Williamson, in 1871, out of the 217 sugar estates on the island, none of the owners were fined for violating this law.

Furthermore, admission to estate hospitals did not necessarily mean quick recovery. As Dr. O. Beaugeard noted, the "high mortality

rate amongst Indians can be attributed to several factors before their entrance within the hospitals: their physical conditions are considerably weakened by repeated bouts of malarial fever, malnutrition and lack of good nutrients."[108] Thus according to Beaugeard, the average per thousand of fatal cases "among Europeans was 18.4, among Creoles 66.6 and among Indians 158.6."[109] At other times, when coolies were given medication, they were "not allowed to remain in hospitals and [were] sent to work with the bullocks," as was the case on Mr. Poulin's estate.[110] However, hospitals were not meant mostly for sickness and recovery. While Frere and Williamson underlined several issues with Mauritian planters' estates and their provision of health accommodations for indentured workers, they, nevertheless, suggested how Indian indentured workers "subsist[ed] at the expense of Government in hospital."[111] After the 1866–1867 epidemic, Mauritian planters and the island's British colonial administration were wary of importing diseases to the island. Migrants were quarantined at the immigration depot in Mauritius before being sent to their respective masters' sugar estates.[112] Such stringent quarantines led to several deaths on board ships as indentured migrants waited to be discharged.

Conclusion

The historiography of Indian indentured labor in Mauritius has resolutely focused on working and living conditions of indentured workers, thus shedding light on the medical practices used in these workers'daily lives. However, when combining the Indian Ocean as a framework of analysis with a reading of indentured labor and a social history of disease, new results appear. Sugar estate owners' ideology of cost-cutting measures and profit motivated their lack of concern for adequate and efficient hospital services on sugar estates. However, a combination of geography and climate influenced their decisions (for example, an increase in the number of hospitals during the 1866 malaria epidemic). More specifically, the interdependence between climate and pathogenesis affected indentured workers' metabolic rate (for example, their proneness to malarial fever) and, by extension, their health and productivity.[113] Indian indentured labor's productivity drove the island's sugar industry.

While the allies of the colonial state (Mauritian sugar estate owners and Indian industrialists) had different aims, their ideologies hardly differed since they sought to preserve their economic self-

interest. At times, doctors buttressed such interests (as in the case of Dr. J. R. Martin) by promoting the construction of fever hospitals. Once medical circles had specific perceptions of a treacherous climate, this influenced their discursive perspectives on the constitutions of the colonized and the debilitating effects on Europeans' mental and physical propensity to live in the tropics. However, the tensions between the perception and the physicality of climates (the onslaught of cholera and malaria in Mauritius) played out differently for indentured workers.

Migration indeed placed workers more at risk to epidemics such as malaria. Not only was the Indian Ocean seen as a vector of diseases in the nineteenth century but also its geographical topography may have operated differently in the context of the Indian subcontinent and that of Mauritius. The island's geographical position and its disposition to cyclones discretely influenced the decisions of colonial capital. Their dominant power legitimated and even naturalized the beliefs that a systematic control of migrant labor was needed. However, Mauritian sugar estate owners' ideologies could not be rigid mostly because of the contingencies and unpredictability of climatic conditions, which facilitated the spread of diseases.

Notes

* Archival records used for this chapter were consulted at the Mauritius National Archives (MNA) in Coromandel, Mauritius; British National Archives (BNA) in Kew, England; and the British Library, India Office Records (IOR) in London, England. The abbreviations used in this chapter are as follows: RRC—Report of the Royal Commissioners Appointed to Enquire into the Treatment of Immigrants in Mauritius, 1875; BPP—British Parliamentary Papers; CCE—Calcutta Commission of Enquiry from BPP, 1841 (XVI.287, Session 1 (45) Hill Coolies); and PRO—Public Records Office. A version of this chapter was presented at the "Histories of Medicine in the Indian Ocean World" conference, April 26–27, 2013, Indian Ocean World Centre, McGill University, Montréal, Canada. The author expresses her sincere thanks to Subho Basu and Anna Winterbottom for their numerous comments and help with this article.

1. For a detailed discussion of the Indian Ocean World and its related historiographies, see Markus P. M. Vink (2007), "Indian Ocean Studies and the 'New Thalassology,'" *Journal of Global History,* 2 (1): 41–62.
2. While ideology can have several definitions and the definition(s) can be somewhat slippery, ideology is not a set of fixed ideas; it has to do with power, control of productive sources, and how a dominant socioeconomic group controls the body of workers for productive and profit purposes. I derive this definition from Terry Eagleton (1991), *Ideology: An Introduction* (London

and New York: Verso), p. 6: "Ideology is a set of ideas or ways in which relations of domination occur and how a "dominant power [legitimates] itself by promoting beliefs and values congenial to it; naturalizing and universalizing such beliefs so as to render them self-evident and apparently inevitable; denigrating ideas which challenge it; excluding rival forms of thought, perhaps by some unspoken but systematic logic; and obscuring social reality in ways convenient to itself."

3. Thomas R. Metcalf (2007), *Imperial Connections: India in the Indian Ocean Arena, 1860–1920* (Berkeley and Los Angeles, CA: University of California Press).
4. Dipesh Chakrabarty (1989), *Rethinking Working-Class History: Bengal, 1890–1940* (Princeton, NJ: Princeton University Press), p. 4.
5. Subho Basu (2008), "The Paradox of Peasant Worker: Re-Conceptualizing Workers' Politics in Bengal 1890–1939," *Modern Asian Studies,* 42 (1): 50.
6. Rajnarayan Chandavarkar (1998), *Imperial Power and Popular Politics: Class, Resistance and the State in India, 1850–1950* (Cambridge: Cambridge University Press), p. 2.
7. David Arnold (1993), *Colonizing the Body: State, Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley: University of California Press).
8. Mark Harrison (1994), *Public Health in British India: Anglo-Indian Preventive Medicine, 1859–1914* (Cambridge: Cambridge University Press,), pp. 2–3.
9. Daniel R. Headrick (1981), *The Tools of Empire: Technology and European Imperialism in the Nineteenth Century* (Oxford: Oxford University Press); and Philip D. Curtin (1989), *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century* (Cambridge: Cambridge University Press), cited in Harrison, *Public Health in British India*, p. 2.
10. Ryan Johnson and Amna Khalid (2012), *Public Health in the British Empire: Intermediaries, Subordinates, and the Practice of Public Health, 1850–1960* (New York: Routledge), p. 2.
11. However, the following works have addressed workers' health: Subho Basu (1995), "Emergence of the Mill Towns in Bengal 1880–1920: Migration Pattern and Survival Strategies of Industrial Workers," *The Calcutta Historical Journal,* 18: 97–134; Subho Basu (2004), *Does Class Matter?: Colonial Capital and Workers' Resistance in Bengal, 1890–1937* (New Delhi: Oxford University Press), pp. 76–83; Nandini Bhattacharya (2012), *Contagion and Enclaves: Tropical Medicine in Colonial India* (Liverpool: Liverpool University Press), pp. 119–148.
12. George Rosen (1943), *The History of Miners' Diseases: A Medical and Social Interpretation* (New York: Schuman's), pp. 153–423; Ludwig Teleky (1948), *History of Factory and Mine Hygiene* (New York: Columbia University Press), pp. 22–74.
13. Christopher Sellers (2011), "Health, Work, and Environment: A Hippocratic Turn in Medical History," in *The Oxford Handbook of the History of Medicine*, ed. Mark Jackson (Oxford: Oxford University Press), p. 454.

14. C. Kondapi (1951), *Indians Overseas, 1838–1949* (New Delhi: Indian Council of World Affairs); Hugh Tinker (1974), *A New System of Slavery: The Export of Indian Labour Overseas, 1830–1920* (London and New York: Oxford University Press); Marina Carter (1995), *Servants, Sirdars, and Settlers: Indians in Mauritius, 1834–1874* (Delhi and New York: Oxford University Press), pp. 124–145.
15. Ashin Das Gupta (1967), *Malabar in Asian Trade: 1740–1800* (Cambridge: Cambridge University Press); Ashin Das Gupta (1977), *Indian Merchants and the Decline of Surat: c. 1700–1750* (Wiesbaden: Steiner); K. N. Chaudhuri (1985), *Trade and Civilisation in the Indian Ocean: An Economic History from the Rise of Islam to 1750* (Cambridge: Cambridge University Press).
16. Kären Wigen (2006), "Introduction: AHR Forum Oceans of History," *The American Historical Review,* 111 (3): 718.
17. Ibid.
18. Fernand Braudel (1972), *The Mediterranean and the Mediterranean World in the Age of Philip II*, trans. Siân Reynolds (London: Collins).
19. Robert D. Kaplan (March 1, 2009), "Center Stage for the 21st Century: Power Plays in the Indian Ocean," *Foreign Affairs*, http://www.foreignaffairs.com/articles/64832/robert-d-kaplan/center-stage-for-the-21st-century, accessed March 2013.
20. Metcalf, *Imperial Connections: India in the Indian Ocean Arena, 1860–1920*; Sugata Bose (2006), *A Hundred Horizons: The Indian Ocean in the Age of Global Empire* (Cambridge, MA: Harvard University Press).
21. Tony Ballantyne (2003), "Rereading the Archive and Opening Up the Nation State," in, *After the Imperial Turn: Thinking With and Through the Nation*, ed. Antoinette Burton (Durham, NC: Duke University Press), p. 112, cited in Metcalf, *Imperial Connections: India in the Indian Ocean Arena, 1860–1920*, p. 7.
22. Metcalf, *Imperial Connections: India in the Indian Ocean Arena, 1860–1920*, p. 9.
23. Bose, *A Hundred Horizons: The Indian Ocean in the Age of Global Empire*, p. 6.
24. Ibid., p. 31.
25. Gwyn Campbell (2006), *An Economic History of Imperial Madagascar, 1750–1895: The Rise and Fall of an Island Empire* (Cambridge: Cambridge University Press), p. 16.
26. Here the colonial state is understood as the administrative and bureaucratic colonial structures that existed in various nodes of the Indian Ocean: Mauritius and Calcutta.
27. See, for example, Rajnarayan Chandavarkar (1998), "Plague Panic and Epidemic Politics in India, 1896–1914," *Imperial Power and Popular Politics: Class, Resistance and the State in India, 1850–1950* (Cambridge: Cambridge University Press), Ch. 7.
28. It has been demonstrated that male indentured migration was privileged at the beginning of the indenture period (1834) and that female indentured work was regulated by the colonial state. Moreover, female indentured workers worked mostly as domestic workers and less so on sugar plantations.

29. Mark Harrison, Margaret Jones, and Helen Sweet, eds. (2009), *From Western Medicine to Global Medicine: The Hospital Beyond the West* (New Delhi: Orient BlackSwan). One chapter in this edited volume addresses labor and health in the Indian Ocean context of Ceylon, Margaret Jones, "The Indian Immigrant Worker and the Development of Hospital Provision in Nineteenth-Century Ceylon," pp. 33–66.
30. David Arnold (1991), "The Indian Ocean as a Disease Zone, 1500–1950," *South Asia: Journal of South Asian Studies,* 14 (2): 1–21.
31. Roland Lamusse (1964), "The Economic Development of the Mauritius Sugar Industry—I: Development in Field and Factory," *Revue Agricole et Sucrière de L'île Maurice [organe officiel de la Société de technologie agricole et sucrière de l'Ile Maurice]*, 43 (1): 22–38.
32. Noël Deerr (1949), *The History of Sugar* (London: Chapman & Hall), pp. 203–204.
33. Richard B. Allen (2008), "Capital, Illegal Slaves, Indentured Labourers and the Creation of a Sugar Plantation Economy in Mauritius, 1810–60," *The Journal of Imperial and Commonwealth History,* 36 (2): 153–154.
34. Ibid., 154. Allen notes that "field hands declined from 58 to 45 per cent between 1823 and 1835."
35. Carter, *Servants, Sirdars, and Settlers*, p. 18. R. B. Allen suggests circa 1827 as the time around which planters had sought "free" labour from India. Marina Carter has suggested the following dates: 1825, 1829, and 1831. Abolition of slavery in Mauritius did not go smoothly since a compensation of two million pounds sterling was paid to the planters.
36. Allen, "Capital, Illegal Slaves, Indentured Labourers," 154.
37. See a discussion of cholera in 1819 in R. Boodhoo (2010), *Health, Disease and Indian Immigrants in Nineteenth Century Mauritius* (Port Louis, Mauritius: Aapravasi Ghat Trust Fund), p. 60. Several cases of dysentery, colic, and cholera were found on board the frigate *HMS Topaze* that came from Manilla, stopped over at Ceylon and Seychelles before mooring at the Port Louis harbor in Mauritius. Scientists in France and Britain argued that "the air" was to blame for the disease.
38. "Mauritian" here refers to planters of French origin who had not left the island for France after the British takeover of 1810, and their Creole descendants born in Mauritius.
39. Allen, "Capital, Illegal Slaves, Indentured Labourers," 154.
40. On September 10, 1834, Mr. Macfarlane, chief magistrate in Calcutta informed the secretary to government how 36 Hill Coolies had entered Mauritius on the following conditions: (1) their contract length was five years; (2) their return passage to India after five years was paid; and (3) men were paid 5 rupees (11 rupees per month, paragraph 124, pp. 33–34) while women earned 4 rupees. They were engaged to dig holes, weed canes, or work in the sugar factory; 1 rupee was kept per month per worker for the return passage. Their food allocation was: "2 lbs. rice per diem per man; 1.5 lb rice per diem per woman; 0.5 lb dholl; 2 oz. of salt; 2 oz. of oil; 2 oz of mustard" and the clothes given to them were: "1 dhotee, 1 sheet, 2 blankets, 1 jacket, and 2 caps annually." William Edward Frere and Victor Alexander

Williamson (1875), *Report of the Royal Commissioners Appointed to Enquire into the Treatment of Immigrants in Mauritius: Presented to Both Houses of Parliament by Command of Her Majesty, 6th February, 1875* (hereafter Frere and Williamson, RRC) (London: William Clowes), paragraphs 99, pp. 27–28. Later on, the return passage would be canceled and the immigrant was either responsible for it or, in dire cases (sickness, injury), the Immigration Office in Mauritius would pay for the return passage.

41. For example, in December 1837, Mr. Merven received 185 new immigrants. Only 105 remained, "all of whom had been often in hospital, 57 bore marks of having suffered under severe and acute disease," paragraph 165, RRC, p. 41. The situation did not necessarily improve later. In January 1856, immigrants were not allowed to disembark from two ships from Calcutta, the Futtay Mubarak and the Hyderee, because of some cases of fever. By May 1856, 284 out of 697 immigrants had died. The mortality rate increased from 1.64 percent in 1864–1865 to 3.26 percent the next season, quoted in Carter, *Servants, Sirdars, and Settlers*, pp. 123, 126, and 133. David Northrup suggests that "Mortality on Indian voyages to Mauritius fell from 10 per thousand in the 1870s to under 4 per thousand at its end in the 1890s," in David Northrup (1995), *Indentured Labor in the Age of Imperialism, 1834–1922* (Cambridge: Cambridge University Press), p. 99.
42. Frere and Williamson, RRC, paragraph 115, p. 33. Woodcock adds that immigrant workers received "a quart of water daily" and as much food as they wanted.
43. Frere and Williamson, RRC, paragraph 125, p. 34.
44. Between 1836 and 1838, 22,923 immigrants (22,015 men, 716 women, 130 boys, and 62 girls) were introduced into Mauritius. More importantly, Lord Glenelg had disallowed Ordinances 16 and 17 of 1835, which emphasized high security levels throughout the island.
45. Hansard, House of Commons Debate, July 20, 1838, vol. 44, cc 382–3.
46. British Parliamentary Papers (hereafter BPP), 1841, XVI.287, Session 1 (45) Hill Coolies, Report of the Committee Appointed By The Supreme Government of India To Inquire Into The Abuses Alleged To Exist In Exporting From Bengal Hill Coolies and Indian Laborers, Of Various Classes, To Other Countries (Calcutta Commission of Enquiry, hereafter CCE), p. 4. The six members of the commission were T. Dickens, James Charles, W. Dowson, Major Archer, Russomoy Dutt, and J. P. Grant. Major Archer was unavailable later while W. Dowson and J. P. Grant disagreed with the remaining committee members since both felt that the indentured labor system should not be abolished.
47. CCE, paragraph 9, p. 5. From T. Dickens, James Charles, and Russomoy Dutt to G. A. Bushby, Secretary to Government of Bengal, October 14, 1840.
48. S. N. Mukherjee, "Class, Caste and Politics in Calcutta, 1815–38," in *Elites in South Asia*, ed. Edmund Leach and S. N. Mukherjee (Cambridge: Cambridge University Press, 1970), p. 76.
49. Ibid., p. 77.
50. CCE, paragraph 12, p. 5, from T. Dickens, James Charles, Russomoy Dutt to G. A. Bushby, Secretary to Government of India, October 14, 1840.

51. CCE, paragraph 22, p. 6, from T. Dickens, James Charles, Russomoy Dutt to G. A. Bushby, Secretary to Government of India, October 14, 1840, p. 6.
52. CCE, paragraph 866, p. 71, Examination of Dwarkanath Tagore, November 9, 1838.
53. Lynn Zastoupil (2010), *Rammohun Roy and the Making of Victorian Britain* (New York: Palgrave Macmillan), p. 113.
54. CCE, paragraph 23, p. 6, from T. Dickens, James Charles, Russomoy Dutt to G. A. Bushby, Secretary to Government of Bengal in the General Department, October 14, 1840.
55. Ibid., p. 7.
56. Mark Harrison (1999), *Climates & Constitutions: Health, Race, Environment and British Imperialism in India, 1600–1850* (Oxford: Oxford University Press), pp. 111–112.
57. Harrison, *Public Health in British India*, p. 37. Mauritius was perceived to be healthier during the eighteenth century, as can be seen in travelogues of the time, Bernardin de Saint-Pierre (1773), *Voyage à l'Isle de France, A l'Isle de Bourbon, Au Cap de Bonne Espérance Avec des Observations Nouvelles Sur La Nature et Sur Les Hommes, Par Un Officier du Roi, Tome II* (Amsterdam: Merlin); George Riley (1790), *A New Moral System of Geography: Containing an Account of the Different Nations, Ancient and Modern: Their Situation and Climate, Their Rise and Fall, Their Customs and Manners : Including, a Description of Each Country, and Their Respective Productions, by which Commerce Has Been Established, and Society Cemented for the Good of Mankind: Adorned with the Dresses of Each Country* (London: Printed for G. Riley and sold by S. Hazard, Mess. Watson and Elder).
58. Harrison, *Public Health in British India*, p. 36.
59. Harrison, *Climates & Constitutions*, pp. 117, 120.
60. Ibid., p. 18.
61. Ibid., p. 22.
62. Ibid., p. 23.
63. British Library, India Office Records (hereafter IOR), IOR/V/26/840/1, 1840–1845, Calcutta Fever Hospital and Municipal Enquiry (Grant) Committee 1836–47, "Abridgement of the Report of the Committee Appointed by the Right Hon. Governor of Bengal for the Establishment of A Fever Hospital and for Inquiring into Local Management and Taxation in Calcutta," p. 1.
64. Ibid.
65. Ibid.
66. For example, whenever indentured immigrants were not allowed to disembark from the ships, the coolie ships would station at Gabriel Island, an islet in the north of Mauritius.
67. Bengal Emigration Proceedings (BEP) 432/17, Payne to Emigration Agent, February 13, 1866; 432/18 Report Govt Medical Inspector of Emigrants for 1866–1867, quoted in Carter, *Servants, Sirdars, and Settlers*, pp. 147, 148.
68. Besides Calcutta, the two other ports from where indentured workers left India were Bombay and Madras. This chapter primarily focuses on Calcutta.

69. *Sirdar* is the equivalent of jobbers, the head of indentured workers who recruited new workers for Mauritius.
70. CCE, p. 35, Examination of Abdoolah Khan, "native doctor," September 10, 1838.
71. CCE, paragraph 48, p. 17, Examination of Captain James Rapson, August 22, 1838.
72. CCE, paragraph 270, p. 31, Examination of Captain Alexander Garioch Mackenzie, September 6, 1838.
73. CCE, paragraph 59, p. 19, Examination of Captain James Rapson, August 22, 1838.
74. Calomel or mercurious chloride was used to clean the nervous system of any toxins. It is either administered alone or in combination with opium. One Ramburn, 27 years old, traveling from Calcutta to Trinidad, was administered calomel and opium because he had diarrhea, Sarup Leela Gujadhur (2009), "Mortality of the Emigrant Coolies on board the 'Eliza' Trinidad to Calcutta," *Colonial Emigration Proceedings, Volume 3* (Kolkata: Aldrich International), page unavailable. Calomel was also used in tea plantations of Darjeeling, see Bhattacharya, *Contagion and Enclaves*, p. 68. Or it was used with immigrant workers going to Fiji, see Brij Lal (1998), *Crossing the Kala Pani: A Documentary History of Indian Indenture in Fiji* (Canberra: Australian National University and Suva, Fiji: Fiji Museum), p. 39.
75. CCE, paragraph 281, p. 31, neither pregnant mothers nor newborns could be saved. Examination of Captain Alexander Garioch Mackenzie, September 6, 1838.
76. CCE, paragraph 40, p. 18, Examination of Captain James Rapson, August 22, 1838; paragraph 444, p. 38, Examination of Abdoolah Khan, September 10, 1838. Medicines that were available were given in disproportionate doses.
77. CCE, paragraph 425, p. 37, Examination of Captain Alexander Garioch Mackenzie, September 13, 1838.
78. CCE, paragraph 292, p. 32, Examination of Captain Alexander Garioch Mackenzie, September 6, 1838; paragraph 507, p. 40, Examination of Captain Edwards, September 17, 1838. Coolies were generally given six pints of water, which was enough for the voyage but not to quench their thirst. Water would then be exhausted, causing coolies to drink salt water and fall sick. At other times, the presence of cockroaches made the water undrinkable.
79. CCE, paragraph 728, p. 58, Examination of James Smart, master pilot on the ship *Edward*, October 15, 1838.
80. CCE, paragraphs 25 and 26, p. 18, Examination of Captain James Rapson, August 22, 1838; paragraph 273, p. 31, Examination of Captain Alexander Garioch Mackenzie, September 6, 1838; paragraph 742, p. 60, Examination of John Dyer, master pilot on the ships *Lonach* and *Whitby*, October 25, 1838.
81. Ranbir Sinh (1980), *Mauritius: The Key to the Indian Ocean* (New Delhi: Arnold-Heinemann), p. 39. Sinh points out that "the dispensary was placed on the top deck, and the hospital was in the middle."
82. CCE, p. 45. Examination of Bibee Zuhoorun, September 20, 1838.

83. Ibid., 46.
84. Just as the outrage about indentured workers' conditions was increasing, Governor Nicolay quickly instituted a commission made of "Mr. Special-Justice Campbell and Messrs. Bury and Hugo, and captain Forbes of the East India Company's service, together with the Special Magistrate of each district," RRC, p. 38. Special-Justice Anderson was the special magistrate in the capital, Port Louis, and he had a view different from the other commission members. The rest of the members visited 31 sugar estates in Port Louis, while Anderson visited only 12.
85. Frere and Williamson, RRC, p. 39.
86. CCE, p. 72. Examination of Karoo, November 16, 1838.
87. It is unclear which hospital Karoo attended, whether it was the estate hospital or the Civil Hospital, which was a large hospital in the capital of the island, Port Louis. Estate hospitals were within the boundaries of the sugar estate. While there seemed to have been small dispensaries on sugar estates, the Civil Hospital in Port Louis was accessible to "Europeans, Natives and Indians, Police Serjeants, 1st Class Guards and Overseers of Convicts," *Bolton's Mauritius Almanac and Official Directory* (Mauritius: A. J. Tennant, Place D'Armes), 1851, p. 186.
88. CCE, paragraph 882, p. 72, Examination of Karoo, November 16, 1838.
89. CCE, paragraph 888, p. 73, Examination of Suboo, November 16, 1838.
90. Ibid.
91. Ibid.
92. CCE, paragraph 918, p. 74, Examination of Ramdeen, November 27, 1838.
93. Ibid..
94. BPP, 1841, XVI.287, Session 1 (45) Hill Coolies, Appendix, Sample Contract between Mr. A. Gardyne, agent of Mr. L'Eclizio, owner of the Vale property and native Indians. The report mispelt the owner's name, which is actually Leclézio, p. 125.
95. British National Archives (hereafter BNA), alternatively known as Public Record Office (hereafter PRO), PRO 30/12/31/5, 1838–1842, Papers relating to the introduction of Indian Labourers into Mauritius and the West Indies, Outlines of a Plan (…) To Regulate and Carry on the Introduction of Indian Labour at Mauritius, the Observations by Charles Anderson, Esq, Judge of The Court of Peace and of Police, And Formerly Superintending Special Magistrate of Mauritius, p. 3.
96. BNA, PRO 30/12/31/5, 1838–1842, Outlines, p. 6.
97. Ibid.
98. Saloni Deerpalsingh and Marina Carter (1994), *Select Documents on Indian Immigration: Mauritius, 1834–1926. Vol. 1, Organisation and Evaluations of the Indenture System* (Moka, Mauritius: Mahatma Gandhi Institute), Document 1.8, p. 74, quoted in Boodhoo, *Health, Disease and Indian Immigrants*, p. 79.
99. Mauritius National Archives (hereafter MNA): PB 5 Protector of Immigrants to Colonial Secretary: October 21, 1852, November 13, 1852, December 6, 1852, December 16, 1852, Protector's Report, February 22, 1853, quoted in Carter, *Servants, Sirdars, and Settlers*, p. 81.

100. All immigrants who arrived in Mauritius were provided with an immigration (a kind of identifying number) number.
101. MNA, PA 3, Report No. 10 signed by Protector of Immigrants, February 22, 1856.
102. MNA, PA 3, 110, Signed by Protector of Immigrants, February 25, 1856.
103. India Public Proceedings (hereafter IPP)/188/69, Colonial Secretary to Secretary Govt India, October 6, 1864, quoted in Carter, *Servants, Sirdars, and Settlers*, p. 149.
104. Albert Pitot (1914), *Mauritius Illustrated: Historical and Descriptive, Commercial and Industrial Facts, Figures, & Resources*, ed. Allister Macmillan (London: W. H. & L. Collingridge), p. 55.
105. Ibid.
106. Frere and Williamson, RRC, p. 8.
107. Ibid., 10.
108. Dr. O. Beaugeard wrote the following in his Report on the Civil Hospital of 1870: "La très grande proportion de la mortalité parmi les Indiens peut être attribuée à ce que lorsqu'ils entrent à l'Hôpital, leur constitution physique est plus ou moins ébranlée par la cachexie paludéenne, qui se développe chez eux à la suite d'accès répétés de Fièvre Paludéenne, que les soins médicaux leur ont manqué complètement, ou que ceux qu'ils ont recus étaient insuffisants, et surtout au manque de nourriture au d'aliments convenables," quoted in Frere and Williamson, RRC, p. 10. "The high mortality rate amongst Indians is because of their physical condition that has degraded because of malarial cachexia (or wasting), which occurs because of repeated fevers, lack of medical care or inadequacy of medical care provided and mostly because of lack of food" (translation mine).
109. Frere and Williamson, RRC, p. 10. A similar argument would be made in twentieth-century Mauritius when the colonial state would appeal to the Rockefeller International Health Board to eradicate hookworm and ankylostomiasis between 1916 and 1925. For instance, the Annual Report of the Rockefeller International Health Board of 1918 notes that Indian workers' propensity to hookworm made them "extremely weak, anemic, (…) and suffer from disturbances of the heart," quoted in Rockefeller International Health Division, Fifth Annual Report, January 1918, p. 59. For more on the Rockefeller's international health initiatives, see Shirish N. Kavadi's chapter "The Rockefeller Foundation and Public Health in Colonial India" in this book.
110. Frere and Williamson, RRC, 11.
111. Ibid., 27.
112. Indentured workers had been quarantined even during the earlier phase of indentured labor (1825 to 1839). However, it seemed more stringent during the 1866–1867 epidemic.
113. Lenore Manderson (2002), *Sickness and the State: Health and Illness in Colonial Malaya, 1870–1940* (Cambridge: Cambridge University Press), pp. 72–74.

2

Treating Black Deaths in Egypt: Clot-Bey, African Slaves, and the Plague Epidemic of 1834–1835

George Michael La Rue

The Egyptian plague epidemic of 1834–1835 stands at the conjuncture of multiple streams of change affecting the Indian Ocean World (IOW), the Ottoman World, Europe, the Eastern Mediterranean, and northeastern Africa. The epidemic and its multiple consequences affected the medical debates between contagionists and anti-contagionists, fostered debates over the efficacy of quarantines and lazarettos, helped to determine how particular European medical ideas spread in Egypt and other parts of the Middle East, and ultimately contributed to international cooperation on sanitary regulations.[1] Beyond its medical and demographic dimensions, this epidemic also had important economic consequences. The recent rise of steamship navigation and increasing interest in free trade meant that seemingly capricious quarantine regulations in the Mediterranean and on Indian Ocean routes affected trade in cotton, the speed of transportation, and, soon, navigation in the Red Sea and through the Suez Canal.[2] New understandings of the epidemic influenced regional diplomacy, with Britain, France, the Ottoman Empire, Egypt, and Austria taking part in complex negotiations whose powerful consequences extended into the IOW.

But analyzing this epidemic also brings new insights into a skein of issues related to slavery. The key strands include the trans-Saharan slave trade that supplied African slaves, largely from the Sudan to Egypt and from there into the Ottoman World, the Red Sea, and the IOW; the lives of individual slaves in Egypt as seen in the medical records and reports of the epidemic; and the demographic impact

of the epidemic on the black population of Egypt. Contagionists and anti-contagionists alike cited specific early cases among the black slave populations in Alexandria and in Cairo, commenting on their nature, debating higher than average mortality, and discussing individual lives. Much of this information was reviewed in the two major investigations of the epidemic, first by British and later by French medical authorities.[3] The demographic impact on African slaves in urban Egypt, the resulting increased demand for slaves in the Sudan, and the renewed Egyptian slave raids there also drew the attention of the international abolitionist movement.

Beginning in the summer of 1834, the Egyptian plague epidemic claimed over 14,000 victims, more than a third of Alexandria's civilian population. By June 1835, Cairo similarly lost a third of its 250,000 inhabitants. Nationwide, mortality from the plague was about 10 percent.[4] Many contemporary observers—including Dr. A. B. Clot and John Bowring, whose works are often cited by modern scholars—noted that the mortality rates of black Africans in Egypt were comparatively higher.[5] Felix Mengin specified: "In Cairo, of the blacks of both sexes who are employed as domestics, fifteen thousand individuals have perished, as well as Nubians and other strangers."[6] This demographic catastrophe provides a rare window into the real lives, and unfortunate deaths, of African slaves and freed blacks in Egypt.

Few individual African slaves in Egypt had received much attention until recently. Egyptian slavery was portrayed as unchanging, noneconomic, and mild. To sketch their living conditions, some sources simply reviewed the treatment of slaves prescribed by Muslim law, or projected orientalist harem fantasies. Tantalizing references hinted at their agricultural work. More was known about black eunuchs and enslaved Sudanese "recruited" for the Egyptian army after 1820.[7] In contrast, details of the actual living conditions of Egypt's black slaves emerge in descriptions of this epidemic.

The epidemic generated intertwined debates about the nature of plague and African slavery in Egypt. Two key participants in those debates, Clot and Bowring, concurred that plague was noncontagious, but disagreed over slavery. Clot, a Frenchman, was Egypt's chief medical officer and always conscious of the views of his employer, Muhammad Ali, ruler of Egypt. Bowring, a well-known British politician, free-trade advocate, and abolitionist, knew relatively little about medicine. Comparing their works and opinions in the context of the 1834–1835 epidemic reveals a great deal about their characters, their concerns, the state of medical knowledge, and the lives of slaves in Egypt.

This chapter first traces the epidemic's course from Alexandria through Cairo, pausing only to consider contemporary statistics on black susceptibility to plague. Its second half analyzes contemporary debates over plague's contagiousness, and African slavery in Egypt, by focusing on Clot and Bowring. Clot's strong anti-contagionist views influenced Bowring, shaped the careers of many medical personnel in Egypt, and found favor with those advocating free trade and opposing quarantines. Bowring's empathy for African slaves in Egypt drew attention to their plight, while undermining Muhammad Ali's reputation as a reformer, and Clot's official views on Egyptian slavery. After the epidemic, public health officials addressed the perceived causes of plague (and smallpox), and temporarily eliminated quarantines. But for two decades after the epidemic, abolitionists had little impact on Egyptian slavery, or the trade and raids that supplied Egypt, as replacement slaves flowed into the country.[8]

The Events

Alexandria

Between 1800 and 1844, plague outbreaks occurred in at least 20 of the 44 years. But occasionally, the slow simmer boiled over into a serious epidemic.[9] Two modern accounts of this epidemic overlook its early phase from July to November 1834 when many victims were African slaves in Alexandria.[10] Contemporary observers thought that the plague arrived by boat from Jerusalem or Malta, claiming its first reported victims, two monks in the Greek convent in July 1834. Consular sources confirm its presence in Jerusalem from April through July 1834, but medical eyewitnesses and subsequent reports differ in their details. French Consul Ferdinand de Lesseps reported a Greek ship from Constantinople that reached Alexandria in early July, and after its quarantine period left two sick crew members in the Greek convent. Two attending doctors found that the plague spread from the sailors and the convent's residents to some "Ethiopian" washerwomen living nearby, and to their husbands.[11] De Lesseps was either discreet or perhaps not fully informed.

Other sources are more specific, and somewhat contradictory. On July 2, 1834, Alexandria's Sanitary Committee learned of a patient in the Greek convent. Five days later, Dr. Francesco Grassi investigated and his diagnosis of plague was confirmed by five other doctors, including Dr. Arsène-François Bulard.[12] The local Greek patriarch's servant, after receiving visitors and goods from Cyprus, worked closely with

the monks who later became ill.[13] The convent, located on a raised area inside the old town walls and 500 paces from the town proper, was quarantined after two weeks, but by then the plague had reached two adjoining black villages.

Dr. Louis Rémy Aubert-Roche, who became familiar with the town while stationed there, provided some useful background on one black village, one of a pair of black residential areas within the town walls. The Arab houses did not fill all the space between the walls and the sea, and here and there were:

> mud huts (*huttes en terre*) which made up a neighborhood, but to which the special name of "villages" is given. Thus, the one of the Negroes, near the European hospital, that of Ras-el-Tin, near the palace of the Pasha, at the point known as Figtree Point, etc. All are part of the "villages."[14]

They lacked sanitation facilities (as was standard at the time), and good water supplies.

Of one adjoining black village, Grassi reported:

> Only a few days later, the plague showed itself in this village of one hundred ten inhabitants, and 11 August, I verified that in sixteen days, eighteen individuals had died there after two, three and four days of sickness; I was able to recognize all of the plague symptoms on a sick person I found there. The sanitary measures applied to this village only delayed its propagation momentarily; because these blacks had been in communication with the town, sowing the disease at several locations.[15]

Bowring added that on August 13 in that village and another nearby,

> both inhabited by Negroes, various deaths took place in succession in the course of a few days. The plague was found to exist, and on accurately examining the origin, it was clearly ascertained that two black washerwomen inhabiting one of the villages had been at work in the Greek convent for the first time, when the effects of the monks who had died of the plague were collected together.[16]

Perhaps infected fleas in the clothing bit the washerwomen. One village was "in the middle of a cemetery where numerous burials occurred the previous year during the cholera epidemic." De Lesseps wrote that "some of the huts barely appeared above ground, while others were perhaps three feet in height. This population, of which the women serve as washerwomen, is entirely composed of freed black slaves and their families."[17]

The impact on one black village was dramatic: "In less than a month, of one hundred fifty inhabitants, forty died of the plague. The rest were immediately isolated in the gardens. Their homes were burned. A few more fatalities occurred in the following three or four days, but the disease stopped there."[18] The Dutch consul-general Schutz, the Sanitary Commission's acting chair, reported the two villages were purified with care and "made so that they would no longer compromise public health."[19] According to another source, they were evacuated and thoroughly fumigated with burnt lime. Bowring reported 48 deaths in one black village in August, and that the fumigation was effective until November 11. The inhabitants were put in the "jardin Botchi" (perhaps a *bocce* court). More surprisingly, "On 10 October, all the blacks who had been transported to the lazaretto were released, there were now only one hundred thirty of them. Twenty-seven had died in the lazaretto, and four while under quarantine in the garden."[20] The plague soon spread into a larger adjoining shantytown that housed many new residents: sailors' families and arsenal workers, and then into Alexandria itself. [21]

As the death toll rose, the narrative shifted from individual cases to anonymous statistics. After his experiences in earlier plague outbreaks, and the devastating cholera epidemic of 1831, Muhammad Ali firmly believed in quarantine's efficacy against all epidemics, and plague in particular.[22] From November 1834, the official response came from the Quarantine Board composed of various European consuls and the local police chief. Muhammad Ali backed their decisions with vigorous measures, which soon led to protests. By December the local *ulama* petitioned him, protesting such measures as plague investigators "examining the nude corpses of deceased Muslims," and sending victims' families to quarantine, away from employment and livelihood. From a religious perspective, these measures were considered offensive. Furthermore, nocturnal removal of people disrupted sleep, and alarmed neighbors. However, no similar complaints were heard from the black "villages," where government actions had a greater impact, but the residents lacked political clout. The corpses of plague victims were dumped at night in distant neighborhoods, buried at home, or abandoned. To appease the petitioners, Muhammad Ali instructed the board to avoid medical examinations of victim's bodies, placing families in quarantine, or destroying corpses with quicklime. A cemetery outside Alexandria was designated for proper burials. Victims' families could be quarantined at home, and food provided for the needy.[23]

Major government installations were quickly quarantined. At the arsenal, 5,000–6,000 workers built and repaired ships in the dockyards, now doubly sealed by barriers and guards. The plague-infected patients were sent to a lazaretto; all those who had been in contact with them were detained, forced to bathe, and issued new clothing. Similar measures applied to the Egyptian fleet. By December, after more than one hundred victims had died, the Quarantine Board imposed a cordon sanitaire on the whole city, and European merchants complained. On December 7, 1834, Suzanne Voilquin and other Saint-Simonians arrived from France to find Alexandria under quarantine, including all the hotels. They took refuge in the consulate, with Consul de Lesseps.[24]

By January 1835, the government imposed further sanitary measures:

> Airing and exposing to sunlight the household effects of all inhabitants; whitewashing the interior of all dwellings; daily removal of rubbish from courtyards and passageways; disinfecting and whitewashing all workshops in the Arsenal; and mandatory bathing and an issue of new clothing for all workers in the Arsenal.[25]

By February, Muhammad Ali had lost patience with the town:

> The failure of the populace to observe the health regulations is a consequence of their ignorance. As I have said before, such observance is within the bounds of Islamic law and is required for the public good. This is a sign of God's wrath, and fleeing from divine wrath to divine mercy is not contrary to the law. God said "Cast not yourselves by your hands into perdition." (Qur'an 2:195). And the prophet said; "Flee from the leper as you would from a lion." There is no denying the infectiousness of this disease…These ignorant people do not discriminate between good and evil and desire to spread disease in the great city of Alexandria. Is it not proof of God's mercy that our fleet and the workers of our arsenal have been preserved from the evils of the epidemic?[26]

That he couched his argument in these terms testifies to Islam's strength as the dominant religion and ideology in Egypt. He forcefully quarantined Egyptians, a move reminiscent of Renaissance rulers who faced plague epidemics with an "ideology of order."[27] Muhammad Ali overrode Clot's medical advice, so Clot reluctantly instructed his subordinates: "Whatever your opinion, you are to consider plague a contagious disease and to act accordingly."[28]

Were Blacks More Susceptible to Plague?

This question was often asked in the medical literature of the day. In his 1840 monograph, *De la Peste Observée,* Clot-Bey linked susceptibility to several factors. These included race, general physical condition, gender (women were believed to be more susceptible), age (the young more vulnerable), profession, and residential area:

> Those…who…are exposed to hard physical work, to excesses of fatigue, to the harshness of the seasons, to sharp changes of temperature, are more apt than others to contract the plague. Manual laborers, bakers, black-smiths, cooks fall in this category.
>
> The unfortunate who live in filthy and poorly ventilated quarters, just as those who suffer from all sorts of privations, have furnished numerous victims to the plague.

His description fit slaves and their residences. Clot concluded that "in all the epidemics, the negro race is ordinarily the most ill-used, followed by the Nubians."[29]

This was not a new suggestion. During earlier epidemics, one observer noted: "The plague caused death among the Mamluks, children, black slaves, slave girls and foreigners."[30] In 1791, maidservants and slaves were among those who died.[31] Dr. Louis Frank wrote in 1802: "Not only Negroes newly arrived in Cairo, but also those who have lived in this capital for several years very easily succumb to this fatal infectious disease. It is in my opinion extremely difficult to account for this particular susceptibility."[32] Johann Ludwig Burckhardt, the famous traveler, stated that 8,000 slaves (perhaps two-thirds of the slave population) died in Cairo during the 1815 epidemic.[33] An Italian physician concurred: "Negroes and foreigners, especially if recently arrived, are most exposed to contagion."[34] In the 1824 epidemic, Dr. Richard Robert Madden suggested that Egyptian troops, including black slaves, brought the disease to Candia.[35] In 1835, an early report also indicated that "blacks almost universally die, or if they escape the immediate attack of the disease, they fall victims to the secondary disorders."[36] These ideas have also been pursued by modern scholars.[37]

During the outbreak in Alexandria's black villages, Dr. Grassi believed that race affected the plague's speed of onset:

> Among the Negroes I have frequently had occasion to observe a type of plague which by reason of the rapidity of its progress, could receive the name "apoplectic."[38]

These rapid deaths—with symptoms including dizziness, staggering, vomiting, and babbling deliriously—indicated the highly contagious pneumonic plague.[39] Some victims appeared drunk, which delayed their treatment. A greater incidence of plague among the poor may correlate with their sleeping arrangements. While the wealthy often had raised beds on an upper story, the poor, including slaves, simply slept on a mat on the floor at street level.[40] They were thus readily accessible to rats and fleas, common everywhere.[41] Therefore, race, rather than causing greater susceptibility in blacks, was a marker for the unhealthy conditions of slavery.

The hypothesis—that African slaves were more susceptible to plague—can be tested using contemporary statistics. Aubert-Roche analyzed Alexandria's plague deaths (Table 2.1).

Mortality was greatly underreported for all groups except Greeks, Maltese, and Europeans. To estimate the probable deaths, he therefore doubled the reported number for all other groups.[42] He found those who suffered the most were "Negroes and Nubians" (people from Upper Egypt up to the second cataract). Aubert-Roche argued that the surviving Arabs stayed in Alexandria while only 1,800 Negroes and Nubians remained: "All the others, seized with terror at the sight of their compatriots fatally afflicted, fled to Upper Egypt." His probable death figures (Table 2.2) suggest a mortality rate of 849/1,000 for

Table 2.1 Plague mortality in Alexandria, Egypt, in the epidemic of 1834–1835[i]

Ethnicity	*Population*	*Official deaths*	*Estimated deaths*
Arabs	20,000	5,468	10,936
Soldiers	3,000	235	470
Negroes and Nubians	4,000	764	1,528
Turks	6,000	339	678
Copts, Armenians, Jews	4,000	241	482
Greeks	1,800	257	257
Maltese	600	367	367
Europeans	*2,600*	*170*	*170*
Total	42,000	7,841	14,888

Note: Kuhnke, *Lives at Risk*, p. 86 includes a single table combining Aubert-Roche's Tables 1 and 2, citing George Sticker (1908), *Abhandlungen aus der Seuchen geschichte un Seuchenlehre, I: Die Pest, Pt. I: Die Geschichte der pest* (Giessen: Alfred Toepelmann), p. 312; Reimer, *Colonial Bridgehead*, p. 214; and Ilbert, *Alexandrie,* p. 20, accept 14,800 as the number of plague deaths in Alexandria. Panzac also refers to these figures in *La Peste*, Table 33, p. 350.

[i]*Source*: Aubert-Roche, *De la peste*, p. 24.

Table 2.2 Mortality rates in Alexandria, Egypt, in the plague epidemic of 1834–1835

Ethnicity	*Population*	*Mortality (individuals)*	*Mortality rate (per thousand)*
French, English, Russians, Germans	1,000	52	52
Italians, S. Europeans	1,600	118	73
Turks	6,000	678	113
Jews, Armenians, Copts	4,000	482	120
Greeks	1,800	257	142
Arab soldiers	3,000	470	156
Arabs residents	20,000	10,936	546
Maltese	600	367	611
Negroes and Nubians*	[1,800]	1,528	[849]
	4,000		381

Notes: Aubert-Roche's table has been translated and modified in two ways. First, he expressed mortality rates as percentages, here they have been converted to the modern convention of per thousand of population. Second, his calculation error has been corrected on the last line, with his errors in brackets and the corrected figure below.

* La population nègre et barbarin était de 4000 âmes mais on a vu que la fuite avait réduit ce nombre à 1800. [The Negro and Nubian population was 4,000 souls, but we have seen that flight had reduced this number to 1,800].

Source: Aubert-Roche, *De la peste*, p. 25.

"Negroes and Nubians," but he made a statistical mistake. He used, as a base, the 1,800 *remaining* individuals rather than the *initial* count of 4,000. Correcting this yields a reported mortality of 191/1,000, and *probable* deaths of 382/1,000. For the general population, the reported death rate was 187/1,000 and probable deaths, 354/1,000.

The corrected figures show black mortality only slightly higher than the general population's. Europeans, who generally observed quarantine and enjoyed better diets, lighter workloads, and better health, had lower mortality rates. Overall, the estimated black mortality rate was below that of the general Arab population, but higher than that of other immigrant groups. The flight of many blacks and Nubians (672 of the original 4,000 are missing from Aubert-Roche's accounting) obscures their fate. Some may have died of plague, but their deaths were not recorded in Alexandria. The events of July and August 1834, high black visibility in Alexandria, and the reported flight to Upper Egypt left an impression of high black mortality. The reported mortality rate of 191/1,000 per year is a horrid loss, and Aubert's estimate doubling that appears credible.

By March 1835, 200 people per day were dying in Alexandria, and the epidemic had clearly spread to Cairo and beyond. Quarantine was no longer enforced, and the cordon sanitaire was dropped that month. Free to travel, nearly 4,000 Alexandrians fled the plague.[43] The fleet sailed away to Crete. Soon the center of the epidemic shifted to Cairo.

Cairo

The epidemic spread the 200 kilometers from Alexandria to Cairo in multiple ways. In fact, many people and goods moved by land and boat. As Voilquin and her party reached the dam at the top of the Delta in December 1834, more than 200,000 workers building it were released.[44] Given their poor housing and nutrition, and the project's disruptive effects on local rodent populations, discharged workers undoubtedly carried fleas and the plague bacilli as they scattered to their homes. As in earlier epidemics, some people, including Alexandria's blacks and Nubians, fled in fear. Soldiers ordered to Cairo certainly carried the plague with them as well, since they became ill and were treated in Ezbekiya hospital.[45] The considerable river traffic between Alexandria and Cairo included grain boats (with ever-present rats on board) and passenger boats, whose fleas were controllable only by lengthy submersion.[46]

Despite other possibilities, one individual, M. Sauveur Giglio, a Maltese merchant under British protection who transported trade goods to Cairo at the year's end, was designated as the plague's carrier. In fact, the Maltese community had suffered in the epidemic, and Giglio was infected in Alexandria. In apparent good health, he left by boat in late December 1834. Some 24 or 36 hours out of Cairo, he experienced chills, headache, and nausea, followed by vomiting. He died on January 3 after three days' illness. By January 20, 1835, Muhammad Ali proclaimed a cordon sanitaire around Alexandria, mentioning Giglio's death, and noting "the persons affected belong in general to the poor class and to that of the Maltese, the dirtiest and the worst housed of Alexandria's inhabitants."[47]

Giglio's case figured prominently in the ensuing medical debates. Both sides noted many members of the Giglio household died in succession, as did some neighbors. This was the "beginning of the plague of 1835" in Cairo.[48] The Giglio home in Cairo had many links to African slaves as it briefly housed the traveler, his three brothers, and four servants (a Maltese male, a young Arab man, an Abyssinian slave woman, and an old Arab woman)—who were all placed under

quarantine. One brother died 20 days later. A surviving brother feared the house itself was plague-infested, and arranged to have his place of quarantine shifted, moving on January 27 to a new house and garden outside Cairo, accompanied by two male servants. However he only survived six more days. The remaining brother hired a Nubian replacement servant, who also died ten days later. Meanwhile, in the Giglio house in Cairo, the Abyssinian slave woman died on February 3 and the Arab woman discovered a bubo, and died soon after. On February 18, the last brother became ill, and died 28 hours later. Five days later a soldier assigned to enforce quarantine fell ill, and died after two days in hospital. Only one household member survived. The disease had spread into the neighborhood, where houses were built side by side, with flat roofs used as terraces. After the first Giglio death, the Marco-Iliadi family's house next door was quarantined. But a black slave woman, a child, and M. Marco himself died of plague. Most medical professionals in Europe believed that plague was contagious. Foremost among the local contagionists was Dr. Grassi, the head of the lazaretto in Alexandria, who believed the slave women spread the disease as they interacted over the rooftops. Mme. Marco, alarmed that health authorities might burn her prized possessions, moved them over the roof to an unquarantined house. Its owner, a local shaykh, also died a few days later. A second Abyssinian woman, described as "Bokhite, négresse, 20 ans," who had frequented the Marco house, fell ill in another quarter of Cairo on February 14, 1835. The Health Council learned she had been thrown into the street by a Jewish family to avoid quarantine. The Saint-Simonien Dr. Joseph Fourcade examined her, and confirmed the diagnosis. She was admitted to Ezbekiya hospital on February 17, where she died on February 19, 1835, and was autopsied. Fourcade also died four days later.[49]

Again, the epidemic overwhelmed attempts to chronicle its spread. Clot conceded "it was impossible for the doctors busy treating the military plague victims to make house calls to all those who were ill, because in Cairo the plague infected nearly half the inhabitants. Of that number, two-thirds recovered."[50] Roughly one-sixth of Cairo's residents died, matching Alexandria's official mortality rate. At its height in Cairo, the official death rate reached 780 per day. This was Egypt's worst plague epidemic in the nineteenth century.[51]

Contemporary medical descriptions, material from the contagion debates, consular reports (such as those by Alexander Duhamel, the Russian consul), and Voilquin's vivid account of her experiences with Dr. Dussap treating patients, including African slaves, show

the epidemic's further impact. In February 1835, Duhamel noted the departure of Muhammad Ali for Upper Egypt. Later, Voilquin learned the epidemic extended beyond the Jewish quarter (in the western half of Old Cairo) that had narrow lanes and accumulated rubbish.[52] When Dussap predicted its severity, she agreed to move in with his family.[53]

Muhammad Ali intended to stay in Upper Egypt until "the plague…should lose its intensity."[54] In Alexandria, mortality reached 180 persons a day, but it kept climbing in Cairo. Voilquin felt that Muhammad Ali had left his country adrift, after closing government offices and quarantining the military. The city was quiet:

> What solitude everywhere! No more lines of camels in the streets, no more merchants in all the bazaars, the little shops formerly so busy were closed, now clients and merchants both were closed up with their families.[55]

Muhammad Ali returned to Shubra, his palace near Cairo, on May 7 because the epidemic had spread throughout Egypt. He was in complete quarantine, while unofficial estimates of daily deaths ranged from 1,200 to 2,000.[56] Duhamel's periodic estimates of the epidemic's victims began at 100,000 on May 31, and reached 200,000 by June 26, with perhaps 75,000 in Cairo alone. Traditionally, the plague season ended by the summer solstice. By July 20, he estimated that a quarter of Egypt's population, 800,000 people, had died of the plague.[57]

Clot was clearly not sentimental about black deaths:

> The Negroes died en masse. Before the epidemic, there were more than five hundred in the bazaar; there remained of them eighteen. Of sixty slaves in a single master's house, fifty-four are dead.[58]

This suggests alarming mortality rates of 964/1,000 for Cairo's slave market, and 900/1,000 in a single large household. In the slave market (*wakalat al-jallaba*, near Khan Khalil in old Cairo), slaves were crowded together. New arrivals predominated, with some "second-hand" slaves. Modern studies suggest the greater susceptibility of individuals without previous exposure to the plague. In these conditions, slaves were quite vulnerable, especially to the pneumonic plague. As an argument against quarantine, Bowring noted that in Alexandria's lazaretto, mortality reached 900/1,000 in 1833, and 773/1,000 in 1836–1837.[59] A European visitor in 1835 found almost no buyers in the slave market, "all transactions…were completely out of the question as long as the

Table 2.3 Plague deaths in Cairo in 1835, by ethnicity/nationality

Ethnicity/nationality	*Number of deaths*
Arabs	22,049
Turks	3,042
Negroes	6,150
Nubians	830
Christians	575
Jews	583
Military	781
Total deaths	33,733

Note: The percentages were calculated from the data given by Hamont. See also E. F. Jomard, *Coup d'oeil Impartial sur l'État présent de l'Égypte* (Paris: 1836), p. 36. Jomard gives the official number of plague deaths in Egypt as 35,000. He also puts the total number of Nubians and blacks at 11,000–12,000.

Source: Hamont, "Review," 457–458.

plague was raging." In 1836, the slave market, as a possible source of the epidemic, was relocated to an outlying area.[60]

General estimates of Cairo plague deaths between 80,000 and 100,000 complement the more specific details. According to Pierre N. Hamont, the founder of the Egyptian veterinary school, 18 percent of the official deaths were "Negroes" in Cairo, Boulak, and Old Cairo in 1834–1835 (Table 2.3). This exceeded any estimate of their representation among Cairo's living inhabitants. If, as in Alexandria, some slave deaths were not reported, the actual percentage could be higher.

From 1836 to 1843, plague epidemics were not as well documented.[61] Available evidence does not prove that blacks were exceptionally susceptible. Perhaps susceptible individuals died in 1834–1835, or plague's pneumonic form became less common, or the removal of Alexandria's black villages and Cairo's slave market brought substantial changes. Given Clot's post, and his anti-contagionist views, Egypt was very fortunate that later plague epidemics were less murderous, and diminished by 1844.[62]

Debates and Other Consequences

By 1840, two fascinating and often heated debates attracted considerable attention in Europe, arising from events between 1834 and 1840 in Egypt and the Sudan, and reported largely by Europeans:

diplomats, travelers, doctors, and longtime residents of Egypt. One was over plague's contagiousness, and the other over Egyptian slavery. Coincident in time, the two debates shared deeper causal connections. The key figures in both debates were the French doctor, A. B. Clot, and the British politician, John Bowring. Each disputed plague's contagiousness and the need for quarantine, and commented on African slavery in Egypt, and abolition there. Their most famous works, both published in 1840, Clot's *Aperçu Général sur l'Égypte* and Bowring's *Report on Egypt and Candia*, are widely cited by modern scholars.[63] Their works were not completely independent, even though their authors differed in nationality, political orientation, professional training, and temperament. Each author was internally inconsistent, and held views not completely supported by his information. These inconsistencies invite reconsideration of their evidence and conclusions, the interconnections between the two debates and their participants, the assumptions that framed them, and, most importantly, the epidemic's impact on African slavery, the supply of slaves to Egypt, and the growing pressure for abolition.

The major official and medical authorities on Egypt's 1834–1835 epidemic were embroiled in these debates over plague's contagiousness, and its implications for quarantine.[64] Their positions were affected by medical, political, and commercial considerations. Contagionists had often witnessed pneumonic plague, which readily spread between persons; anti-contagionists failed to link human victims infected via rodents and fleas. Egypt's ruler, Muhammad Ali (1805–1848) wanted to open up his country to trade, yet had a personal fear of plague.[65] Local merchants observed quarantine, as did the representatives of established Mediterranean trading companies. British commercial and diplomatic interests found quarantines and lazarettos an impediment to free trade. The debate was not only over abstract science, but also over lives and fortunes. The debate could not be won by science alone because the plague bacillus was not discovered until 1894. Controversy continued for a decade after 1835, fading only as plague became less common.

By 1840, Bowring and Clot professed opposing views on Egyptian abolition, yet seemingly agreed on the general nature of Egyptian slavery and on plague's devastating impact on African slaves. Neither had a clear understanding of plague's etiology, nor a full picture of African slave life there. Yet their shared views on Egyptian slavery overshadowed Bowring's reasons and actions in pressuring Muhammad Ali to end slavery, and to cease Egyptian slave raids in the Sudan. Why should

this be so? And why did they agree that the plague was particularly devastating to African slaves?[66] Addressing these questions requires a reconsideration of the two authors, their works, and the controversies in which they were embroiled.

Clot-Bey

With Muhammad Ali's backing, Clot played a key role in the spread of Western medicine to Egypt, even before the epidemic. Although Italian doctors were working in Egypt before 1798, the French savants studied medical practices and diseases there. A new influx of European doctors followed, and some, such as Louis Frank and Charles Dussap, stayed in Egypt after serving in the French army.[67] By the 1820s, several dozen European doctors practiced in Egypt. Some accompanied Egypt's army as it invaded the Sudan in 1820.[68] The returning army and the thousands of enslaved Sudanese males destined for military service required medical treatment. Dussap and other European doctors were overwhelmed by the challenges they faced. Among those recruited to help was Clot, hired in December 1824 as chief medical officer for the Egyptian army.[69] Removed from Marseille's Société Académique de Medicine, and forbidden to teach in the hospital there, Clot feared his career was over. Despite his spectacular career in medical school, Clot got into trouble with his colleagues in Marseille, perhaps because he was said to be "egotistical, obsessive and intolerant."[70] In 1824, M. Tourneau, a merchant in Egypt and French consul in Damietta, recruited Clot and several other doctors in Marseille. After a rocky start, Clot's medical successes won recognition, and an international reputation as a surgeon.[71] He was very ambitious and introduced many contemporary French medical practices in Egypt, including "comprehensive physical examinations and case histories of patients, scrupulous necropsies and regular recording of morbidity and mortality figures" in clinical medicine, the battlefield presence of doctors that was a hallmark of the Napoleonic armies, and a general concern for fostering demographic growth.[72]

Absolutely dependent on Muhammad Ali's support, Clot sought to please him, protect the army's health, and foster demographic growth in Egypt. Between 1825 and 1832, Clot reformed Egypt's military health service, and established a civilian hospital and medical school, followed by pharmacy, veterinary, and midwifery schools. By 1836, a national anti-cholera vaccination program was in place, followed by a provincial health service a year later. Clot had strong relationships

with earlier French diplomats and savants, including Consul Drovetti, and E. F. Jomard, the scholar. Clot remained a key figure in Egyptian medicine, central to European-Egyptian relations until Muhammad Ali's death in 1849.[73]

Bowring on Slavery and the Plague

In the 1830s, one of the keenest observers of slavery and the slave trade in Egypt was John Bowring, former member of Parliament, linguist, radical, close associate of Jeremy Bentham, and founding member of the British and Foreign Anti-Slavery Society.[74] In 1837, Lord Palmerston, the British foreign secretary, sent him on a fact-finding mission to Egypt. On his return, Bowring wrote his *Report on Egypt and Candia* and a less-known piece, *Observations on the Oriental Plague*, which argued that since plague was not contagious, quarantines were unnecessary.[75] This fit well with his views favoring free trade.[76]

In Egypt, Bowring relied partly on British diplomats for his information. Consul-General Patrick Campbell provided him with statistics, and generally admired his judgment. Bowring—fluent in French, Arabic, and Turkish—interviewed local people, officials, slaves, and French citizens in Egypt. He also consulted unofficial British sources, notably Arthur T. Holroyd, just back from the Sudan with information on the slave trade and (to Campbell's concern) consistently negative views of Muhammad Ali's policies. In 1838, Campbell and Bowring together pressured Muhammad Ali on slavery and the slave trade in Egypt. This was continued in 1840 by Dr. R. R. Madden, representing the British and Foreign Anti-Slavery Society, Col. Hodges, the new consul-general, and later by Hamont, the French veterinarian, and Victor Schoelcher, the French abolitionist.[77]

In 1837–1838, Bowring learned about the trans-Saharan crossing. He estimated that of those captured, about one-third arrived in Egypt. Annual slave imports totaled 10,000–12,000 slaves. As he explained:

> Sometimes the mortality is very great before the slaves reach a market, in crossing the desert, in consequence of insufficient supplies of food and water, from excessive fatigue, from the inroads of smallpox, or other epidemic diseases. Taking all these causes of destruction into account, it may be estimated that for every hundred slaves which reach the markets of Cairo and Alexandria, another hundred, at least, have perished.

Bowring's inconsistency on slave mortality may reflect his sources, the portion of the overall journey under consideration, and real variations. Bowring found their suffering continued:

> Even when they have reached and are settled in the Egyptian cities, their average term of existence is deplorably short—not so much from ill-usage, for, on the whole, they are treated with tolerable kindness by the Mahometans—but from the change of climate, altered modes of life, seclusion and pestilential visitations.[78]

Bowring's sympathy extended to their fate during the epidemic.

The worst year for plague in Egypt was 1835. Bowring stated that "60,000 families were visited by plague." He reported that 200,000 people were destroyed in the 1834–1835 plague season. Drawing upon Alexandria Board of Health records from 1833, 1836, and 1837, he found that the "average mortality with good medical treatment was not more than 60%, and often does not exceed 30%."[79]

Bowring investigated the situation of black slaves:

> I have heard it estimated that five or six years are sufficient to destroy a generation of slaves, at the end of which time the whole have to be replenished. This is one of the causes of their low market value.[80]

These remarks reflect the 1831 cholera and the 1834–1835 plague epidemic; Bowring's narrative of the plague's course in Alexandria's black villages reflects his awareness of its impact.

Bowring made it clear that his conclusions on the plague and quarantine were influenced by

> a very distinguished physician, Clot-Bey who is at the head of the Medical Department in Egypt; a man whose services to knowledge and to humanity in that country outstrip all need of praise, and who has treated thousands of plague victims.[81]

Clot confirmed this:

> I have seen a great deal of Dr. Bowring…[he] has also directed his attention to the plague, and has pronounced a decided opinion on our barbarous, vexatious and destructive sanitary regulations [e.g., quarantine]. Thus my dear friend, we have the pleasure of seeing the number of contagionists daily decrease, and I trust that the day is not far off when quarantine regulations will be completely reformed, if not altogether abolished.[82]

Despite their agreement on these issues, they disagreed on slavery and the slave trade in Egypt.

Clot on Egyptian Slavery

Clot's dilemma, as a dedicated doctor and a loyal bureaucrat, is highlighted in the contrast between his writings for medical and general audiences. An organic tie links his two key works. Clot initially began his plague book, *De la peste observée,* with a physical and medical introduction to Egypt. When the introduction outgrew its original conception, it became his most famous work, *Aperçu Général sur l'Égypte*, with help from "Jomard, Mengin, Linant de Bellefonds," and other French experts.[83] During a visit to France in 1840, Clot completed both books.[84]

In *Aperçu Général*, Clot lauded Muhammad Ali's achievements. Critics labeled it a panegyric—one critic memorably called Clot "the Pasha's little French encomiast."[85] Clot later came to regret his fulsome praise of the viceroy.[86] The work was written in the face of British abolitionist pressure on Muhammad Ali.[87] In his chapter on slavery, Clot noted changing Western attitudes, evoking recent progress towards "the abolition of the hideous traffic which fed and still feeds the slave markets of the European colonies, and the initiation into liberty of these Africans transplanted to America in the middle of such horrible circumstances." Then he contrasted Egyptian slavery to the economic slavery of the Americas:

> The western settler only esteems in the Negro his material value, forgetting the moral man, he denatures him. The Muslim, on the contrary sees always a man in his slave, and treats him as such, so that one could say of Oriental slavery that it is often a real adoption, and always an admission into the larger circle of the family.[88]

This echoed prevailing European views on slavery in Muslim countries.[89]

In the same work, Clot glossed over the Saharan Middle Passage (vividly described by Bowring), and Egypt's capture of slaves through the invasion and occupation of the Sudan in 1820–1821: "These are prisoners that the peoples of Africa reciprocally create of each other in their internal wars."[90] He ignored Muhammad Ali's orders to his generals to capture thousands of Sudanese to send to Egypt, although he personally treated enslaved Sudanese in Egypt's army.[91] Clot declared that Egyptian slaves are far from being unhappy, that slavery often

raised their station in life. While black slaves less frequently rose to the top of society than white ones, some achieved the rank of bey: "Slavery is first for them like a sort of second birth, because it saves them from death; if after having been made prisoners they were not sold they would have been pitilessly massacred."[92] This rationalization of the "benefits" of slavery resembles those given by Atlantic slave ship captains.[93] The chapter then rehashed familiar Qur'anic views on slavery. Clot stripped slavery of its horrors, placing his condemnation of castration in a separate chapter.[94]

Clot's official views on slavery resemble those of contemporary orientalists.[95] But he knew firsthand the dismal fates of African slaves. Earlier, he had discussed their high mortality and suffering during the trans-Saharan crossing.[96] He was hired to address the high mortality of enslaved Sudanese in Egypt's army. In the Egyptian medical school, he overcame the Muslim *ulama*'s moral uneasiness about autopsies by performing the first one on an African slave. Similarly, he overcame the reluctance to send young Egyptian women to study under European male professors, by buying Sudanese and Abyssinian slave women to enroll as the first midwifery students.[97] In *De la peste*, he commented explicitly on the susceptibility of African slaves to the plague. His views on slavery in the *Aperçu General* reflected not his own experience, but his dependence on Muhammad Ali's goodwill.

Debates over Contagion

Even as Western medical ideas were affecting some layers of Egyptian society, plague was still controversial in the West. By 1800, Europeans generally viewed Egypt as the cradle of the plague, and some linked the annual Nile floods to the plague. The Galenic idea of miasma from decaying organic matter was updated to specify soil that contained human corpses as the source of the poisonous airs. Following the savants in the French Expedition, most French doctors believed that the plague was contagious.[98] Laverne Kuhnke's account of the epidemic of 1834–1835 depicted two opposing camps of European physicians: the contagionists and the non-contagionists.[99]

Clot had no direct knowledge of plague before arriving in Egypt in 1825. His medical training had made him a contagionist, reinforced by reviewing "the works of the medical officers attached to the [French] expedition into Egypt." In his baggage was an extra-long stethoscope that allowed him to keep his distance when examining plague victims.[100] As a follower of the "médicine physiologique of François Broussais," he hoped to bring a medical revolution to Egypt.[101]

Clot's direct experience began in 1825. While dining with Consul-General Drovetti in Alexandria, a ship captain asked Clot to examine a crew member. To Drovetti's amusement, Clot diagnosed the illness as plague. Egyptian doctors concurred, and the patient died within five days. Shortly afterward, Clot sought out Dr. Dussap, a physician with experience of epidemics in Cairo. Clot found Dussap's explanation of plague's causes, nature, and treatment inadequate, and noted that Dussap had never performed any autopsies. In 1825, alerted by Dussap, Clot examined two plague cases looking for evidence of contagion.[102]

Just before Clot's first return home, France had a major cholera outbreak in May 1832. The fall of King Charles X in 1830 had given the upper hand to public advocates who "contested the contagious character of some epidemic diseases, such as plague (but not smallpox), both for political and scientific reasons." But Broussais and the French Academy of Medicine still favored the contagion theory.[103] In November 1832, Clot escorted his first class of Egyptian medical students to Paris for their final exam. When Dr. Dupuytren, a leading medical authority, asked about plague's contagiousness, Clot disarmingly said he had seen too few cases to form any opinion. The examiners included Larrey, Desgenettes, Jomard, and Pariset: the first two as medical officers of the French Expedition described plague's contagiousness; Jomard edited their medical chapters for the *Description de l'Égypte*; and in 1828, Pariset investigated the plague in Egypt. One Egyptian student was indeed questioned about the plague. Clot, at least, knew the "right" answer about its contagiousness. But by 1835, Clot was the leading anti-contagionist. By 1840, he rejected theories attributing the plague to the *khamsin* (the seasonal Saharan wind), or humidity, or stagnant waters, blaming instead local meteorological conditions that created a "pestilential constitution."[104]

Clot held contradictory positions on public health measures during the epidemic:

> In his books and articles in French, Clot spoke as a scholar defending his original theses in front of his peers, supported by clinical, epidemiological evidence and even pieces of experimental research, in a spirit of unrestrained freedom. In his books in Arabic intended for the students of the school of Abu Zabel and Qasr al-Ayni, he composed his recommendations as an officer of public health, linked by the "devoir de réserve", entangled in his administrative duties and his allegiance to the patron state.[105]

This very interesting observation parallels the disparity between his knowledge of the African slaves' suffering, and his depiction of them in his *Aperçu General*. Clot consistently suppressed his own medical experiences to support Muhammad Ali's views.

As the epidemic worsened in Alexandria in early 1835, Clot thought the Egyptian population responded with Muslim fatalism, and Muhammad Ali blindly followed earlier practice by imposing quarantine on Alexandria. Clot created the Egyptian Plague Commission, but in early February 1835, continued his duties at Abou-Zabel medical school. Dr. Bulard, chief of the medical-surgical administration at Ezbekiya hospital in Cairo, recounted Clot's responses and the Plague Commission's activities. Bulard headed the plague ward, soon flooded with patients. After Bulard performed an autopsy, and successfully cauterized buboes, Clot noticed his activities. Jealous of his own position, Clot rushed to take charge, and tried to dismiss Bulard. Bulard appealed to Consul-General Mimaut. He stayed through the epidemic, and served on the plague commission. Lacheze and Bulard each took charge of daily rounds for a group of patients, while the senior doctors, Gaetani and Clot, came every few days to check interesting cases. When autopsies were performed, Lacheze took notes, while Gaetani merely observed. Composing the commission's report caused considerable friction. Bulard was the best writer, but Clot interpreted each detail rather than reporting objective facts. Pulling rank, Clot imposed his analysis of the material, and forced the others to accept his fanciful plague typology. Clot spent the next five years rewriting *De la peste*, and concluded that plague was not communicable.[106]

Although Clot's views prevailed, other European doctors also wrote on the plague: Aubert-Roche generally agreed with Clot; Bulard and the veterinarian Hamont did not. Later, many medical personnel who served in Egypt and the Ottoman Empire between 1830 and 1845 were sent plague questionnaires by regional British consuls, and then interviewed by Prus's commission.[107] Biographical details are given only for those who commented on blacks during the Egyptian epidemic. Aubert-Roche wrote of his experiences in Egypt, Arabia, the Red Sea, Abyssinia, Smyrna, and Constantinople between 1834 and 1838. At Cairo's Esbekiya hospital he witnessed the epidemic's beginnings, then transferred to Alexandria, before serving as a private physician. He took his role very seriously:

> I believe it is my duty to recount in order the facts which signaled its appearance. I noted them day by day, up to the moment [February 21,

> 1835] when I left for Alexandria as chief physician of the army hospital. What I say here is based on rigorous observations.

He narrated events and case studies in Cairo and Alexandria. His description of Alexandria's physical and medical topography situated the black villages and other key locations. He also provided statistics based on reports from de Lesseps, from the Alexandria Sanitary Commission, and from other local authorities.[108]

Not surprisingly, Aubert-Roche was an anti-contagionist after working under Clot. The leading doctors in Alexandria were contagionists, led by Dr. Grassi who worked in the lazaretto, where travelers were isolated during their obligatory quarantines. Aubert-Roche grew bitter, and labeled Bulard a charlatan. In Alexandria, he thought his colleagues' beliefs reflected only self-interest, and reinforced their job security in the lazaretto. By contrast, he admired the objectivity of European consuls on the Sanitary Council as motivated only by "truth and humanity." He accepted their monthly reports and statistics as factual. He gleefully reported several contagionist doctors (including Grassi) and one merchant (Tourneau, Clot's recruiter), renowned for his careful quarantine observance, had all been attacked by plague and died, or had lost family members. More soberly, he dedicated his book to Dr. Rigaud, a close colleague who died in February 1835.[109]

Bulard protested mightily against Clot's anti-contagionist conclusions, and vowed to write his own book. Clot and his colleagues had actively fought the plague epidemic, seeing thousands of patients, conducting autopsies, and even conducting perilous experiments to determine how it spread.[110] Many European doctors died during the epidemic. Bulard believed that Clot abused his position as inspector general, sacrificing devoted doctors to his own ambition. After the epidemic, Clot overlooked many colleagues who had risked their lives and punished others who wished only to retain the positions they occupied during the epidemic.[111] Clot's personal animosity for his young assistant is clear:

> Bulard [was] a pharmacist and not a doctor as is generally believed. A man of spiteful nature, combining a rare impudence with such cowardice that he never earned anything but mistrust from those who like myself were the objects of his base slanders. I will not soil my pen with the details of this individual's character and morality.

Despite this feigned reluctance, Clot deprecated Bulard's knowledge of medicine, his activities with the Plague Commission, and his book.[112]

The heated rivalry between contagionists and anti-contagionists resulted in several dismissals from the Egyptian Health Service. After the epidemic, Bulard and Aubert were dismissed, Lacheze was transferred to the Hijaz, while Clot was promoted to general for his efforts. In Alexandria, noncompliance with quarantine regulations led to the dismissal of Dr. Koch, "head of the navy medical corps and chief surgeon for the Egyptian fleet," and Dr. Aubert-Roche.[113] After dismissal, Aubert-Roche stayed on as a private physician, with support from Alexandria's French community. Later Consul-General Jean-François Mimaut was compelled to exile him from Egypt. Aubert-Roche had failed to quarantine one of his patients, insulted the British consul-general, and "struck the health warden."[114]

Pierre Hamont, who led the veterinary school, was one of Clot's foremost critics. They clashed over their evaluations of Muhammad Ali, and differed on contagion.[115] In a highly critical review of Clot's book, Hamont added information on the epidemic, and questioned Clot's use of medical evidence. Although he valued Clot's summary of the work and opinions of doctors in Egypt, Hamont found Clot's anti-contagionist argument driven by a desire to eliminate quarantine, and concluded:

> Finally, one regrets that a doctor who has long occupied one of the first positions in the medical hierarchy in Egypt, has not better understood the influences which are likely to cause or favor the development of the plague. The opinion he puts forth on the cause of the disease is unsustainable and dangerous.[116]

Hamont acknowledged Clot's unsurpassed access to medical evidence, but found his logic on plague's causes torturous and contradictory, and his actions defending his views personal and petty. Clot discussed his differences with Hamont in very impersonal terms as a tactic to discredit his biting criticisms of Clot's professional judgment.[117]

Official Investigations

Two main plague investigations were conducted between 1839 and 1846. In 1839, British diplomatic representatives in the Levant

distributed a questionnaire posing seven questions to leading European physicians in the region. In all, some 15 physicians responded to the British inquiry. The most detailed response came from Dr. Francesco Grassi, an experienced Tuscan doctor trained at the University of Pisa, the medical attendant of Alexandria's plague hospital (lazaretto) for over 15 years, and chief doctor of the Alexandria Sanitary Committee in 1834. As Clot put it: "Of all the partisans of contagion in Egypt, M. Grassi is certainly one of those who is the most logical in their principals and their ideas."[118] Clot and Grassi were leading adversaries in the debate over contagion.

In 1846, a commission of the Académie de Medicine de France under Dr. Prus's leadership held hearings on plague and quarantines for the ministries of agriculture and commerce. The final report ran to over a thousand pages, and repeated some responses to the British inquiry of 1839, as well as additional written and oral testimony. A modern French comparison found that of the original 1839 responses, seven were anti-contagionist, seven were contagionist, and one was indecisive; seven respondents were French, three English, three Italians, and two Germans. In the Prus commission report, only seven of the 1839 responses are given, all from physicians in Egypt: six anti-contagionists and Grassi's contagionist response. An additional 11 reports on the 1841epidemic were all from non-contagionists. Panzac found the Prus commission was biased, and blamed the influence of Dr. Clot-Bey.[119]

Beyond showing Clot-Bey's character, the two investigations revealed new information on African slaves. Grassi detected and treated the earliest victims in Alexandria's black villages. No one challenged his narrative, though anti-contagionists questioned the connections between the victims there. His evidence, which emerged in the British Correspondence, was repeated in the Prus report, and shaped comments by Clot, Bulard, Aubert-Roche, and Bowring. Evidence on the Giglio household was carefully assembled and scrutinized in both reports.

The controversy over contagion and quarantine had several interesting outcomes. In the light of subsequent medical developments, Clot and the other anti-contagionists have been proven wrong. Modern studies of bubonic plague and the rat-flea vector help to explain the efficacy of the quarantine and other measures.[120] Because the contagionist/anti-contagionist debates helped to preserve information about plague victims, this evidence helps to understand the situation of Egypt's black population in the mid-1830s.

Other Eyewitnesses

Besides medical doctors, diplomatic observers, Egyptian officials, and European visitors witnessed the epidemic and recorded their impressions. Many of the best records come out of the Sanitary Council in Alexandria. But its organization—with the chairmanship rotating to a different consul each month—has made it difficult for modern scholars to read all the reports presumably scattered in various European capitals. Some excerpts, available in Prus's and secondary works, provide chronological and statistical details of the epidemic. In addition to the British diplomats Campbell, Hodges, and Thurburn, other diplomats in Egypt wrote on the plague or slavery. The French include Consul Ferdinand de Lesseps (later of Suez Canal fame), who had recently taken up his duties, and Consul-General Mimaut. US Consul George R. Gliddon penned no book on the plague, but had a very low opinion of Muhammad Ali and of Clot, and barely met Bowring.[121]

Other eyewitnesses reported both their observations and interpretations of mass behavior in Egypt. The most famous account of the 1835 epidemic comes from *Eothen*, by the traveler Kinglake:

> Cairo and Plague! During the whole time of my stay, the plague was so master of the city and stared so plain in every street and every alley, that I can't now affect to dissociate the two ideas…the orientals, however, have more quiet fortitude than Europeans under afflictions of this sort…[In the cities of the dead], tents were pitched, and swings hung for the amusement of children—a ghastly holiday!—but the Mahometans take a pride…in following their ancient customs undisturbed by the shadow of death.[122]

Elsewhere, Kinglake communicated a sense of the horror of the time: everyone that he contacted at the beginning of his stay had died before he left a few months later. He does not mention the black population in his chapter on the plague.[123]

Other European residents included the recently arrived Saint-Simonians.[124] Besides their leader, Enfantin, engineers worked on various irrigation projects, Fourcade and others joined the fight against the plague, and some artists and generalists worked for the Egyptian government. A few, such as Suzanne Voilquin, an early feminist, remained out of quarantine and in contact with Cairo's population during the epidemic. She apprenticed herself to Dr. Dussap, lived in his household, and treated plague victims including African slaves. Ismail Urbain, another Saint-Simonian, also witnessed the plague and

reported on the community of Europeans and Africans living in Egypt at the time.[125]

The primary sources were written by European expatriates and Egyptians who formed a diverse and often contentious community. By examining this community and their writings, one learns their positions, motives, and biases. Many knew each other, and they interacted as friends, rivals and enemies, and patrons and clients on many occasions and a wide range of issues. Some were Egyptians, or longtime residents of Egypt, while others were only visitors to the country. Comparing their views on slavery, plague, and quarantine, individual and common assumptions emerge, as do controversial issues. For example, Clot-Bey not only was very concerned about maintaining his support from Muhammad Ali, Egypt's ruler, but also sought to make a name for himself within the broader French medical community. His power in Egypt led others to orient themselves either for or against his views. European and Egyptian medical professionals who worked for the Egyptian government generally found that it was best to follow his views on the non-contagion of plague, and his official opinion on the mildness of Egyptian slavery. John Bowring was dependent on Clot for information on the plague, but as an abolitionist saw that Africans enslaved in Egypt suffered on the trans-Saharan routes, and from contracting diseases such as plague once they reached Egypt. The French medical opponents of Clot also tended to criticize many policies of Muhammad Ali, including his actions toward the Sudan and his inability to stop the slave trade to Egypt. Clot's influence did not extend to other European observers, who generally felt free to take independent stands on the issues that most concerned them.

Conclusions

Historians have studied nineteenth-century Egypt, Egyptian slavery, the trans-Saharan slave trade, plague, and quarantine in Egypt, or the foreign observers in Egypt. But no previous study has attempted to treat these topics simultaneously. Doing so reveals rich new information on standard sources and the lives of African slaves in Egypt, bringing to light unusual as well as well-known published sources. Much of the medical material has been brought to the surface by dedicated scholars following their own research agendas on nineteenth-century Egyptian medicine and health, or epidemics and quarantines.[126] Some basic information on slavery has appeared in earlier studies of Sudanese history or the trans-Saharan trade.

Finally, relations among some contemporary observers have been discussed in the literature on the French, or, more specifically, on Saint-Simonians in Egypt.[127] But combining these approaches and extending them to look at black slaves in Egypt is new. Parallel studies in other parts of the Ottoman Empire—and beyond—might well provide new and useful insights into the multiple dimensions of the histories of medicine in the IOW.

Notes

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3

Rockefeller Public Health in Colonial India

Shirish N. Kavadi

In the 1920s, the Rockefeller Foundation (RF) initiated public health work in a number of locations in the Indian Ocean region. It represented the RF's global vision for public health underscored by a belief in the promotion of preventive care through demonstration and education, particularly in regions that were considered to be underdeveloped.[1] Lt. Col. Walter King, a former Sanitary Commissioner of Madras, had lamented that in India, "education by practical demonstration of sanitary works for the community has been grossly neglected in the rural areas" and blamed the government, educated elected representatives of the local bodies, and the military-oriented and European-dominated Indian Medical Service (IMS) for this state of affairs.[2] The RF program, which consisted of an anti-hookworm campaign and demonstration rural health units that were to serve as the vanguard of a public health system focused on preventive health, sanitation, health education, and community participation, addressed an important lacuna in Indian public health.

The RF intervention in India occurred at the intersection of two simultaneous processes: first, the inauguration of a new chapter in the internationalization of health and medicine, in which India was a key node in the generation and transmission of international knowledge about health;[3] and second, in India colonial policy was moving away from its restricted focus on European health to a more inclusive but decentralized health system.[4] The RF's engagement with Indian public health came at an opportune time for provincial governments and local self-government bodies struggling to organize and develop public health systems. The RF programs were alluring for their promise

of possible gains in preventive care but even more so for the flow of funds and personnel.

The RF as a principle worked only with governments. It collaborated with the Government of India in the establishment of the All India Institute of Hygiene and Public Health (AIIHPH) in Calcutta, but as a part of its own program of creating public health training institutes at different locations around the world. It was primarily engaged with governments of five provinces in British India and three princely states. Except for the Madras Presidency and the princely states of Travancore and Mysore, nowhere did its cooperation extend beyond five years.[5] In a country of subcontinental proportions, its hookworm work in Madras was described by the RF's own representative as "scattered" and "patch work."[6] What did this mean for developing an all India perspective? What effect did political uncertainties within particular provinces have on RF work?

Bhattacharya, Harrison, and Worboys have emphasized the influence of the fractured and disaggregated nature of colonial administration in India on health policy and decision-making and implementation of public health programs.[7] How did this disaggregation affect the integration of RF public health ideas into official policy and practices? How did the RF deal with the varied official and popular responses to its programmes? How did it deal with competing ideas and demands? What bearing did all this have on trans-regional transfer of public health concepts and on the transmutation of colonial public health? This chapter attempts to answer these questions.

The Internationalization of Health and the RF

Discussing the internationalization of health in the period between the world wars, Sunil Amrith explains how the League of the Nations and the RF institutionalized trans-regional networks of information and research that "fostered new kinds of connection[s] in the field of public health."[8] This internationalization, he says, was part of a wider thinking on rural poverty and hygiene that entwined disjointed experiments in public health, sanitation, and medicine from different locations in South and Southeast Asia into a cohesive set of ideas and practices and brought together diverse and divergent ideas that were not part of any official public health policy.[9] But it was the RF that, by introducing techniques pioneered in the US south, "transformed the scale and intensity of inter-regional connections in the shaping of health and welfare in Asia."[10] It rested on new scientific knowledge and developments in sanitary engineering, unifying techniques

being tried out in various locations in Asia and Europe in experimental projects including demonstration health units and public health institutes. However, each of these locations had their own particularities. Official, medical, and popular perceptions about disease, medical relief, and public health across these sites were at once discrete and coalesced. Experiences of RF influence on public health clearly differed.

In Indonesia, Eric Stein argues Indonesian anticolonial nationalists reenvisioned the Intensive Rural Health Projects introduced by the RF in the 1920s and 1930s as a tool for self-sufficiency and rural empowerment in the struggle for national independence. The RF program, Stein argues, resonated with the nationalist call for public health education to attain its goal of "healthy people, strong nation."[11] Ceylon, according to Victor Heiser of the RF, was to be "a large scale demonstration for the entire East," from where it hoped to spread modern health concepts in Asia.[12] However, as Soma Hewa points out, the anti-hookworm program achieved far less than expected, but the rural health unit at Kalutara in Ceylon served as a model of primary health care and a training center for public health personnel from countries of the region and became the foundation for an extensive public health care system after independence.[13]

Locating India within this process of internationalization, Amrith states that it formed "a key node within the networks of expertise and experiment" and an active site for the production of "international" knowledge about health and welfare in tropical Asia.[14] However, in India, Deepak Kumar observes that the RF's public health program "lacked the intensity and thrust" of its programs in China or Eastern Europe because the RF "understood the local conditions and contemporary politics rather too well and consciously opted for a cautious lukewarm approach."[15] According to John Grant, RF officer and Director of AIIHPH, the RF's major accomplishment in India was creating a "medical—technical consciousness" that was earlier lacking.[16]

Public Health Organization and Administration in Colonial India

The reorientation in colonial medicine mentioned earlier was the result of several factors: advancements in medical science, the gathering momentum of the nationalist movement, demands for Indianization of the IMS, a professional and popular awakening in

public health issues, demands by provinces for more autonomy to enable them to adjust provincial affairs in accordance with the special needs of their particular regions, and, most importantly, the Central Government's economy drive. What followed was a curtailment in Central Government expenditure on public health and a constitutional transfer of public health functions from the Central Government to provincial governments.

The restructuring of public health organization created a system so fractured and diverse that health administration and program implementation became more complex. The Indian Sanitary Policy, 1914, stated: "While the general direction of a policy of public health must remain with the central Government, all detailed control and executive action are, and will be, left to local Governments,"[17] reflecting a strong centralizing tendency amid an apparent show of decentralization. The Government of India Act of 1919 introduced dyarchy at the provincial level and decentralized administrative responsibilities and functions to the provincial governments. The Governor's Executive Council was now composed of official European members and a few elected Indian representatives co-opted as ministers. The former retained control over key portfolios such as finance and the latter were allotted "soft" portfolios such as education and health. It was not uncommon for proposals submitted by Indian ministers to face difficulties with budget allocations.

The 1919 act made a firm division between central heads of revenue and that of the provinces and transferred sanitation, vital statistics, public health, and medical education to provincial control. This decentralization, however, was only an attempt made by the Central Government to control its expanding financial burden for managing the Indian empire. Christopher Baker says the dominating factor behind these administrative changes was the lack of money.[18] Since it was politically inexpedient for the Central Government to generate revenue through increased excise, custom duties, and direct taxes, the task of raising revenue and responsibility for administration of services was delegated to the provinces. In an editorial, the *Indian Medical Gazette* observed that the increasing tendency to relegate responsibility and authority of the Central Government to the provincial governments had become one of the most serious obstacles for sanitary reform.[19] With rising administration costs taking up a major portion of the provincial funds, activities such as sanitation were allocated a lesser proportion of the total resources.[20] Provincial governments, in turn, entrusted district boards and municipal councils with the responsibility for raising taxes and providing social services, education,

water supply, health, and sanitation. This further compounded the problems.

Much in the way the Central Government retained control over policy, provincial authorities maintained control over public works, medical, and public health services using their financial powers to establish a provincial policy and program.[21] It was, however, not a uniform system. In Bengal, for instance, administration was so extremely decentralized that the provincial government had little control over district- or village-level governmental bodies and the Director of Public Health was often constrained from undertaking any intervention. On the other hand, in Bombay, the Director of Public Health had greater control: probably because, quite surprisingly, it lacked an adequately organized public health department and sufficiently trained public health officers.[22]

In Madras, although municipal and rural boards were responsible for public works, their freedom was restricted. No board was able to construct a major project, such as a sewerage scheme or even a tank, from its own revenue. The resources at the disposal of local bodies were far too inadequate to undertake any scheme on their own. Rural district boards collected no rates, and except for the grants they received from the provincial government they had no funds of their own. A greater problem was that a sizeable number of these boards either did not function at all or existed only in name.[23] Proposals for forming public health services for municipal and district board areas could not be undertaken owing to the government's reluctance to commit funds.[24]

The Hookworm Campaign

Soon after its establishment in 1913, the RF launched its global public health program with an anti-hookworm campaign. Its forerunner, the Rockefeller Sanitary Commission, had concluded hookworm control work in the southern parts of the United States, where the absence of safe and hygienic privies and the practice of walking barefoot,[25] was as common as it was in Asia, Africa, or Australia.[26] Hookworm control was predominantly an entering wedge for extensive sanitary measures, and the primary objective of the campaign was to create "a health concept in the minds of people" and "a desire for public health agencies" by which "the public health movement throughout the world can succeed."[27]

Wickliffe Rose, Director of the International Health Bureau of the RF, believed that the purpose of their work was not to control

hookworm but to demonstrate techniques that would enlist local agencies in the work. The other object was to make people aware of medicine's potential to identify the cause of the disease and cure it, and of hygiene and sanitation as conduits for disease prevention. Merely setting up dispensaries in rural communities for treating hookworm would provide few results and, therefore, Rose considered it desirable to secure the cooperation of existing state health agencies and work through them. The eventual aim was to build up the health departments of countries to deal with their own diseases and help set up a system that would gradually function efficiently by itself.[28] This plan had the added advantage of creating a permanent organization when the RF withdrew. The program consisted of an infection survey, creating awareness on hookworm and sanitation, encouraging local organizations to promote sanitary conditions, experimenting with anti-helminthic drug treatments, and demonstrating inexpensive and easy-to-maintain latrines to encourage widespread use. Their methods, RF officials maintained, were simple enough to be acceptable to "even ignorant and prejudiced sections of the population."

Ceylon and Madras

In 1914 Rose undertook a tour of the East and, recognizing that knowledge of hookworm control was incomplete, appointed a commission that surveyed Java, Sumatra, Straits Settlement, Singapore, Siam, Federated Malaya States, Fiji, Burma, Ceylon, and India. The investigations identified Indian indentured labor exported from the Madras Presidency in southern India as a major source of hookworm infection in several of these countries. Infection rates were found to be 65–90 percent for Indian immigrants to the colonies.[29] Indian emigrants to the United States, also found to have high infection rates, were viewed by the RF as a threat to American health.

The RF worked on the theory that certain diseases, such as hookworm, malaria, and yellow fever, were endemic in certain locations from where they spread. By identifying the locations, the diseases could be controlled at the source; yet, with hookworm, it chose to initiate its campaign in Ceylon. Several factors appeared to have been considered: Ceylon was viewed a prize colony because of its economic prosperity; heavy and widespread hookworm infestation; an annual export of about one hundred thousand Indian contract laborers, including families, to work on its tea and rubber plantations; the RF belief that what it could accomplish in Ceylon it could then apply in other British colonies, which would then try to emulate it; and, finally,

a successful campaign in the colony would serve as an entering wedge elsewhere in Asia. If the RF could prove the importance and practicability of a hookworm campaign, funds would be made available and colonial health services would extend support.[30]

In 1921 the RF decided to abruptly discontinue the Ceylon campaign. It seemed futile to attempt hookworm control in Ceylon if infection was going to constantly recur from the source of labor supply. Heiser noted it was important to convince the Indian authorities of the high infection rate among Indian labor emigrating in all directions to the West Indies, Africa, Malaya, and Burma to the South Seas, which would be the first step toward "stamping hookworm out of Madras which was a radiating center of infection."[31] It was decided to treat emigrating workers while they were in quarantine camps in Madras.

Perceptions about Hookworm

In official, medical, and popular perceptions in both Ceylon and India, hookworm was not regarded a major public health menace. Perceptions have an important bearing on the adoption of particular medical interventions against diseases.[32] Despite large-scale prevalence of the hookworm infection, the British colonial authorities in both countries did not view it as a major cause of disease and had shown a singular lack of concern for undertaking organized eradication or control measures.[33] In Ceylon, the RF proposal for hookworm control had to face strong objections from both the colonial authorities and plantation owners. The authorities believed the matter concerned the plantation owners, while the latter saw no direct economic benefit from controlling and curing the disease. Sir Thomas Chalmers, the governor, is reported to have exclaimed that he did not want "any Yankee men or Yankee methods introduced; Ceylon was capable of running its own affairs and paying for its own healthwork."[34] In India, Gordon, referring to British attitudes toward RF officers, says tensions "between testy British officials jealous of their Indian preserve, and American 'interlopers' as they saw them"[35] were common. After some persuasion, the authorities and plantation owners relented and, notwithstanding, obstacles and discouragement, according to Heiser, the RF learnt more about the practical application of hookworm knowledge in Ceylon than anywhere else in the world.[36]

A great deal of ambivalence characterized the outlook of government officials and planters as they oscillated between indifference and apparent zest. In Madras, the response of the Sanitary Commissioner to the enquiry was tepid and so also of the Director General of the

IMS in Delhi. The official position was that infection largely affected mine workers and plantation labor and, as a disease, had not assumed virulent form in any part of the presidency to warrant special control measures.[37] Heiser stressed that since India was the source of infection in the British colonies, the colonial government had a responsibility to undertake measures to control it. This elicited official permission to conduct hookworm surveys that were initially conducted by the Indian Research Fund Association among small controlled communities: several categories of labor, schoolchildren, hospital patients, and convicts. For long, controlled communities had been the most common sites of medical investigations. The investigations revealed a 97 percent infection rate, enough to satisfy colonial authorities that physical suffering and economic loss caused by hookworm infection required control measures.

The government sought the services of RF officers for a thorough hookworm survey and a treatment and prophylaxis program.[38] Dr. George P. Paul, working on an anti-hookworm program in Australia, arrived in early 1920 and a year later was replaced by Dr. John F. Kendrick, who was engaged in hookworm control in Mauritius. Such transfer of staff reveals another important facet in the interregional exchange facilitated by the RF network.

The investigations revealed a high incidence rate but a low degree of intensity. The most common species, the harmless *Necator americanus*, affected nearly 100 percent of the population in most areas. The infection from the more pernicious *Ancylostoma duodenale* was on a much smaller scale, both in geographic spread and by population. This explains why the infection, though endemic, did not have a very detrimental effect on the health of the people and the indifferent medical, official, and popular attitudes toward hookworm. After completing control work on the plantations, when it was decided to extend the campaign to the districts, most district and municipal officers similarly denied the existence of the disease in their areas or its intensity to warrant specific measures. Investigations were repeated to determine infestation.

It was a RF strategy to conduct surveys and public awareness campaigns to dispel all "misunderstandings" and "incorrect notions" about hookworm to promote the campaign. John Ettling observes that before the RF could undertake hookworm control, it had to spend energy and money to create the disease in the minds of people[39] in whose perception it was not an illness and a threat to individual health, but an everyday fact of life, as common as a cold. When the RF campaign

came to an end in 1928, Kendrick asserted that hookworm infection "constituted a distinct public health problem in many parts of the Presidency," demanding "definite proposals for the commencement of comprehensive control measures."[40] In contrast, Asa Chandler, an American professor conducting independent investigations into hookworm at the Calcutta School of the Tropical Medicine, claimed that hookworm in India was a relatively unimportant cause of disease.[41]

Sanitation

The RF believed that its global campaign would "not be of permanent value unless proper sanitation is introduced to protect the soil from pollution and the population from reinfection" and hence generally declined to undertake control measures until governments gave assurance to enforce necessary sanitary measures.[42] But as Hewa's account shows, sanitation, an absolute necessity for demonstrating the usefulness of RF methods, was neglected and the campaign failed to accomplish a reduction in the infection rate.[43] Although it was acknowledged that sanitary conditions required improvement, the RF was unable to convince either the planters or the government of the importance of constructing latrines. The government was unwilling to put pressure on the plantation owners, who were reluctant to make capital investments citing poor market prices for tea and rubber after the war. It was not ready to shift from its traditional policy of not interfering with the plantations. The planters were, however, more favorable to the RF conducting treatment that would deflect criticism about their indifference toward the health and well-being of their workers.[44]

In Madras, at the end of the campaign, Kendrick admitted that the RF had completely neglected sanitation while relying only on awareness activities and treatment, which, although important adjuncts to soil sanitation, alone could not be expected to bring hookworm or any other filth-borne diseases under control. He noted that as long as these diseases devastated people's health, it was impossible to successfully enforce other more specialized areas of public health practiced by modern health services elsewhere in the world. Kendrick considered the RF neglect of an effective waste disposal system that alone could have produced permanent benefits as "incongruous." Until then, he argued, the results of other activities would have only a temporary effect.[45] However, two facts need to be noted. The closed European-style privies that the RF was attempting to promote were, even according to Chandler, unsuitable for rural Indian conditions since these were difficult to maintain, mainly on account of inadequate water supply.

Indians found these filthy and obnoxious and avoided using them. The other is to examine the constraints imposed by public health administration on the program, especially sanitation.

District Administration and Sanitation

The Madras Presidency, with a population of approximately 45,000,000, had just one public latrine per 22,000 inhabitants. Racial segregation and income distribution determined who received the benefits of water and sanitation. Houses of Europeans and wealthy and middle-class Indians connected to the water mains and sewers had private latrines. The majority of the people, who did not have access to such facilities, invariably resorted to using vacant sites adjoining houses, which were thus constantly polluted. Soil pollution occurred to the same extent in urban and rural areas. In Madras city, which had the most number of public latrines and where education was more widely diffused than elsewhere, soil pollution was a common phenomenon. The poorer districts suffered from inadequate facilities, for instance, Kendrick described conditions in Ranipet as "deplorably bad" and scavenging services as extremely sparse and inadequate, while in Guntur and Vizagapatam, most municipalities lacked a waste removal system.[46]

Hugh Tinker has argued that local bodies in India, which had a notable Indian presence, were generally indifferent or unaware of needs of public health and water supply.[47] He notes that in municipal boards, members, although well aware of the utility of piped water supplies, were unconvinced of the need for sewerage or refuse disposal schemes.[48] Tinker ignores that paucity of funds and a lack of technical personnel forced local bodies to make hard and popular decisions. When the Madras Municipal Council had to opt between implementing a huge drainage and water supply scheme and meeting a pressing need for a hospital, it chose the latter.[49] In England, Sheldon Watts points out, loans and subventions from the Central Treasury to municipal bodies made possible basic sanitary improvements at the local level, which increased noticeably over the years.[50] This was not in practice in India.

According to Watts, the non-provision of sanitation and potable water in rural India, a defining characteristic of British policy, was responsible for the unsanitary conditions prevalent in the Indian countryside.[51] The colonial revenue policy had caused the dismantling of the precolonial system of voluntary contributions, which paid the wages of the village sweepers, leaving Indian villages unclean. Most British

officials feigned ignorance of government culpability and claimed that Indian villages had been awash with human and animal fecal matter from "time immemorial" and thus attempted to absolve themselves of any responsibility for major sanitary and public health work for the rural Indian population.[52] Attempts made to develop rural health services by providing grants to villages for sanitary works were far too modest, making it impossible to find projects small enough to come within their scope.[53] It was not uncommon to find village water supplies dragging on for years without completion.[54] In 1941, the Madras Presidency had installed protected water supplies for 46 percent of the urban population but had covered less than 6 percent of the rural population.[55]

The absence of medical personnel in local government bodies further affected the development and improvement of sanitary conditions in towns and villages. In 1894, King had initiated public health services and secured the compulsory employment of trained sanitary officers by all local bodies in Madras but faced strong opposition from the Surgeon General, an IMS officer. In 1921 only two Sanitary Assistants were employed by the district boards.[56] Kendrick reported no sanitary inspectors in Ranipet and most municipalities in Guntur and Vizagapatam. Vizagapatam, a town with a population of 70,000, had four sanitary inspectors.[57] The observation by the Ministry of Local Self Government, "The reluctance of professional men to accept service under Municipal Councils is a menace to the future of sanitation in this Presidency,"[58] ignored the fact that most municipal councils did not offer security of tenure to health officers or take kindly to criticism by them about inadequate sanitary provisions. Since municipal councils and district boards had no control over selection and work of medical and health officers, they showed an unwillingness to appoint and make use of sanitary officers.[59] At times of financial crisis, it was mainly the sanitary and public works department that faced retrenchment, reducing the staff numbers to even below the level of minimum service requirement.[60] In 1927 when a proposal for expanding district health staff was made, the finance secretary declined to assure that the requirements of the medical and public health department would be met.[61]

Two district boards showed both willingness and initiative in constructing latrines. The Madura District Board, of which an Englishman was the President, sanctioned an amount of Rs. 20,000 for latrine work on the understanding that the government would match it with an equal amount. When the government declined, the district board

went ahead and successfully persuaded local governing boards in the district to meet half the cost of latrine construction in their areas. In 1925 when Kendrick recommended that the government and district boards unite in an effort to initiate and develop rural sanitation, the Minister, an Indian, indicated that the government would match the amount Kendrick could collect for latrine construction from the district boards with its own contribution.[62] Kendrick's efforts to get the government to allot Rs. 50,000 to match the Madura District Board's Rs. 25,000 did not yield results. Both the Surgeon General and the Sanitary Commissioner were just as unsuccessful.[63] Although the Legislative Assembly sanctioned funds for the educational campaign, treatment on tea estates and schools, and even a health officer for the estates, it ignored funding demands for latrine construction.[64]

The President of Chingleput District Board, an Indian, expressed his desire to initiate similar work in his district. Kendrick claimed he did not doubt the earnestness of the appeal, but, nevertheless, had reservations since the board was Indian dominated.[65] Presidents of other boards were willing to sanction money for latrine construction but none were successful with their boards. Kendrick unsuccessfully attempted to convince the government to subsidize the work by providing a free boring service otherwise charged under its Rural Sanitation Campaign. Kendrick simultaneously tested a cooperative plan with Poonamallee Union Board, supplying Rs. 200 worth of building material and the union and district boards each contributing Rs. 200 toward construction work. The success encouraged three other areas in the district to install latrines under a similar cooperative scheme financed by local funds.[66]

Mass Treatment

The RF believed that successful treatment and cure would awaken "an intelligent public interest" in hygiene, modern scientific medicine, and "practical measures for permanent public sanitation," which would then persuade local authorities to undertake public sanitation.[67] In Madras, the Surgeon General encouraged mass treatment on the grounds that the deplorable conditions of rural sanitation made prevention of soil pollution extremely difficult. His argument was treatment would reduce the worms in the infected persons, lessening the chances of soil pollution and preventing the spread of infection.[68] RF officers assented and the campaign became primarily curative.

According to Hewa, the RF's aim "was to cure the disease" and thus to "demonstrate the curative power of Western medicine." In Ceylon

the campaign's success was "measured in terms of cure, reduced absenteeism, increased productivity, and increased fertility on the plantations."[69] Others similarly argue that the purpose was to "arouse interest in scientific medicine that revealed the cause and cure of the disease,"[70] promote "a public health orientation that favoured the control of diseases amenable to individualised medical interventions,"[71] and to promote the belief that solutions to all illnesses would come from "the standards set by professional modern medicine."[72]

Mass treatment had significance for the RF, which exemplified "the Progressive Era's faith in science as arbiter of humankind's secular problems"[73] and emphasized science as the primary agent of its worldwide civilizing mission. Rose, an educationist, had underlined health awareness to promote preventive health. In 1920 he retired and Dr. F. F. Russell, a physician, was appointed to his post. Russell believed that the RF could "make a greater contribution to public health by pursuing scientific studies in the field than by further developing health organization on the basis of existing knowledge."[74] For Russell the "advancement of knowledge" became more important than bringing up to date "backward sections of human thought and action."

The hookworm program provided the RF with an opportunity to "develop a world-wide co-ordinated research effort," to identify inexpensive but effective vermicides for treatment. The RF was especially interested in trials by Indian medical scientists with betanapthol and methods of treatment,[75] while Kendrick was primarily engaged with testing the comparative efficiency and effectiveness of thymol, betanapthol, oil of chenopodium, and carbon tetrachloride as anthelminthics.[76] India, with its sizeable infection levels and variety in population groups, served as a field laboratory for the RF, which was simultaneously engaged in testing the efficacy of these drugs in field areas as far flung as Jamaica, Fiji, Mauritius, the Philippines, Australia, and its own laboratories in New York. The RF's interest was in correlating experiments with vermicides in different locations and serving as an international clearing house of information about the disease. To this end it was even willing to overlook or suppress information about the more detrimental consequences of these experiments, such as human deaths.[77]

Health Units

The health units related to hookworm work had been experimented with in the United States before the RF exported the idea to countries

abroad. These units were microlevel rural centers meant to conduct health surveys; demonstrate feasible administrative methods for public health organization, economical means of running intensive rural public health work, and techniques of health education; facilitate community participation; and serve as training centers for public health workers. Its objective was: "Rousing health consciousness to create demand for protection against disease and for better living conditions."[78]

India

In 1934 Jacocks was transferred from Ceylon to India, where he attempted to replicate some of his success in the former country by seeking to establish health units in different provinces of India. These were Partabgarh in the United Provinces (UP) (1932–1937), Poonamallee in the Madras Presidency (1935–1940), Najafgarh in Delhi (1936–1942), Sirur in the Bombay Presidency (1938–1942), and Singur in the Bengal Presidency (1939–1945), which was attached to the RF-established AIIHPH at Calcutta. War and local politics undermined attempts to set up health units at Golghat in Assam (in the northeast, bordering Burma) and in the Punjab.

The health units emphasized preventive care. The RF believed curative care was well developed in India. Maj. General John Megaw, Director General of the IMS, agreed that the aim had to be primarily preventive care and that the rural health units should focus on eliminating conditions that caused disease rather than on medical relief. It was recognized that immediate and important rural needs were neglected and that it was essential to provide rural communities with the benefits of health protection available in urban areas. According to Jacocks, "The need of rural areas was the greater where the largest number of people lived and who were the main source of wealth."[79]

Each of the health units was to cover a population of approximately 40,000. A figure smaller than that was likely to increase the overhead expenses and the numerical data collected would be insufficient for proper statistical analysis. The personnel were to consist of a medical officer, four sanitary officers, four health visitors, eight midwives, a clerk, and some menial staff. The annual budget estimated was Rs. 30,000, partly to be provided by the RF in diminishing proportion over a five-year period, after which the provincial governments were to take over. The need for access to a hospital, proximity to district or government headquarters for close supervision of work, official approval, and proper road connection was stressed.

According to Jacocks, the key to the conduct of health unit work was cooperation between those responsible for running the health unit, the community, and government.[80] There could be no compulsion or imposition, and the work had to be based on an active community interest and willingness to cooperate. The health units, Jacocks asserted, were not direct transplants from the United States, and while certain fundamental public health principles were universal health units in Asia would have to adapt themselves to local conditions when determining procedures. These would have to be based on common sense and on recognition of what was useful, reasonable, and feasible.

Establishment of Health Units

The establishment of Partabgarh health unit (United Provinces, 1932–1937) appeared easy, since interest was expressed at all levels. The Director of Health, the Indian Red Cross Society, the local municipal board, the town area committee and district board, and local communities gave assurance of cooperation. In Madras, the Poonamallee health unit, inaugurated in 1935, was the subject of prolonged negotiations between the RF and the Government of Madras, partly affected by the provincial politics of the time.[81] The issues were mainly the period of cooperation and the RF's financial contribution. All RF collaborative activity was limited to five years. In Madras it was agreed to first experiment for a period of 18 months before deciding on completing its entire term.

In the Najafgarh health unit located in Delhi, the capital of British India, it was hoped that, given the various financial constraints, departure from health unit principles, and the difficulties faced by health units elsewhere, the RF could make a proper demonstration "under his (Viceroy's) nose,"[82] and impress him with the need for better rural work in India based on health unit principles. If the Central Government was favorably impressed then it was reasonable to suppose the provincial governments would fall in line.[83] The proposal was accepted by both the Minister of Health and the Finance Department in the Delhi Government. Jacocks was hopeful that this would be "the beginning of a sound public health organization"[84] and set a "standard for all India."[85]

The Singur health unit (Bengal, 1939–1945), affiliated to the AIIHPH at Calcutta as its rural training center, was viewed as a probable all India experimental and demonstration unit for public health administration.[86] It was not wanting in medical facilities, with a government-run Kala-azar center, a charitable dispensary, and a malaria society,

a well-equipped 14-bed hospital under the charge of an Assistant Surgeon, and a number of unqualified and qualified individual medical practitioners to provide curative care.

The local board promised to gift free land while the local community offered to build a central office, a clinic, and quarters for the staff.[87] The Singur health unit came to be officially known as the "S N Mallick Maternity Home and Model Health Unit," named after an influential government official born in Singur, whose widow generously donated land and Rs. 80,000 for construction and maintenance of the health center to which the existing Mallick Maternity Home was attached.[88] Given the people's appreciation of existing government-run health centers, Jacocks was hopeful of receiving wholehearted cooperation from them.[89] The actual running of the health units, however, proved less easy as political developments and a bureaucratic mind-set overwhelmed their functioning and divergence of opinions emerged between local authorities and the RF officers over issues of financial commitments, staff appointments, and preventive versus curative care.

Provincial Politics and Health Units

The Government of India Act 1935 abolished dyarchy and introduced provincial autonomy. This, however, did not necessarily lead to surrendering the hold of the strong and rigid bureaucratic machinery over administration in the provinces.[90] Elections to the provincial legislatures followed in 1937, in which eight of the eleven provinces were won by the Indian National Congress including UP, Bombay, and Madras. In Bengal, a coalition government between the Krishak Praja Party and the Muslim League was formed.

In Bombay the administration had no properly organized public health department. In the 1937 elections, the Congress formed the government and Dr. Jivraj Mehta, a prominent Congressman and a leading medical practitioner of Bombay, was appointed the Minister of Health. Mehta was particularly interested in improving rural health. Lt. Col. A. Y. Dabholkar, the Director of Public Health, approached Jacocks with a proposal to establish a health unit.[91] Until then, the RF had been unsuccessful in getting the Bombay government interested in public health work except for a short malaria survey. For Dabholkar, this was an opportunity to create a public health organization with assistance from the RF.[92] The Sirur health unit was established without much difficulty, although its functioning was hampered by the usual difficulties of transportation and the lack of trained staff.

The formal collaboration with the UP government in relation to the Partabgarh unit ended in July 1938 and the question of its continuance came up. The newly formed Congress Ministry immediately undertook the overhauling of the governmental machinery, leading to concerns about the continuation of the health unit. The Minister of Health and the Governor favored continuation. The Chief Minister, however, differed and decided to close down the unit and disband the staff. The decision caused local protests and political agitation, compelling the government to reverse it. This popular protest appears to have been partly due to the success of the health leagues, which had become models for the other health units.[93]

The unit was reopened in October 1938 and operated with the same budget and staff but an increased area and population. The RF considered this "a real victory for rural health work won by the people who had experienced and had appreciated the value of sound health work." Moreover, local opinion had managed to push the district board and other local authorities to vote budget allocations that nearly matched amounts paid by the RF. The provincial government also announced its intention to include the unit budget in its permanent commitments from 1939.[94] However, despite the disapproval of the RF, the government went ahead and handed over the running of the health unit to the Indian Red Cross Society.

In Madras, the Congress Government formed after the 1937 elections resigned in 1939 in protest against India being dragged into the war that had broken out in Europe. Before it laid down office, the government recommended that at the expiration of the cooperative period the health unit should be closed and "a 'better but cheaper' arrangement should be made."[95] In February 1940, the Director of Public Health was able to successfully persuade the Governor to reconsider the recommendation, partly because of local demand for its continuation.[96] But with no contribution forthcoming from the RF, the Governor's Council was unwilling to allocate the full cost of running the health unit and instead proposed continuation at the government's own expense "on a modified scale." The Madras Public Health Department operated the health unit as a field-training center for medical officers to be posted in rural areas and the government appeared willing to make it a permanent program.[97]

In Bengal, where the Muslim League was a partner in the coalition, government staff appointments were embroiled in the communal politics that had permeated the political process as India inched closer to independence. Bengal had a fair number of districts dominated by

Muslims. In 1905 Lord Curzon, the then Viceroy, had divided the province into Hindu-dominated West Bengal and Muslim-majority East Bengal. A public uproar had led to its annulment in 1911. The issue remained a festering sore, aggravated by the demands for a separate Pakistan. Communal representation in the central and provincial legislatures had been conceded to the Muslims and other communities. Similar concessions were granted in government employment. Singur was located in a minority (Muslim) Legislative Assembly constituency.

Despite a written agreement between the Bengal Government and the Government of India that appointments to the health unit would be made through the Technical Advisory Committee, the Bengal Health Minister, a Muslim, blocked the committee's selections insisting that it be made through the Civil Service Commission to ensure adequate communal representation.[98] A decision given in favor of the Technical Advisory Committee accomplished little, and the question of staff appointments continued to be confronted with the issue of communal ratio. This annoyed the RF officials but they chose to be "patient and accommodating" for the Singur unit was important to the reorganization and development of the AIIHPH.[99] At one point, Grant proposed approaching the Governor but was dissuaded by the Secretary of the Public Health Department, who assured him that he would have the communal ratio waived without much difficulty. The Minister refused, insisting that the posts be advertised as per the regulation on communal ratio. This had to be complied with,[100] contributing to further delays in the development of the unit work.

Implementing Health Unit Principles and Practice

In Partabgarh, as stated earlier, people's support to the health unit could be attributed to the success of health leagues formed as part of the health unit. Health leagues were formed to initiate, supervise, maintain, and popularize health measures in villages. Jacocks described these as only one form of the Indian village *panchayat* (traditional village council) system. The entire village population constituted the league membership and everyone was free to make suggestions and discuss proposals. Each activity was undertaken and completed before beginning the next one. The stimulus came from league members and not the unit staff. Jacocks attributed the success to the "utilization of the panchayat principle," which was "universally understood in India" and "clearly appreciated by all village bodies." The health league idea, he believed, was "the most important contribution to

general sanitation" and public health that the health unit system had made.[101]

The staff motivated and encouraged several villages under the unit to organize themselves into health leagues to carry out essential environmental hygiene activities. Nine were reported to be well organized, but these appeared to be mostly those with active maternity and child welfare work and that functioned as modified clinics. Gradually, their activities appear to have made other public health gains that gave the RF officers some confidence in its work. In these nine villages every person was reported to have been vaccinated against smallpox, every home provided with a latrine and soakage pit, cattle were removed to the edge of compounds and were kept clean, wells improved, windows and ventilators installed, and vital statistics properly collected. The unit, besides carrying out its usual activities such as collecting vital statistics and general sanitation, also undertook training of health officers, both local and foreign, medical officers, sanitary inspectors, midwives, and health visitors.[102]

Although the Poonamallee unit ran for just over five years, the RF did not appear satisfied with its functioning. In 1946, when Major J. H. Gorman, IMS, the Director of Public Health, requested continued financial aid from the RF for the unit, Dr. M. C. Balfour, the RF representative in India, declined stating that the question of the RF's participation was closed, since in their assessment the health unit had deviated from the original scheme with little hope that it could be put back on track.[103]

Najafgarh witnessed a major departure from health unit principles. RF officials, it appears, had not reckoned with the conservative attitude and limited exposure of government medical officials who insisted on privileging curative care over preventive health. Maj. W. H. Crichton, Assistant Director of Health, appeared to vehemently disagree with health unit principles. He reversed the content of unit work and organized the activities on a "non-health unit basis," giving prominence to treatment. Crichton opened a series of dispensaries at each center, accentuating curative care to the exclusion of preventive work. The dispensaries were run by health visitors who had no qualifications as dispensers. Treatment was made available for minor ailments for mothers, infants, and babies, the justification being that it was essential in rural conditions. This treatment was not merely a curative and preventive measure but also meant "to attract the womenfolk for group talks to make new friends and to establish friendship and co-operation."[104] Crichton also declined to utilize the services of

the Public Health Nurse and the Sanitary Engineer assigned by the RF to the health unit.

For a brief period of time, Crichton was transferred, during which Jacocks managed to restore unit activities. Upon his return, however, to Jacocks' chagrin, Crichton's immediate act was to cancel the health unit work and reestablish his own regime of daily dispensaries. Clearly irked, Jacocks wrote to Sawyer in New York that this was not the purpose for which RF money had been appropriated.[105] While not denying the need of the villagers for treatment, Jacocks felt this was the responsibility of the government medical department, which had the necessary resources. He considered it unsuitable for the RF to depart from its key public health principles and strategies and suggested the withdrawal of financial support unless it could be assured that the work was being conducted along health unit principles. It seemed the only recourse, for the RF could not possibly support work that it had always avoided undertaking.[106] In New York, RF officials appeared no less disheartened with Sawyer indicating that he would be highly disappointed if the unit work was thus thwarted. For him the Partabgarh and Najafgarh experiences underlined "the difficulties of working in India," which suggested the need for "conservatism and caution in starting new health unit projects."[107]

At this point, it was decided to seek the intervention of Megaw, who was then Medical Advisor in the India office in London. Sawyer informed him about their difficulties in Najafgarh. Megaw managed a compromise and a memorandum of cooperation acceptable to all. Although it was understood that health unit procedures would be reintroduced, Crichton did not completely retract from his position and instructed the Medical Officer at Najafgarh that every effort should be made to "appease public opinion" by attending to minor ailments during home visits and clinic days.[108] It had taken a little over two years for the RF officers to convince the medical authorities in Delhi to undertake health unit work. The five years came to an end in March 1942.

Despite the various problems with Crichton, health unit work appeared to have won the community's appreciation probably more for the curative care it offered than preventive work. Members of the Health League at Chhawlah submitted a memorandum to Jacocks praising the RF for the work done, making them self-supporting and aware of the advantages of preventive health activities.[109]

In Singur, trouble began soon after the health unit became functional. Mrs. Mallick expressed great dissatisfaction with the health

unit work and began to press for emphasis on maternity work.[110] With both the maternity home and health unit under the control of the district board, the Medical Officer, Assistant Medical Officer, and health visitor at Singur were required to give honorary service at the maternity home. The unpopularity of the health unit was attributed to the perceived inadequacies of the maternity home. While it was equipped and staffed to deal with only normal cases, Mrs. Mallick and the local people demanded treatment for all types of labor cases. The government Health Department, unwilling to offend the people, accommodated their wishes, with the result that the unit staff spent a great deal of their time attending to the maternity home cases. The compromise accomplished little. The subordinate staff, primarily field workers, could be assigned limited responsibility. Public health suffered as the Medical Officers attended to maternity cases.

The initial interest and enthusiasm of the people dissipated and was replaced with resentment. Discontent and frustration were common to the health unit staff, villagers, and RF officials. According to Dr. Bhattacharya, the Medical Officer, the people had "got the unit unasked for" and were not sufficiently educated and economically well-off to appreciate the services offered by the health unit. Mrs. Mallick disapproved of preventive work and expressed disappointment that her money had been ill spent. These sentiments, Jacocks reported, were the prime reason for the unpopularity of the unit.[111]

The gains from the health units in India were limited and attained none of the effectiveness and influence of the Ceylon health unit. A 1942 memorandum by the Central Advisory Board of Health appreciated the utility of the health units as "a demonstration centre for successful rural health work" and for training of the public health staff, but stressed the urgency for a wide expansion of curative and preventive medical work in the rural areas.[112] The Health Survey and Development Committee (1946), more commonly known as the Bhore Committee, a landmark in India's health care development that provided the blueprint for health in independent India, strongly recommended "Soviet style health committees" as at Singur as a desirable model for India to secure active community support for environmental sanitation and control of infectious diseases.[113] Grant believed that the chief value of the health units was to "stimulate consciousness among health administrators" for "a more intensive organization of administration at the periphery" and to provide a practice field for health visitors, but pointed out they had "made no contribution to the solution of the fundamental administrative problem of India, and never

will as they are now constituted."[114] Grant's major grouse with regard to public health administration in India was the lack of an all India perspective, its centralization in the Central Government despite an apparent decentralization to the provinces, the lack of uniformity in the provincial public health systems, the hold of the civil service over public health, and the conservatism of the IMS.[115]

Concluding remarks

The RF public health programs in India were part of a larger process of internationalization of health and medicine. Epidemics and disease contagion knew no borders and the need for collective international action was recognized. The scientific advancements of the late nineteenth century and the social, economic, and political consequences of ignoring preventive care had created awareness about the importance of preventive health. The RF's global campaigns for hookworm control and health units were primarily meant to create an awareness of the importance of preventive health. The object was to learn from the experiments and experiences from different locations, emulate, and put these into practice. The central RF office in New York and the laboratories it ran served as a clearing house of information and knowledge accumulated from field areas spread over different sites across the globe. Information, research, ideas, and practices about public health were shared with RF field officers who were commonly transferred across these different locations. The field personnel themselves were a reserve of varied experiences that they carried to different locations. Yet, each new setting was distinct and unique.

Local official, medical, and popular perceptions about particular diseases were important in determining how and whether a program would be conducted. The purpose of the RF's program was to educate people about preventive health and sanitation and not to control disease. It chose a disease that was seen to spread easily, had some consequences for labor productivity, and, most importantly, for which the ease of control techniques could be demonstrated. The RF's belief that even simple minds could be convinced of their methods was belied. Let alone simple, even official and medical minds were unconvinced of the necessity for undertaking preventive work for a disease whose gravity was in doubt. High infestation rates did not necessarily cause severe physical illness. In these circumstances, the RF had to work overtime to induce people into believing in the disease. One important aspect discerned in the global campaign was that preventive measures

were viewed as intrusions affecting everyday life everywhere. Popular resistance, official indifference, and reluctance to finance the construction of latrines were common to the American south, Mexico, Australia, Ceylon, India, and elsewhere. Heiser's belief that what was experimented with in one part of the British Empire would be immediately and easily emulated in the other colonies was not necessarily true, as seen here.

Certain systemic deficiencies inherent in the disaggregated structure of the general and public health administration caused priorities, perceptions, and responses to diverge at different levels. Coordination among different government departments varied. Finances and personnel were lacking or inadequate. The responses of the Indian political elite differed regionally as seen with respect to the health units. The Partabgarh health unit was considered a model unit but the provincial Congress Ministry was divided on its continuation and only after local, popular protests was it restored. Even in the princely state of Travancore, there was much opposition to the continuance to the health unit.[116] On the other hand, in Bombay and Madras, health units were desired although these too had to countenance the vicissitudes of administrative and political processes. Notwithstanding the success of the health leagues in a few locations, none of the institutions that survived necessarily worked along RF principles for health units. Whatever success some of the health units appeared to have attained seems to have been because these offered treatment along with undertaking preventive activities. The Bhore Committee Report, of which John Grant was an influential member, recommended the amalgamation of preventive and curative approaches to providing medical relief. The rural primary health centers introduced in independent India adopted this methodology and continue to operate on these lines. Within the RF Grant successfully convinced the Directors to abandon the exclusive emphasis on preventive care and accept the integrated approach in its future public health programs.

Notes

1. The campaigns were conducted by the International Health Commission, a constituent agency of the RF, later renamed the International Health Board and finally the International Health Division. Here RF is used for convenience. For a history of the division, see J. Farley (2004), *To Cast Out Disease: A History of the International Health Division of the Rockefeller Foundation (1913–1951)* (New York: Oxford University Press).

2. Colonel King (September 1923), "On Sanitation," *Indian Medical Gazette (IMG)*, p. 429.
3. S. Amrith, "Internationalizing Public Health in South and Southeast Asia, c. 1919–1939", p. 6; sincere thanks to S. Amrith for sharing the English version of his article published in French.
4. D. Arnold (1994), "Colonial Medicine in Transition: Medical Research in India, 1910–14," *South Asia Research*, 14: 10–35.
5. Hookworm, malaria control, and health unit work were undertaken in the princely states of Travancore and Mysore in southern India; this is excluded from the discussion, which is confined to British India. For its work in Travancore, see M. Kabir (2003), "Beyond Philanthropy: The Rockefeller Foundation's Public Health Intervention in Thiruvithamkoor, 1929–1939," Working Paper 350, www.cds.edu. In Sawantwadi on the western coast bordering the Bombay Presidency, it conducted malaria surveys in the 1920s. See S. N. Kavadi (1999), *The Rockefeller Foundation and Public Health in Colonial India 1916–1945: A Narrative History* (Pune: FRCH).
6. Paul to Heiser, November 27, 1920, RG5, S1.2, Box 102, F1390 Rockefeller Archive Center (RAC).
7. S. Bhattacharya, M. Harrison, and M. Worboys (2005), *Fractured States: Smallpox, Public Health and Vaccination Policy in British India 1800–1947* (New Delhi: Orient Longman); also see Khalid A. (2009), "'Subordinate' Negotiations: Indigneous Staff, the Colonial State and Public Health," in *The Social History of Health and Medicine in Colonial India*, ed. B. Pati and M. Harrison (Delhi: Primus Books), pp. 45–73.
8. Amrith, "Internationalizing Public Health," p. 22.
9. Ibid., p. 1.
10. Ibid., p. 5.
11. Stein, E. (2012), "Hygiene and Decolonization: The Rockefeller Foundation and Indonesian Nationalism, 1933–1958," in *Science, Public Health and the State in Modern Asia*, ed. Liping Bu, Darwin Stapleton and Ka-Che Yip (New York: Routledge), pp. 51–70.
12. V. Heiser (1936), *An American Doctor's Odyssey—Adventures in Forty-Five Countries* (New York: Norton), p. 344.
13. S. Hewa (2012), "The Alma-Ata Declaration, Rockefeller Foundation and Development of Primary Health Care in Sri Lanka: A Model for Health Promotion," in Bu, Stapleton, and Yip, *Science, Public Health and the State*, pp. 71–92.
14. Amrith, "Internationalizing Public Health," p. 2.
15. Deepak Kumar (2008), "Questions of Public Health and Foreign Philanthropy: Rockefeller Foundation in India, 1915–1945," in *Historical Diversities: Society, Politics and Culture*, ed. K. L. Tuteja and S. Pathania (Delhi: Manohar), pp. 193–207.
16. Grant to M. C. Balfour, November 20, 1944, Record Group (RG) 2, Series 464, Box 275, Folder 1884.
17. Government of India (1914), *Indian Sanitary Policy, 1914* (Calcutta: Superintendent Government Printing, India), p. 9.

18. C. Baker (1975), "Figures and Facts. Madras Government Statistics 1880–1940," in *South India: Political Institutions and Political Change, 1880–1940*, ed. C. Baker and D. Washbrook (Delhi: Macmillan), p. 210.
19. King, "On Sanitation," p. 430.
20. Baker, "Figures and Facts."
21. H. Tinker (1968), *Foundations of Local Self Government in India, Pakistan and Burma* (London: Praeger), p. 280.
22. Far East Estimates 1939, Minutes, November 10, 1938, RG 1.1, Series 464, Box 12, Folder 94.
23. Sir Christopher Masterman Papers, Box I, Centre for South Asian Studies, Cambridge University.
24. "The Need for a Public Health Policy for India" (October 1927), *Indian Medical Gazette*, p. 577.
25. Hookworm infection is a cyclical process. Hookworm enters the body through contact with the soil. Defecation on open grounds infects the soil, exposing communities to reinfection, particularly individuals commonly moving around barefoot. Preventing soil pollution is a necessary condition for hookworm control.
26. About the centuries-old unchanged sanitary habits of the rural population in the American south, see W. A. Link (1990), "The Harvest Is Ripe, but the Laborers Are Few: The Hookworm Crusade in North Carolina, 1909–1915," *The North Carolina Historical Review*, 67: 1–27; for a detailed account of the hookworm campaign in the American south, see J. Ettling (1981), *The Germ of Laziness, Rockefeller Philanthropy and Public Health in the New South* (Cambridge: Harvard University Press).
27. Heiser to Col. White, March 12, 1919, RG 5, Series 1.2, Box 85, Folder 1189.
28. Heiser, *A Doctor's Odyssey*, pp. 272, 275.
29. For accounts of the hookworm campaign in Madras, see S. N. Kavadi (2002), "'Wolves Come to Take Care of the Lamb': The Rockefeller Foundation's Hookworm Campaign in The Madras Presidency, 1920–1928," in *The Politics of the Healthy Life: An International Perspective*, ed. Esteban Rodríguez Ocaña (Sheffield: EAHMH Publications); and S. N. Kavadi (2007), "'Parasites Lost and Parasites Regained': Rockefeller Foundation's Anti-Hookworm Campaign in Madras Presidency," *Economic and Political Weekly*, 72: 130–137.
30. Heiser, *A Doctor's Odyssey*, pp. 327–328.
31. Ibid. p. 340.
32. V. R. Muraleedharan and D. Veeragahvan (1995), "Disease, Death and Local Administration: Madras City in Early 1900s," *Radical Journal of Health*, 1: 9–24.
33. Rockefeller Foundation (1922), "Distribution and Control of Hookworm Disease in India, International Health Board," *Indian Journal of Medical Research*, 10: 295–342.
34. S. Hewa (1994), "The Hookworm Epidemic on the Plantations in Colonial Sri Lanka," *Medical History*, 38: 73–90, 90.

35. L. A. Gordon (1997), "Wealth Equals Wisdom? The Rockefeller and Ford Foundation in India," *Annals of the American Academy of Political and Social Science*, 554: 105.
36. Heiser, *A Doctor's Odyssey*, p. 301.
37. SC to Heiser, June 7, 1915, RG 5, Series 2, Box 49, Folder 306.
38. Government of India to Heiser, June 11, 1919, RG 5, Series 1.2, Box 85, Folder 1189.
39. Ettling, *The Germ of Laziness*, p. 23.
40. Report on work in India from January 1, 1929 to July 31, 1929, RG 5, Series 1.2, Box 304, Folder 3860.
41. Editorial (May 1928), *Indian Medical Gazette*, p. 261.
42. Rockefeller Foundation, Annual Report, 1919, p. 26.
43. Hewa, "The Hookworm Epidemic," 38.
44. Ibid.
45. Kendrick to Hutchinson, September 7, 1926, RG 5, Series 1.2, Box 266, Folder 3363.
46. Anti-Hookworm Campaign—Ranipet, RG 5, Series 3, Box 204, F Hookworm Report 1920–21.
47. Tinker, *Foundations of Local Self Government*, p. 279.
48. Ibid., p. 292.
49. Muraleedharan and Veeragahvan, "Disease, Death and Local Administration."
50. S. Watts (2003), *Disease and Medicine in World History* (New York: Routledge), p. 118.
51. Ibid., p. 119.
52. Watts comments, "Under the dictate of British revenue officers, these customary assessments were now raked in and (in a manner of speaking) sent off to the UK Treasury." Watts, *Disease and Medicine*, p. 119.
53. Tinker, *Foundations of Local Self Government*, p. 282.
54. Ibid., p. 290.
55. Ibid., p. 291; Government of India (1942), *Health Atlas of India* (Delhi: Government of India Press).
56. King, "On Sanitation," p. 429.
57. Hookworm Campaign, Kendrick's ReportfFor 1922, RG 5, Series 3, Box 204.
58. King, "On Sanitation," p. 429.
59. Tinker, *Foundations of Local Self Government*, p. 282.
60. Ibid., p. 289.
61. V. R. Muraleedharan (1987), "Rural Health Care in Madras Presidency," *The Indian Economic and Social History Review*, 24: 328.
62. Kendrick to Sawyer, October 28, 1925, RG 5, Series 1.2, Box 232, Folder 2963.
63. Kendrick to Heiser, August 21, 1926, RG 5, Series 1.2, Box 266, Folder 3363.
64. Kendrick to Heiser, April 7, 1927, RG 5, Series 1.2, Box 304, Folder 3857.

65. Kendrick to Heiser, February 2, 1927, RG 5, Series 1.2, Box 304, Folder 3857.
66. Report on work in India from January 1, 1929 to July 31, 1929.
67. Hewa, "The Hookworm Epidemic,"
68. "Hookworm campaign," *The Hindu*, August 6, 1924.
69. Hewa, "The Hookworm Epidemic," p. 90.
70. J. Farley (1995), "The International Health Division of the Rockefeller Foundation: The Russell Years," in *International Health Organisations and Movements, 1918–1939*, ed. P. Weindling (Cambridge: Cambridge University Press), pp. 203–221.
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72. Link, "The Harvest Is Ripe," 6.
73. Birn, and Solorzano, "Public Health Policy Paradoxes," 1197.
74. Farley, "The International Health Division."
75. For a critical account of these trials, see Kavadi, "Wolves Come to Take Care of the Lamb."
76. Ibid.
77. Ibid.; also see S. Palmer (2010), "Toward Responsibility in International Health: Death following Treatment in Rockefeller Hookworm Campaigns, 1914–1934," *Medical History*, 54: 149–170.
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80. Ibid.
81. For an account, see S. N. Kavadi (2007), "'Working through Government' and 'Working in Close Co-operation with Government': A Perspective on the Rockefeller Public Health Program in Colonial India,'" in *Philanthropic Foundations and the Globalization of Scientific Medicine and Public Health*, ed. B. Page and D. Valone (Lanham: University of America Press).
82. Jacocks to Sawyer, March 30, 1936, RG 1.1, Series 464, Box 12, Folder 95.
83. Ibid.
84. Jacocks to Sawyer, October 6, 1936, RG 1.1, Series 464, Box 12, Folder 95.
85. Local Health Departments (1937), Estimates, October 29, 1936, RG 1.1, Series 464, Box 12, Folder 95.
86. Minutes, Scientific Director Meeting, October 26–27, 1944, RG 1.1, Series 464, Box 12, Folder 92.
87. Jacocks to Sawyer, February 28, 1938, RG 1.1, Series 464, Box 12, Folder 91.
88. India Annual Report, 1938, RG 5, Series 3, Box 202.
89. Jaccocks to Sawyer, February 28, 1938, RG 1.1, Series 464, Box 12, Folder 91.
90. Baker, "Figures and Facts."
91. Jacocks to Sawyer, June 17, 1937, RG 1.1, Series 464, Box 12, Folder 94.
92. Ibid.
93. India Annual Report, 1937, RG 5, Series 3, Box 202.

94. India Annual Report, 1938, RG 5, Series 3, Box 202.
95. Ibid.
96. India Semi-Annual Report, 1940, RG 5, Series 3, Box 203.
97. India Annual Report, 1940, RG 5, Series 3, Box 203.
98. J. B. Grant Officers' Diary, February 1944, RG 12.1, Box 20.
99. Sweet to Sawyer, January 30, 1939, RG 1.1, Series 464, Box 12, Folder 91.
100. J.B. Grant Officers' Diary, September 17–30, 1944, RG 12.1, Box 20.
101. Jacocks, "Ceylon Health Units."
102. India Semi-Annual Report, 1938, RG 5, Series 3, Box 202.
103. Balfour to Gorman, April 18, 1946, RG 1.1, Series 464, Box 12, Folder 96.
104. India Semi-Annual Report, 1938, RG 5, Series 3, Box 202.
105. Jacocks to Sawyer, May 15, 1938, RG 1.1, Series 464, Box 12, Folder 95.
106. Jacocks to Sawyer, July 4, 1938, RG 1.1, Series 464, Box 12, Folder 95.
107. Sawyer to Jacocks, August 9, 1938, RG 1.1 Series 464, Box 12, Folder 95.
108. Memorandum No. 7792/P/34H.V. September 5, 1938, RG 1.1, Series 464, Box 12, Folder 95.
109. Memorandum from Health League of Chhawlah, RG. 1.1, Series 464, Box 12, Folder 95.
110. .India Annual Report 1938, RG 5, Series 3, Box 202.
111. Note by J. K. Bhattacharya on S. N. Mallick Maternity Home & Model Health Unit RG 5, Series 3, Box 203, Folder India Annual Report, 1941.
112. Memorandum submitted by the Central Advisory Board of Health V/25/840/71—India Office Library and Records, London.
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114. J. B. Grant, Officers Diary 1943, RG 12.1, Box 20.
115. S. N. Kavadi (2010), "'Clear Stream of Reason…Lost Its Way into the Dreary Desert Sand of Dead Habit': The Story of the All India Institute of Hygiene and Public Health, Calcutta, 1922–45," in *Science and Modern India: An Institutional History, c. 1784–1947*, ed. Uma Das Gupta (New Delhi: Pearson).
116. Kabir, Beyond Philanthropy.

4

Colonial Madness: Community and Lunacy in Nineteenth-Century India

Anouska Bhattacharyya

In 1870, a British medical officer and official visitor at several asylums in the Bengal Presidency, Dr. Edwards, wrote of a patient in the *Calcutta Medical Gazette*. Without a professional organ for "alienists," or psychiatrists, in India, the various medical gazettes (Calcutta, Bombay, Madras, and Indian) were the most common outlets for ruminations on lunacy in the subcontinent. Regular exposure to native lunacy had put white insanity into perspective for Dr. Edwards. He wrote:

> I cannot understand the language and life Mannu leads. Labelled a violent insane, he has caused little trouble once he arrived. That which I took as evidence of his lunacy was, when visited by his father…normal behaviour. It cannot be that entire families are insane, even allowing for the hereditary nature of many diseases of the mind…In talking with his father, I agreed to give Mannu a small garden plot. Working with his hands, renders him less liable to babbling and spitting.[1]

On one hand, Edwards did not "understand" Mannu: Mannu's behaviour was not considered abnormal by his Indian family, and yet British categories of madness would label him a "violent insane."[2] On the other hand, Edwards was in agreement with Mannu's father: the notion of outdoor work, tending a garden, and establishing an occupation or routine was familiar. Moreover, "babbling and spitting" were evidence of Mannu's affliction for Edwards. How did Edwards navigate this hybrid presentation of insanity, which was

partly conventional and partly unfamiliar? How to resolve his ambivalence toward Mannu's diagnosis and his commitment to the native lunatic asylum?

Edwards later became Inspector General of Hospitals in Bombay, and his new role permitted him less time to interact with asylum communities in the presidency. Nonetheless, he continued to ruminate on the idea of "native lunacy." He wrote in a letter to his wife that British "lunatics in England manifest less of the depravity or insanity that is so rife amongst these natives."[3] In other words, Edwards felt the nature of lunacy in England and India was comparable; "native lunacy" was not incommensurable with "English lunacy." The relative nature of insanity is one of many ideas we can glean from Edwards's writings. By coupling Edwards's writings with each asylum's annual reports, which were collected and published alongside the medical reports for each region, we can begin to reconstruct an everyday history of the native asylum, steeped in its local ecology.

Edwards's writings also show how local families emerged as critical actors in these asylums, very unlike the other colonial institutions in British India in this period. Mannu's father provided information on how the asylum staff might provide therapeutic relief for his son, and ample documentary evidence shows that this was common practice in these mid-century native asylums. This is just one of the many ways in which native asylums were not typical of colonial institutions in India. Native prisons rarely admitted visits from inmates' families, and medical hospitals were sought out by local families precisely for their Westernized paradigms of treatment.[4] Similarly, the well-populated "pauper asylums" in Europe rarely sought or acknowledged advice from patients' families. Mannu's father's suggestion for working in the asylum gardens echoes the idea of "moral therapy"—where medical treatment was accompanied by activities thought to be helpful to the patient, such as gardening, woodwork, and needlework—that occurred in some contemporary European and American asylums. However, these ideas did not stem from the same place. Whereas William Tuke and the other moral reformers in England tried to create a system where daily chores were rewarded, Tuke and Kirkbride's visions of moral therapy were not translated into the way the native asylums in India treated their patients. Native patients were not moved closer to the entrance of the asylum for good behaviour, for example, because native asylum architecture did not permit this maneuver. Mannu's father's therapeutic agenda was well received by the British medical officers because of how familiar the treatment seemed to them, but

Mannu's father was not trained in Westernized paradigms of cultivating rationality or moral autonomy.[5] Nonetheless, the fact that treating Mannu in this way was acceptable to both Mannu's father and the British asylum staff suggests the asylum was tolerant toward many ideas, not only those belonging to Western psychiatry. This "hybridity" of practice was common in the native asylum in this period: unlike other colonial institutions, the native asylum was not imbued with a strong colonial identity or clearly demonstrable Western psychiatry with which to offset local ideas.

From this short anecdote, we can begin to recover the everyday life of the native asylum in mid-nineteenth-century India. We see the familiar and familial interactions between British staff, local families, and admitted patients; we learn of therapies that can be accommodated by many different ideologies of madness; and we conclude that the asylum was a dynamic and permeable site for multiple actors in this colonial world.

This chapter examines a variety of sources to uncover daily life within British-built native asylums at a very tangible, informal, and even mundane level. Looking at the handful of native asylums that emerged after the Lunacy Acts of 1858, I hope to illuminate the ways that a variety of actors interacted with each other and negotiated the meaning of insanity. Examining the place of the asylum within the local community reveals how the community was an integral part of the asylum and shows the colonial government functioning at the ground level. As a variety of Indian and British actors become visible as constituting a rather heterogeneous space, I will intimate the presence of a hybridized system of treatment that borrowed from local, religious, state, and colonial beliefs about madness. This chapter is especially concerned with those actors who are traditionally left out of the asylum records: asylum attendants, families, and local community members. The presence of these overlooked actors allows me to argue for the permeability of the native lunatic asylum in India, and for the utility of the asylum in reframing a number of questions in South Asian history.

The evidence for these nontraditional asylum actors comes primarily from the annual asylum reports, the vernacular press, and correspondence between British staff and administration. Many of the official visitors bemoaned the lack of in situ psychiatric expertise, and superintendents reflected upon the ideas suggested by their inferiors: the cooks, janitors, cleaners, and asylum attendants, who had been recruited from the local community. These ideas were not consistent across the entire asylum network; their appearance in the

historical record reveals the idiosyncrasies of a variety of actors at each asylum.

In order to layer different kinds of archival sources together, I borrow the methodologies demonstrated in a recent feminist history anthology, *Contesting Archives*.[6] With the archived annual reports, official records, and unofficial correspondence all representing the contours of power in colonial India, there are several challenges in trying to write a history that documents and interprets the lives of those excluded or hidden from positions of power. While *Contesting Archives* prioritizes locating different kinds of women in the historical record, the methodologies employed are, nonetheless, pertinent to locating the hidden voices of the asylum community. "Researching around" particular sources, reading materials "against the grain," weaving together different layers of information, and using absences and knowledge of the context are all useful strategies that I employ in this chapter.

Beyond the asylum's resident population—differentiated as it was between British officers, local Indian staff, and the caste and class of the patients—members of the local community regularly traversed the asylum walls. Local tea sellers (chai wallahs) entered the asylums to sell tea to the guardsmen and administrative staff, village elders visited to negotiate the use of land, laundrymen (dhobis) carried clean and dirty clothing to and from the building, and local musicians and dancing women arrived once or twice a month to perform dance or musical *nautches*.[7] In these ways, the everyday life of the local community extended into the asylum. Spiritual gurus and religious men often visited the asylums to mark holy days and enact primarily Hindu rites, although Christian missionaries also visited these institutions. Logistically, the asylum provided employment, not only in recruiting salaried attendants but also by hiring temporary workers (builders, plumbers, and so on) from the surrounding towns and villages. Reframing the asylum as a useful addition to the community, attracting the interest and involvement of Indian people who were not direct employees of the colonial administration, challenges much of the existing historiography that maintains lunatic asylums were stigmatized and stigmatizing institutions in the colonies.

There are three sections in this chapter: the visibility and variability of communities that, by nature of the modern archive, do not appear very often in the historical record; the emergence of a hybrid proto-psychiatry, combining local ideas of madness with the admissions practices of Western psychiatry; and the permeability of the asylum, embedded in local everyday life. In what follows, I examine the

evidence concerning the Indian staff and tea sellers who were actively recruited by the state to serve the asylum. I consider two attendants, Darogah Gilson and Old Babu, who are unusual in being named in the historical record, and whose stories reveal the positive and negative relationships between asylum and community. The second part of this chapter looks at the familial context: why were families invested in the asylum, and which familial tropes became integral to the asylum? Finally, I suggest that the permeability of local belief systems extended upward, beyond the walls of the asylum, through the subofficial network of administration, to affect official practices in asylum management.

Wallahs, Warders, and Keepers

The staff employed to work in the asylums were, out of necessity, recruited from the local communities surrounding each asylum. Janitors, cooks, and attendants were Indian, while the asylum superintendent and his administrators were British.[8] Day-to-day care of the inmates was supervised not by the British, but by the Indian staff. Indian attendants therefore exercised the most significant influence over patients, even though British doctors and overseers were responsible for issuing the initial instructions for patient care within these asylums. In this context, local ideas of managing the insane, as provided by the attendants (and janitors, and so on), were able to commingle with any extant Western psychiatric beliefs.[9] Although patients and doctors have often been regarded as the most prominent actors in the asylum, attendants also played vital roles.

The asylum existed to manage insanity, and it was primarily doctors (asylum superintendents, medical officers, and so on) who were charged with treating patients. When patients arrived in the asylum, they were officially given a diagnosis. This was most commonly a simple description of the circumstances surrounding how they were found—for example, "ganja-smoking…wanderer," "melancholic, no family," "low-caste labourer, manic"—but these diagnoses, based mainly on Western psychiatric labels, meant very little once the patient was in the asylum.[10] In fact, most of the patients subsequently reorganized themselves along caste, class, or lines of employment inside the asylum, and very little treatment was given under the auspices of Western psychiatric principles.[11] We glean such information from the notes and letters preceding annual reports in the archives, which

detail the extraordinary roles played by other actors in organizing, managing, and caring for the insane.

In 1872, the asylum at Delhi undertook some restructuring, both in buildings and in employees. The Inspector General of Hospitals in the area, Dr. Tresidder, made several remarks about who had been recruited:

> In place of the discharged Jemadar,[12] I have appointed a man called Peer Bux, a very respectable Mahomedan, who is especially valuable, as he has a certain amount of medical knowledge from having been a Native Doctor in [the community]. There is not enough medical personnel whatsoever and this is needed, although I do hope that if a Native Doctor be appointed, this appointment will not interfere with Mr. Gilson [the Darogah] whose exceeding care, judgment and kindness would, if lost to the Asylum, be ill compensated for by the services of a Native Hospital Assistant.[13]

This quote reveals to us several kinds of attendants: jemadars, native doctors, darogahs, and hospital assistants. While Dr. Tresiddar was concerned about the quantity and quality of medical expertise present in the asylum, his priorities were "care, judgment and kindness," which were not considered exclusive to the role of the darogah in the asylum. The following year, according to the government's 1873 Statement of Newspapers, an interfering native hospital assistant was recruited, much to the chagrin of Dr. Tresidder, and the existing asylum attendants:

> *Chardalaka* [sic]: The new Pagla Doctor, Gurinder, has been in the asylum for six months. He has been in disagreement with Darogah Mister Gilson. Now that three patients have died, he has removed two keepers from employment. Mister Gilson is much loved by the Asylum and, even if Gurinder must leave in order to do so, his men would like him to stay.[14]

We know little of this native doctor, except for this newspaper excerpt. His name suggests he was Punjabi, thus the keepers' dislike of him seems unrelated to ethnic prejudice. Even within the asylum, then, conflict existed: the attendants working under Mr. Gilson preferred the asylum without the new native doctor, Gurinder, not least because he had fired two of them during his residency.

The group of actors most often obscured by the historical record is the asylum keepers and attendants, or "wallahs." A wallah is the term used to describe a person concerned or involved with a specified

thing or business; for example, a "chai wallah" describes a young man who sells tea (chai). Wallah can also be a native or an inhabitant of a specified place, as in "Bombay wallah" for an inhabitant of Bombay, or "*pagla* wallah" for someone living around the asylum.[15] The word comes originally from the Hindi suffix *–vala* ("doer" or "fellow"), which in turn comes from the Sanskrit *palaka*, or "keeper."[16] The chai wallahs visited asylums and other institutions (prisons, banks, courtrooms) on a regular basis, carrying tea and gossip. Their everyday, almost mundane, roles meant they were able to traverse very disparate spaces, such as private homes and official buildings, without causing offense.[17] This section considers the *pagla* wallahs, the men who worked in the asylum as attendants (wallah as "keeper"), the chai wallahs who visited daily, and those men and women who visited the asylum from the local community (wallah as inhabitants of a specified place).[18] There was a great deal of discussion about these wallahs in the official, sub-official, and local literature regarding native asylums. Most of the discussion revolved around their recruitment, their pay, and the kind of work they should be expected to do. With an asylum community so extensive and variable, these discussions did not always reach a conclusion, and many negotiations took place.

The chai wallahs sold their services not only to the people waiting in the asylum reception areas, but also to the doctors and British staff occupying the bureaucratic and colonial administrative spaces, as well as to the patients in the more private areas of the asylum, in patients' rooms, and in the asylum's central courtyard. Some of these men had more access to the asylum than most of the British staff. They exchanged gossip along with their wares, took messages, brought local newspapers, and even discussed recent social and political events. At the Lucknow Asylum, established in what is now called Uttar Pradesh, the visitor books show a number of chai wallahs visiting more than 45 times during the month of May 1865.[19] Mr. O'Callaghan, the Inspector General of Hospitals in the region, wrote in a letter to his friend of:

> How talkative are the wallahs when they come with their tea! Even though I understand only limited Hindustani, they talk as if I am an old friend…One wallah has improved his English immeasurably through our daily interactions. He told me about the construction of a new madhouse to the North, whose establishment would take funds away from our great public asylum [which] already provides an important role for the very vulnerable insanes in this country.[20]

O'Callaghan's words suggest a close interaction between natives and the more powerful colonial government: O'Callaghan was, in many ways, an extension of the state, and at the same time he was on very familiar terms with these wallahs. This letter also points to O'Callaghan's dependency on these local men for information about the very government he represented. Official correspondence between the Officiating Secretary and several interested parties show that the local government was considering the construction of another building to cater to high-caste or Eurasian patients.[21] As a result of this informative tidbit, O'Callaghan was able to successfully petition the Government of India against the construction of another asylum in Oudh, suggesting, "*one* large asylum is sufficient for the whole province."[22] With the aid of the chai wallahs, O'Callaghan redirected some of the allotted funds to his asylum in Lucknow and effectively reified his own position. The wallahs had thus translated the world beyond the asylum into the institution, and made the ideas within the asylum walls effect change beyond it. The asylum was not an isolated space, or simply an appropriated space; it was an increasingly permeable and useful technology for understanding and participating in colonial India, both officially and informally.

The superintendents and their administrative staff were required to hire attendants as needed. Recruiting attendants, of any kind, often resulted in angst at the institutional, administrative, and local levels. In 1870, there was an overarching concern that the native assistants in the asylums were being recruited under the same Sub-Assistant Surgeon rank as English-educated men.[23] By 1910, "following the practice in Bengal lunatic asylums of providing extra attendants for paying patients at the cost of their friends," the asylum in Uttar Pradesh sought to recruit more wallahs for the patients in their asylums.[24] This presented several problems. First, the new attendants had no place to stay—while the Bengal asylum at which this practice had occurred was large enough to accommodate new staff, the Uttar Pradesh asylum had limited space. In a rare letter from one of the native doctors to an administrative friend in Calcutta, we discover "the asylum [was] too crowded for anyone to make sense" and "the close proximity of living quarters has created arguments between the wallahs, some of them complaining the new keepers make the rooms smell."[25] The wage structure and lack of space meant that the new asylum attendants rapidly affected the system already in place, and this disruption was also felt by the administration.

The administration tried to deal with the problem of extra attendants in two ways: by seeking out precedents in asylums in Bengal, and by establishing who had authority over these new employees:

> Under rule 51 of the rules for the control and management of lunatic asylums in Bengal,[26] extra attendants for paying patients in such asylums may be entertained by superintendents in Uttar Pradesh at the cost of the patients' friends…It is not possible to prescribe a standard scale for the employment of such attendants, and thereby to regularize the authority given to the superintendents of asylums. The qualifications and remuneration of such men may obviously vary in different cases, and must be mainly regulated by the amounts which the friends of the patients are willing to pay. In the opinion of the Lieutenant-Governor the matter is essentially one in which a discretion should be left to the local superintendents, provided that the cost of the additional staff…does not fall upon Government.[27]

Essentially, this was a problem of layered authority: the superintendent had local jurisdiction over recruitment in the asylum, but his authority lay under the jurisdiction of the local government, which in turn had to acquiesce to decisions made by the Government of India.[28] Second, there was the problem of what to call these extra attendants:

> Superintendents of asylums employ, as occasion requires, extra servants for such patients at the cost of their friends. The amounts so received are paid into the treasury, and the wages of these extra servants are drawn on supplementary abstract bills…The Accountant-General now points out that these extra attendants should be treated as temporary Government servants and that their entertainment by the superintendents constitutes a re-delegation to a subordinate authority of the power of sanction vested in the local Government, which requires the sanction of the Government of India.[29]

If the new wallahs were considered servants of the patients, then the patients' friends would pay for their entire costs. If, however, they were considered "temporary Government servants," then their affiliation to asylum would not be through the patient, but would render them government employees, and subject to the attendant expectations and benefits. The fact that discretion for these choices usually fell "to the local superintendents" is telling. Ultimately, the colonial

administration wanted "indirect rule," not having to micromanage every aspect of the asylum. This meant relying upon local governments and individual superintendents to make the most effective choices, on-site, within their specific asylums. However, local superintendents might not be very local at all—only rarely did British staff reside at the asylum; overnight the asylums were entirely under the authority of the wallahs. There were offices and bureaucratic spaces for the British staff during the day, but many of the keepers actually slept on the verandahs of the asylums each evening. As such, local men, the newly recruited and existing wallahs, were given responsibility for the institution.

Related to this recruitment angst was the confusion over what kind of wallah should be recruited to asylums. The differences between prison and asylum wallahs reflected the administrative differences between medical and penal spheres of colonial administration.[30] For example, in 1886, Burma was very much under British colonial rule, with many Indians arriving as soldiers, administrators, construction workers, and traders. Burmese asylums fell under the same rubric as asylums built in India, and many Indians lived in Burma as comfortably as they lived on their native soil. The superintendent of the Lunatic Asylum in Rangoon (now known as Yangon) was, unusually, an Indian and he experienced similar angst to his European counterparts in India:

> All the keepers without exception are natives of India, and only a few of them care to stay in their appointments for any length of time…At present, there is no age-limit as regards the keeper staff. Keepers who are, I have considered, too old and feeble to render further useful service have been invalided. Though according to the Asylum Rules, it is apparently permissible for me to fix an age-limit, I would prefer that this be done by [the Inspector-General of Civil Hospitals, Burma], and would suggest that 55 years be made the age of compulsory retirement. This would allow a man entertained at 25 years to complete thirty years' service and qualify for pension.[31]

Superintendent Singh had managed to permeate the asylum community insofar as to supervise the degree to which his own asylum would permit a new, Burmese community. Singh privileged Indian wallahs over the natives of Burma, and was not invested in practicing the same porosity of asylum life as was seen in the Uttar Pradesh asylum at this time. Singh's concern for the kind of "keeper" employed at his asylum

reveals a real reflection over the nature of his job and the role of his institution in this annexed land:

> I hope that you will see…there is the continual risk of injury by dangerous inmates to be considered and the care of the insane demands from a keeper an amount of self-control and tact which is not required of jail warders or nursing orderlies in hospitals, and which is not likely to be found in the lowest class of applicant. The keeper staff is the backbone of an asylum and the qualities of character of individual keepers are more important to the patient's welfare than are those of the member of the superior staff with whom they are not constantly associated. When the wallahs of the Bombay, Lahore and Agra Asylums drawing above Rs.10 per mensem and who are recruited locally are classed as being in superior service, I am unable to understand why such concessions should not be extended to the asylum keepers here.[32]

In Uttar Pradesh and in Burma, events that occurred on the ground gradually ascended the administrative ladder of British bureaucracy to affect other asylums and practices. In Burma, Superintendent Singh was able to use his knowledge of Bombay, Lahore, and Agra asylums to petition for higher wages in Burmese asylums. In Uttar Pradesh, "entertaining" extra attendants in asylums was "a procedure of long standing," a "procedure" that began, in situ, at the turn of the century, in specific asylums. By 1910, a scheme begun by patients' friends and families in an almost subaltern fashion was gradually fortified and made "official" by the Government of India. The local community had expanded into the colonial administration. The friends, communities, and wallahs were significant actors not only on the ground in local asylum communities, but also in the way the colonial system was run. This was indeed a "re-delegation of the power of sanction vested in the local Government."

The notion of the British state extracting political intelligence and information from local communities is not new. Christopher Bayly's analysis of British colonialism during the first two-thirds of the nineteenth century reconceptualized a shifting "information order" in north India.[33] Bayly's monograph is less concerned with intelligence in terms of "spying," and more concerned with social communication.[34] Initial efforts to gain information were impeded by Orientalist attitudes toward Indian culture, which underestimated the value of local people and local knowledge, and prevented British officers from realizing that Western rule was unappealing to their subjects. Only

after the military disasters in Afghanistan in 1842 did the British government realize the benefits of intellectual debate with their subjects about geography, language, astronomy, and medicine. Bayly's analysis raises interesting questions about those elites who balanced precariously between promoting colonial science as a quest for pure knowledge in their midst and participating in the British search for power. It also raises questions for what British asylum superintendents believed to be their purpose at the helm of these asylums; as undistinguished men in a large imperial workforce, they were in no doubt of their unimportance in the middle of the century.

Psychiatry was not yet a coherent discipline that could be debated in the subcontinent. However, as the case of the Uttar Pradesh asylum shows, the chai wallahs were essential to imperial officers learning more about their own imperial system. Neither the chai wallahs nor many of these asylum superintendents were part of India's intellectual milieu; however, Bayly's premise for social communication still stands. The asylum was a site of information exchange, and not just for information pertinent to the management of the insane. As asylum superintendents benefited from gossiping with the chai wallahs, so did other community members who actively participated in asylum life.

Reading against the dominant voice in the asylum reports, we see the extent to which the British administrators were listening to their subordinate staff, be they wallah, keeper, or warder. In 1869, Dr. Payne, the superintendent of Dullunda wrote that

> Babu Nibaran Chandra Banerjee is well-qualified in his task of cooking the daily meal, which the lunatics gladly receive each day in the courtyard. Old Babu has often suggested we reduce the quantity of spices we provide our lunatics, leading as it does to violence and intractable danger for the others and in the town…Babu's suggestion is both less expensive and, it seems, efficient in reducing the maniacal nature inherent to the lower castes…We no longer purchase the pagli[35] spice, much to the dissatisfaction of our peons, who regularly used it to flavour their foodstuffs.[36]

Old Babu's recommendation to reduce the spiciness of the food demonstrates his personal belief that spice itself caused insanity. Although Western medical thought included a consideration of diet in promoting good health, by the mid-nineteenth century, such ideas, based as they were in humoral theory, were regularly overlooked in favour of the growing medical interest in contagion, degeneration, and mesmerism.

While we do not have demographic data for Old Babu, it is certain he was not a student of Western medical theory. His ideas for reducing the spiciness of asylum meals would have been novel to the asylum superintendent, who would have relied on Old Babu to make recommendations, owing to the highly ritualized way many believed Indian food had to be cooked, including caste-based rules and proscriptions. Moreover, Old Babu's recommendations were at odds with some of the other Indian staff: the peons, whom Payne mentions at the end of his letter, were upset at the reduction of spiciness in asylum meals. As such, we see three ideas of the management of diets within the asylum present in Payne's letter: Old Babu's, the peons', and Dr. Payne's.

In effect, with European and government employees being exposed to so many local and "indigenous" ideas in the asylum, we can begin to see a hybridized form of asylum management developing. This hybrid system challenged the assumed dominance of Western knowledge in the colonies. The actors who contributed to this new kind of knowledge were not stagnant within the asylum—they moved beyond the building, transporting and communicating knowledge across its walls, making the asylum very much a part of the fabric of everyday life in colonial India.

The *Anandabazaar patrika*, a Bengali language newspaper, reported a riot that broke out in the local market near Dullunda in 1869, soon after the asylum had stopped purchasing large quantities of spices from the local bazaar. One group of vendors insisted that, borrowing from Hindu law, the British authorities should intervene and buy up the excess spices that the vendors had been unable to sell.[37] Dr. Payne's decision to follow Old Babu's advice had an impact on the community at large. The spice vendors in the market had relied upon the asylum's custom to make significant profit, but Old Babu's suggestion had cost these vendors this profit. They were also enraged that the asylum's association between lunacy and spicy food had carried beyond the asylum to affect the community's beliefs—this resulted in an even greater reduction in the vendors' sales of spices.[38]

One of the consequences of this riot was the loss of employment by Old Babu's own family. They were *paan* sellers in the local village, but Old Babu's recommendations had severely damaged the economic productivity of several of their peers and neighbors.[39] With a general embargo placed on buying their *paan*, Old Babu's brother and nephew could no longer support the rest of the family. As a representative of colonial impartiality, Dr. Payne was asked to intervene by both Old Babu and the local spice vendors. We do not have a record of what was

said; however, Old Babu's family consequently began to work more closely with the asylum: his nephew found employment as a janitor, and his father worked alongside Old Babu in the kitchens.[40] Dr. Payne, under the legacy of the *Arthashastra*, had been asked to intervene as a representative of the ruling class. In this example, the asylum was both the impetus for conflict and the location of a solution. Conflicts beyond the asylum walls were able to penetrate the institution, and thus the asylum became appropriated within local Bengali politics.

As this story shows, local communities in Bengal often entered and interacted with the inhabitants of British-built native asylums; this behaviour was in contrast to the highly isolated and self-contained ways in which public asylums operated in Europe. The asylum was not an impenetrable monolith of colonial conquest but a space that was appropriated by the local community. It was not simply a place of therapy, but a space for employment, trade, socializing, and literal "asylum."

Refuge and Kinship

The "native" lunatic asylum was sometimes a place of refuge. Patna Asylum, built in 1863 along the banks of the River Ganges, was a public asylum funded entirely by the state and donations from charitable groups such as missionaries. The building was built entirely to the specifications of a Civil Surgeon, R. F. Hutchinson, whose detailed reports of the sanitary conditions, the location of windows and ventilation, and inmates' daily occupations provide rich insights into the everyday events of a typical Bengal asylum.[41] Hutchinson seems to have borrowed heavily from the Kirkbride Plan, which was a system of lunatic asylum design advocated by Thomas Kirkbride, an American psychiatrist, earlier in the century.[42] Kirkbride's asylum design was itself based on a philosophy of "moral treatment," and a typical Kirkbride asylum had long "wings" so that each patient had not only comfort and privacy, but also sunlight and fresh air. The grand appearance of the building was meant to have a curative effect on the patients, who were believed to internalize the pleasance of their surroundings—this was an idea to which Hutchinson also subscribed. On account of its beautiful appearance, however, Hutchinson's asylum in Patna received an inordinate number of requests for admission, and it expanded each decade with a new wing or set of buildings, until it looked quite different from Hutchinson's original plan.[43]

During a particularly heavy storm in 1880, low-lying areas of Patna became flooded. Huge walls of mud moved along the Ganges and covered much of the town. For safety and shelter, most of the residents in the local village moved into Patna Asylum, which was relatively safe and stable on account of its constant maintenance and sturdier foundations. Overnight, the lunatic asylum became a literal asylum: a place of refuge. Once it became clear that the damage to the village could not be repaired immediately, the residents made more permanent dwellings inside the asylum. The central courtyard, where patients had been encouraged to run and maintain physical exercise, became the central bazaar. Families took to staying in particular wards or dormitories according to various village-based hierarchies; gurus and religious leaders utilized the already divided kitchen to prepare their food; the bureaucratic spaces, such as the superintendent's office, became the locus of village meetings, and even the British staff quarters—limited as they were—were appropriate by various village elders or those who required more comfortable sleeping space. Despite all the chaos, the assistant superintendent of the asylum, W. D. Stewart, found himself "quite enjoying the interruption," and there was a spontaneous musical skit that was performed that evening: "We joined in the dance and song, and applauded the performance of each artist with enthusiasm…insane and sane alike called upon their fellows to join…There never was any accident, but all behaved admirably and were very well pleased."[44]

Once the damage to the town had been somewhat repaired, the residents moved back to their homes; however, the permeability of the asylum had been rendered more permanent than anyone could have predicted. We can glean such information from the vernacular press: Lord Lytton had enacted the Vernacular Press Act two years prior to Patna's flood, and summaries of local newspapers were kept as a result. While some saw this act as an effort to control local media and prevent criticism of British rule, others saw it as a progressive move that encouraged local debate.[45] For example, we learn that the assistant superintendent "often visits to play *teen pakaad*" with his new friends in the village;[46] the staff found it much easier to buy supplies and haggle over prices in the local market;[47] and when one of the secretaries fell ill, first an Ayurvedic practitioner from the village came to visit, before a British medical officer could be called to treat him.[48] With the local community permeating the asylum walls, the Patna flooding allowed a convivial relationship between the asylum

and village that had nothing to do with treating patients or culturally specific notions of insanity.

All asylum communities did not share this level of conviviality. However, superintendents and British staff often exhibited concern for the asylum and concern for the asylum community in parallel. This was especially true with regard to the families that visited the asylums regularly. Families were important not only as real actors who entered the asylum, but also in how they influenced asylum discourse among other actors. As the private sphere of the family expanded to include the asylum, a somewhat domesticated organization of lunacy came into existence, which complicates modern scholars' understanding of kinship in this period.[49] This was especially important in the first three decades after the Lunacy Acts, when the asylum superintendents did not have families of their own residing in India.

Wallahs and families were active in the asylum, which encouraged the British asylum stuff to become more active and affable with their local communities. The next section shows how the ecology of the asylum allows us to examine and include other kinds of historical actors in our analyses, beyond the physical site of the colonial institution.

Beyond the Walls

While we may acknowledge the contributions to the asylum community of those actors working on the ground more readily, it is important to realize that their machinations are not entirely separate from the colonial machinations of the administration. We can stretch the metaphor of the ecological asylum community into administrative offices and groups of people far removed from the architecture of the asylum. The movements and correspondence between asylum communities demonstrates the existence of a group of actors involved in the management of the asylum, who existed beyond the walls of these institutions. Most of this sub-official realm was constituted by secretaries, who drafted and sent the official telegrams that authorized patient transfers.

The most common message at the official and sub-official levels was to request the transfer of asylum inmates and attendants, at their behest, that of their relatives, or under local official orders. A brief tally of such requests within the National Archives of India shows up to 100 different individual "alleged lunatics" being moved (voluntarily

or involuntarily) every year of the 1880s,[50] and over 200 attendants moving between asylums during this decade.[51] The asylum community was not simply constituted of people moving at a very local and proximal level; men and women were transferred across huge distances, rendering the spaces between asylums part of the conceptual territory of the asylum. It is difficult to track the movement of such historically peripheral characters, but the ecology of the asylum does allow us to comprehend the great volume of men and women who constituted British India, beyond the urban records of cities, towns, and institutions.

Why might asylum patients be transferred? Lack of space in increasingly crowded and dilapidated buildings was the most common reason. One sub-official message mentions the "capture" of an escaped "lunatic," by the name of Manraj, in Burma, and the need to return him to Bombay, to an asylum where his family could visit and care for him.[52] The notion of the Indian family and the importance of kinship were highly respected by the colonial government.[53] As such, the administrators who corresponded regarding Manraj, often sub-officially, were very keen to return him to his home in Bombay. The popular belief that being in an unfamiliar environment exacerbated lunacy was corroborated by the medical expertise (of British and local men) sought by these administrators.[54] Despite their best efforts, however, the sub-official network was unable to secure adequate transport from Burma, and the man died of natural causes three months after his request was first made.

This story adds another set of actors to think about: the transporting staff. Sometimes asylum patients were transferred using government vehicles, but a more economical choice, which was employed more often, was to request traders, or local men who traveled regularly and owned transport, to transfer them. In the case of Manraj, above, several administrators in the Medical Department sought the help of sailors and naval captains to transfer him from Burma to the port of Calcutta and, from there, eastward to Bombay. One such sub-official telegram writes:

> As it is not possible to obtain a passage for Manraj on an ordinary steamer, and his further detention in this country is likely to prejudice his chances of recovery, we may ask the Army Department whether a passage in a troopship can be arranged for him. Might it be possible to allot a passage for the patient either in the *Rewa* or the *Dongola*, which leave Burma on the 6th and 20th of next month?[55]

The telegram invokes both the Army Department and the already rejected connection with "ordinary steamers" and their captains. The sources do not tell us why Manraj could not be transferred in this manner, but the subsequent responses of the Army Medical Board secretary tells us that transport via troopship was considered carefully.[56] Sadly, Manraj died before he was able to transfer home to Bombay, either because communication for his transport took so long or due to physical ailment. Despite the asylum being a permeable space, across such long distances the patients were still subject to the whims of their government.

It was normal for so many letters to be written regarding such a specific issue. In 1893, Chief Commissioners of Burma, Assam, and the Central Provinces, and Secretaries to the Governments of Madras, Bombay, Bengal, the Northwestern Provinces, and Oudh all wrote, at the behest of the superintendent of the lunatic asylum at Delhi, to ask that the privileges received by hospital assistants and jail warders be given to "warders of lunatic asylums" under article 320 of the Civil Service Regulations.[57] The article permitted jail warders and others "while ill in hospital or dispensary or receiving medical aid as outdoor patients of the hospitals or dispensary of the station…half-pay for certain periods."[58] Privileges were extended, and another round of correspondence was distributed to confirm the change.

Burma is an excellent locus from which to analyze the administrative elements of the asylum community, which existed beyond the physical institution, and corresponded daily with administrators from other departments. In December 1870, as a result of a survey that found Burmese lunatics to be lacking in therapeutic institutions,[59] the Chief Commissioner of British Burma and the Secretary to the Government of India both communicated the establishment of a lunatic asylum at Rangoon. This marked the end of almost a year of correspondence between a variety of subordinate secretaries in the Government of India and in the local government of Burma. The need was articulated thus:

> It is an institution which in the interests of humanity is very much needed, and the removal of our insane population from the Criminal Jails to a special Asylum will be felt as a boon by all classes of people. The Chief Commissioner therefore trusts that the present application will meet with the favourable consideration of His Excellency, and he solicits that he may be favoured with a reply as early a date as possible.[60]

The opinions of the Inspector General of Prisons and the Sanitary Commissioner were also invoked, via their secretaries and subordinate officers. The Inspector General of Prisons in Burma was eager to "introduce a large convict element into the constitution of the establishment," garnering employment of his staff as "more trustworthy, much more intelligent and much more orderly than any whom it is possible to find amongst the class of free natives of India which alone would be disposed to take service in the institutions."[61] The department of the Sanitary Commission penned several notes to "Surgeon-Major Payne, who has so long had the superintendence of both the European and Native Asylums here,"[62] to garner the opinion of the Dullunda and Bhowanipore asylum administrators for the number of staff required to successfully run a lunatic asylum in Burma:

> For so small an institution, a matron is unnecessary, as with the aid of native women servants, the female lunatics can be overlooked by a Deputy Overseer…A Native Doctor on Rupees 25 would be sufficient in place of a Hospital Assistant on Rupees 50.
>
> Cooks, sweepers and bhisties may be convicts without any disadvantage, but for personal attendance on the lunatics they will not, I fear, answer well. The work is of an exceptional kind, requiring special training, and it is therefore desirable that…the keepers should not be convicts but paid servants.[63]

In this section, we see the "sub-official" colonial administration at work alongside the physical community of the asylum at specific sites. Reading the official documentation alongside the vernacular press and unofficial correspondence thus gives us much more than simply richer historical detail; it constructs a much larger notion of community. Alongside the doctors, the patients, the asylum attendants, and the actors "on the ground," we also find a network of administrators, visiting missionaries, and existing princes and sovereigns with their own jurisdictions. We can conceptualize this community, then, as the outward extension of the physical landscape of the asylum, or we can imagine this community as the permeation of local people into colonial spaces. In some ways, we can think of the correspondence and movements of wallahs and attendants across asylums as doing the same work of wallahs, dhobis, and locals earlier in the chapter, on a macrocosmic scale. By circulating both people and ideas about asylum management, asylums were connected in a dynamic community, permeated by a variety of actors.

In many ways, these asylums were a means for the Government of India to know the natives—but not in a Foucauldian sense. Inspector General O'Callaghan, of Lucknow, and Dr. Payne, of Calcutta, were not enumerating and disciplining native minds. They developed a rapport with their patients, the visiting families, and the local communities. They knew the natives in the same way that the natives knew them: informally, domestically, for work, and through relaxed socializing. The increasingly permeable walls of the asylum permitted the greater community to use the asylum almost seamlessly in conjunction with their own communal and public spaces. This space was officially the property of the British government, but, in practice, colonial representatives and colonized subjects had the same access to it; in fact, some members of the community, such as the chai wallahs, had greater authority over this space, in terms of their knowledge of it, than the British staff.

This chapter has shown that, at each site, an asylum community existed, functioning only tenuously within the confines of the colonial structures above it. Each institution exhibited a degree of permeability across the asylum walls, where local and imperial knowledge interacted. The notion of "community" both as a physical description of the people living and working around the asylum, and also ecologically to describe the entire asylum system, helps us to construct a history of these spaces that constituted madness, on the ground and within the colonial administration. The actors who constitute the asylum community cover a wider spectrum than might initially be assumed.

Notes

1. R. Edwards (1870), "Correspondence Comprising the Lunacy Acts, and the Statutes Relating to Criminal Lunatics, and the Asylums Officers' Super Annuation Act," *Calcutta Medical Gazette*, p. 326.
2. Categories of madness in the nineteenth century were neither absolute nor constant. The category of "violent insane" was taken directly from European psychiatry, and was a common diagnosis for any patient who behaved violently on admission. Until Emil Kraepelin's diagnostic categories at the turn of the twentieth century, psychiatry did not possess a common and consistent diagnostic vocabulary. Eric J. Engstrom and Matthias M. Weber (2007), "Making Kraepelin History: A Great Instauration?" *History of Psychiatry,* 18 (3): 267–273.
3. Despite his enlightened view of white insanes, Edwards himself never followed up these ideas with identifiable action. R. Edwards (1873), Letter to Beatrice, October 4, National Archives of India (NAI).

4. Local families who were invested in indigenous or familiar therapies sought out local healers, such as *vaidyas* and *hakims*. So much so that by the end of the century, doctors in medical hospitals in India actively recruited such healers to act as in-house locums. If British officers were sensitive to caste taboos and local concerns over women in public spaces, they also recruited high-caste or even female medical staff to encourage families to enter these colonial medical spaces. Kumari Jayawardena (1995), *The White Woman's Other Burden: Western Women and South Asia during British Colonial Rule* (New York: Routledge), p. 40, has argued this was a strategic maneuver, exploiting traditional norms to strong-arm Indian communities into participating with the colonial regime.
5. For more detail about the history of moral reform in British psychiatry, see Anne Digby (1985), *Madness, Morality and Medicine* (Cambridge and New York: Cambridge University Press).
6. Nupur Chaudhuri, Sherry J. Katz, and Mary Elizabeth Perry, eds. (2010), *Contesting Archives: Finding Women in the Sources* (Urbana: University of Illinois Press), p. 3.
7. Bengal Secretariat (1863), *Annual Report of the Insane Asylums in Bengal for the Year 1862* (Calcutta: Bengal Secretariat Office, NAI).
8. This was a long-standing practice, which was economically efficient, especially in the aftermath of the 1850s uprisings. Bengal Secretariat (1909), *Triennial Report on the Lunatic Asylums of Bengal for the Years 1906, 1907 and 1908* (Calcutta: Bengal Secretariat Book Depot, British Library [BL]).
9. We see this commingling in Dr. Edwards's description of Mannu and his father's belief system, described earlier in this chapter.
10. A. C. C. DeRenzy (1878), *Report on the Tezpur Lunatic Asylum 1877* (Shillong: Assam Secretariat Press).
11. Kim Wagner's study of phrenology in colonial India speaks to the way in which nineteenth-century British categories tended to group all Muslims and all Hindus as mutually exclusive subjects. Wagner describes how "Hindus and Muslims would…eat separately but drink and smoke together. Not to say that caste and religious divisions were non-existent, but rather they were flexible and that different norms took precedence depending on practical needs and circumstances." K. A. Wagner (2009), "Confessions of a Skull: Phrenology and Colonial Knowledge in Early Nineteenth-Century India," *History Workshop Journal*, 69 (1): 27–51, 31.
12. *Jemadar* was a rank used in the British Indian Army to describe men who assisted their British commander, filling regimental positions. As the British Raj took over the running of public or state-funded asylums, many military men were recruited to their organization and management.
13. Letter No. 127, February 22, 1873, Dehli [sic] Division—March, Nos. 51–52, *Annual Report on the Lunatic Asylums in the Punjab for 1872*, Home Department, Medical Branch, 1874, NAI, p. 8.
14. Statement of Newspapers, Punjab, 1873, BL.
15. *Pagla* is the masculine adjective for insanity. *Pagla ghar* was often used as a phrase in the Hindi-speaking regions of India to describe the asylum. In

Bengali, where rhyming slang was often invoked, the asylum was often described as a *paglee baree*, using the feminine adjective for insanity to rhyme with the Bengali word for house.

16. R. S. McGregor, ed. (1997), *The Oxford Hindi-English Dictionary* (New Delhi: Oxford University Press), p. 915.
17. The history and dominance of tea in Indian culture is far too expansive to summarize here. However, tea plants have been native to East and South Asia for millennia, and drinking tea has been a common practice in Assam and the northeast of India for almost as long. The Dutch and British East India Companies began their trading monopolies in the subcontinent to capitalize on tea production and consumption. See Colleen Taylor Sen (2004), *Food Culture in India* (Connecticut: Greenwood Press), pp. 19–27; E. M. Jacobs (2009), *In Pursuit of Pepper and Tea: The Story of the Dutch East India Company* (Amsterdam: Netherlands Maritime Museum); Alan Macfarlane and Iris Macfarlane (2004), *The Empire of Tea: The Remarkable History of the Plant That Took over the World* (Woodstock, NY: Overlook Press); Jane Pettigrew (2001), *A Social History of Tea* (London: National Trust).
18. It might be possible to perform the same exercise using the *dhobis*, the laundrymen who were often recruited to clean the clothes of homes and institutions alike. However, dhobis appear in the historical record even less than the chai wallahs, so this may prove difficult. Dhobis preceded modern professional dry cleaners. In the nineteenth century, they would have accessed the asylums through the side entrances, and had little contact with the British staff (who left the historical record we rely upon). Moreover, as asylums became more self-sufficient, many of the patients would have been encouraged to wash their own linen, as a form of occupational therapy, instead of relying upon the dhobis. There are few studies on the class and caste of men who comprised the dhobis, for example, Lucy Norris (March 2005), "Dhobighat," *Visual Anthropology Review,* 21 (1–2): 168–179.
19. This represents approximately three visits every two days, which seems an excessive amount, until you consider the prevalence of tea within British and Indian culture. Bengal Medical Department (1866), *General Report on the Lunatic Asylums, Vaccination and Dispensaries in the Bengal Presidency 1865* (Calcutta: Office of Superintendent of Government Printing, BL).
20. Correspondence, R. D. O'Callaghan, Lucknow, Indian Medical Department to H. W. Norman, Military Department, August 5, 1865, BL.
21. Correspondence, J. T. C. Ross, to Inspector General of Hospitals, Fort William, July 11, 1865, BL. I cannot conceive that this asylum was planned because of demand by local communities. I imagine that the lack (albeit not complete absence) of high-caste patients in these asylums triggered the administration into assuming this was an issue of purity. It is more likely that higher-caste insanes were kept at home, regardless of the institutional help available to them. Karen I. Leonard, among others, has written extensively on caste and caste practices in India: (1994), *Social History of an Indian Caste*: *The Kayasths of Hyderabad* (London: Orient BlackSwan); see also Nandini

Sundar (July 2000), "Caste as Census Category: Implications for Sociology," *Current Sociology,* 48 (3): 111–126.

22. Correspondence, R. D. O'Callaghan, to E. C. Bayley, September 13, 1865, BL.
23. *Conditions under which the Rank of Sub-Assistant Surgeon should be Bestowed upon Hospital Assistants*, Home Department, Public, December 1, 1870, Nos. 45–46, NAI.
24. *Entertainment of Extra Attendants for Paying Patients by the Superintendents of Lunatic Asylums at the Cost of Patients' Friends*, Home Department, Medical A, February 1910, pp. 36–37, NAI.
25. Correspondence, November 25, 1909, BL.
26. "Extra attendants for paying patients may be entertained by the Superintendent at the cost of the patient's friends. The wages of such attendants will be drawn from the local treasury in abstract bills, or paid from permanent advance; and all money received on account of servants from friends of lunatics will be credited under asylum receipts and paid into the treasury. In no case can payment from a patient to a fixed servant of an asylum be permitted." Quoted in V/2/349, BL, f. 2.
27. Correspondence, H. Wheeler, Municipal (Medical Department) to the Secretary to the Government of India, Home Department, no. 4282-Ex, BL, f. 4.
28. This was similar to the layered sovereignty that was seen in the political domain.
29. Correspondence, Colonel R. Macrae to the Secretary to the Government of Bengal, Municipal (Medical) Department, NAI.
30. The various ways in which medical and penal spheres of colonial administration interacted in the asylum are addressed in Anouska Bhattacharyya (2013), "Indian Insanes: Lunacy in the 'Native' Asylums of Colonial India, 1858–1912," PhD thesis, Harvard University.
31. Correspondence: Letter no. 439 P. C., March 10. 1910, from W. S. J. Singh, Lunatic Asylum, Rangoon, to the Inspector-General of Civil Hospitals, Burma; Home Department, Medical A, November 1910, Nos. 78–79, NAI.
32. Correspondence: Letter no. 439 P. C., Singh to the Inspector-General of Civil Hospitals, March 10, 1910, No. 79, NAI.
33. C. A. Bayly (1996), *Empire and Information: Intelligence Gathering and Social Communication in India, 1780–1870* (Cambridge: Cambridge University Press), p. 3.
34. J. Habermas (1979), *Communication and the Evolution of Society*, trans. T. McCarthy (Boston, MA: Beacon Press); J. Habermas (1989), *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*, trans. Thomas Burger and Frederick Lawrence (Cambridge: MIT Press). Bayly acknowledges that the British resorted to traditional intelligence gathering both during and after the events of 1857 and 1858.
35. *Pagli* is a feminized Bengali adjective for "mad" or "insane."
36. Dr. F. Payne (1869), *Annual Commentary on Bhowanipore, a Lunatic Asylum in Bengal* (Calcutta: BL). Old Babu was not a real name but a nickname, or

dak-naam. It is likely that the staff first started calling him Babu, before the patients did, too, and then the British staff themselves.

37. *Anandabazaar Patrika*, December 14, 1869, BL.
38. Ibid.
39. Their familiarity with the various spices used to make *paan* may be the reason that Old Babu held dietetic and spice-related ideas about lunacy.
40. Correspondence, V/28/1870, BL.
41. Bengal Medical Department (1865), "Patna," in *General Report on the Lunatic Asylums of the Bengal Presidency 1864* (Calcutta: NAI), p. 8.
42. Ibid., pp. 10–13.
43. Bengal Medical Department (1882), *General Report on the Lunatic Asylums of the Bengal Presidency 1881* (Calcutta: NAI).
44. In his report, Stewart also wrote how "for some days after the nautch, [we] endeavoured to set up an amateur performance, and amuse [ourselves] with cymbals, guitars and other native instruments after hours." J. T. C. Ross, Indian Medical Department (1886), *General Report on the Lunatic Asylums, Vaccination and Dispensaries in the Bengal Presidency 1884* (Calcutta: BL).
45. For an example of the former, see M. Javaid Akhtar, A. A. Ali, and S. Akhtar (2010), "The Role of Vernacular Press in Subcontinent during the British Rule: A Study of Perceptions," *Pakistan Journal of Social Sciences,* 30 (1): 71–84. For a less critical view, see J. Natarajan (2000), *History of Indian Journalism* (Delhi: Government of India), pp. 100–112.
46. This seems to have been a card game. "Prabat Kaabar," *Vernacular Newspapers Report*, November 1880 (NAI), p. 136.
47. "We have been able to purchase…rice and dhal much more cheaply…The doctor has shown remarkable talent at jhanjata." Bengal Medical Department (1882), *General Report on the Lunatic Asylums of the Bengal Presidency 1881* (Calcutta: NAI), p. 3.
48. Bengal Medical Department (1883), *General Report on the Lunatic Asylums of the Bengal Presidency 1882* (Calcutta: NAI).
49. Historical anthropologists have built on the chequered relationship between history and anthropology to examine the meanings of caste and kinship in this time period. These hybrid works are useful in reevaluating the interaction between family, asylum, and community within the routine opposition of "tradition" and "modernity" in India. Saloni Mathur (2000), "History and Anthropology in South Asia: Rethinking the Archive," *Annual Review of Anthropology,* 29: 29–46. See also Saurabh Dube (2007), "Historical Anthropology of Modern India," *History Compass,* 5: 763–779.
50. See, for example, the tables at the end of Bengal Medical Department (1880–1889), *Annual Report of Lunatic Asylums in the Bombay Presidency* (Calcutta: NAI).
51. *Suggestions and Instructions Regarding the Construction of Native Asylums*, Home Department, Medical B, January 1891, Nos. 92–98, NAI.
52. Letter no. 124, March 11, 1884, "Requesting the Removal of an Alleged Lunatic Named Manraj from Burma to Bombay," Home Department, Medical A, April 1884, Nos. 124–125, NAI.

53. Gauri Viswanathan has written extensively about kinship in India, from a historical anthropology perspective: (1998), *Masks of Conquest: Literary Study and British Rule in India* (Oxford: Oxford University Press).
54. British officials outside the immediate purveyance of the asylum read such texts as Henry Maudsley (1886), *Natural Causes and Supernatural Seemings* (London: K. Paul, Trench); and William James Moore (1883), *A Manual of Family Medicine and Hygiene for India* (London: J. & A. Churchill), both of which suggested that lunacy had environmental as well as hereditary causes.
55. Letter no. 525, August 20, 1884, "Removal to Bombay of Manraj, an Escaped Lunatic," Home Department, Medical B, October 1884, 73–85, NAI.
56. There is a note, the author of which is unknown, written by hand on the telegraph, describing how passage to Bombay via Calcutta can be arranged.
57. Letters for the extension of the provision of Article 320 of the Civil Service Regulations to Warders of the Lunatic Asylums, Home Department, Medical, September 1893, Nos. 14–21; Article 320 of the Civil Service Regulations, Resolution Nos. 661–672/6 Jails, dated November 7, 1891, NAI.
58. Proceedings of the Government of India in the Home Department (Medical), Simla, September 9, 1893, 21, NAI.
59. The 1868 asylums survey was not a catalyst for asylum reform in general, but it revealed a dearth of asylum facilities in some parts of the subcontinent, such as in British Burma.
60. Letter No. 152, December 10, 1870, from Malcolm Furlong, to E. C. Bayley, Home Department, Public A, April 1871, Nos. 38–39, NAI.
61. Letter of September 28, 1870, from the office of the Inspector General of Prisons, British Burmah [sic], Home Department, Public A, April 1871, Nos. 38–39, NAI.
62. Surgeon-Major Arthur Payne was the long-serving superintendent of Dullunda and Bhowanipore Lunatic Asylums in Bengal. Letter No. 38, April 8, 1871, from the office of J. W. M. Cunningham, to E. C. Bayley, Home Department, Public A, April 1871, Nos. 38–39, NAI.
63. Correspondence, W. M. S., 1–12–70, to J. M. C., Home Department, Public A, April 1871, NAI.

5

Russian Medical Diplomacy in Ethiopia, 1896–1913

Rashed Chowdhury[1]

The Russian Empire in the late nineteenth and early twentieth centuries was certainly a great power, but, lacking the far-flung colonies that its peers and competitors, such as the British, French, and Germans possessed, it did not have a global reach in quite the same way as the others—particularly the British and the French—did. Although Russian merchant steamships plied the waters of the Indian Ocean and Russian explorers added to the sum of European knowledge about far-flung regions of the Indian Ocean World (IOW), Russia's political weight was, for the most part, absent from the Indian Ocean littoral. Nevertheless, during this period, which coincided with the rule of Emperor Nicholas II (r. 1894–1917), Russia sought to make itself more visible on the international stage.[2] This desire to show the flag extended even to areas that Russian diplomats acknowledged were far from its true sphere of interest, most notably Ethiopia, for which many Russians felt a cultural affinity, which was derived, to some extent, from similarities in the predominant strains of Christianity in the two empires.

Furthermore, the Russian government and its diplomats saw support for Ethiopia as a means to frustrate the ambitions of rival European powers, none more so than the upstart Italy, which was attempting to turn Ethiopia into a protectorate. Although Emperor Menelik II of Ethiopia (r. 1889–1913) was getting firearms from different European sources, the Russians sent him "135 cases of rifles and numerous cases of ammunition" in August 1895 when an Ethiopian delegation came to ask for assistance.[3] These weapons would prove very useful to the

Ethiopians at the Battle of Adwa the following year, in which Ethiopia emerged victorious.[4]

After the Battle of Adwa, however, medicine replaced weapons as the cornerstone of Russian diplomacy in Ethiopia. The Russian Red Cross medical mission of 1896 set up a field hospital and inaugurated a ten-year period when the inhabitants of Addis Ababa and its environs could count on Russian doctors for free health care, generating significant goodwill for Russia. Both Ethiopian and Western scholars acknowledge that Russia set up the first hospital in Ethiopian history and that Russian medical aid was significant for Menelik and his people.[5] Yet, apart from bare-bone outlines, the story of Russian medicine in Ethiopia remains untold in English. Using a range of published Russian primary sources, including memoirs and diplomatic correspondence, this chapter examines the growth and decline of Russian relations with Ethiopia during the reigns of Nicholas and Menelik, and the role that medicine and physicians played in this relationship.

The late nineteenth century was a time when Western medicine made inroads throughout much of the IOW. In some cases, as in British India, the colonial authorities' patronage of Western medicine gradually helped make it the dominant form of medicine for both the colonizers and the colonized.[6] In areas that had not been colonized by Western powers, as in the Ottoman provinces of the Red Sea and Persian Gulf littoral, the imperial government imposed international quarantine regulations on pilgrims, which both introduced Western medicine into these areas and attempted to make it normative.[7] The case of Ethiopia was somewhat different, in that its own imperial government introduced Western medicine to the country by means of a friendly European power, namely Russia, with Russia bearing the expense and the benefits largely accruing to Ethiopia. By examining Russian diplomatic maneuvering in the field of medicine in Ethiopia during the period under examination, this chapter also highlights the complexity of the broader rivalry, in which the Italians and the French vied with each other, the British, and Menelik for preeminence in this corner of the IOW.

The Russian Red Cross Mission of 1896

When news of the Ethiopian victory against the better armed Italians at Adwa on February 29, 1896 reached Russia, the stage was set for a more visible contribution by the Russians to the Ethiopian cause. In his account of the history of the Russian hospital in Ethiopia, the army

doctor M. I. Lebedinsky, who served as a physician in Ethiopia for several years, notes that the Russian public was "thunderstruck" at the news that "the well-disciplined Italian army, with all its artillery, had been subjected to almost complete annihilation by people armed with spears, swords and shields."[8] He goes on to add that Russians, at large, were unaware at the time that the Ethiopians, too, had rifles.

A group of Italians living in the Russian Black Sea port of Odessa, upon hearing the news, started raising funds to help Italian soldiers wounded at Adwa. This collection, while lawful in its own right, risked embarrassing the Russian government, which wanted to position Russia as a power sympathetic to Ethiopia.[9] Prior to the Italian defeat, according to Lebedinsky, few Russians had been "interested in the fact that somewhere in far-away Africa the Italians were conducting some sort of war." However, once the Ethiopians had carried the day, the Russian public became interested in these "black people related to us by faith," as well as their "glorious and victorious leader, Menelik."[10] The Russian press expressed support for Ethiopia and called for the government to send medical aid to the victors. The Russian Red Cross Society (ROKK), at a meeting in March 1896, decided to send a medical team (literally a *sanitarnyĭ otriad* or sanitary unit) to Ethiopia and allotted 100,000 rubles from its budget for the mission.[11] Part of the motivation behind the decision to send this team was that, as far as the Russians were concerned, "medical aid on the Abyssinian side was completely absent."[12] Thus, the Russian state as well as its medical establishment subscribed to the belief that traditional Ethiopian medicine was no medicine at all and that only Western medicine could provide "medical aid."

The Russian Red Cross, it should be noted, had close ties to the royal family, being under the patronage of Maria Feodorovna (1847–1928), the dowager empress.[13] Moreover, it was a hybrid organization, combining the features of a state structure and a non-governmental organization. What this meant, in practice, was that although the ROKK was an autonomous body, with its own budget, employees, and priorities, it nevertheless acted like an arm of the government and an affiliate of the War Ministry. In this capacity, the ROKK had set up and run field hospitals during the Russo-Ottoman War of 1878–1879, sparing the War Ministry both the effort and the expense needed to do so and allowing it to concentrate on fighting.[14]

Now, too, it was clear to all concerned that the Russian Red Cross would represent the Russian state in Ethiopia, rather than Russian civic initiative. The ROKK assembled a team of military medical staff,

consisting of seven doctors (one of whom was a civilian), one pharmacist, four medical students, and four paramedics. It also included 20 "sisters of charity" (nurses) and 16 orderlies "from the lower military ranks." The team was assembled at breakneck speed, and shipped off to Ethiopia on April 6 (March 25, OS), just ten days after the ROKK had taken the decision to dispatch it. The team was headed by General Nikolai Shvedov (1849–1927), himself an army doctor. Lebedinsky attributes the speed with which the Russian Red Cross managed to send the medical team to Ethiopia to the "exceptional energy of the participants of the expedition."[15] A more plausible explanation, however, is that the Red Cross expedition, headed by no less a figure than a general, functioned as a military mission and was thus subject to military discipline, enabling a quick turnaround time.

Apart from one of the seven physicians, the only members of the ROKK mission who were not, strictly speaking, military personnel, were the 20 sisters of charity. Founded in 1854 in the course of the Crimean War, the Exaltation of the Cross Community of Sisters of Charity was the first female nursing order in the world intended specifically for wartime deployment. Like the ROKK, the Community of Sisters of Charity was under the patronage of female members of the Russian royal family: in this case, that of Grand Duchess Elena Pavlovna (1807–1873), followed by her daughter, Grand Duchess Ekaterina Mikhailovna (1827–1894). Following the death of the latter, the Russian Red Cross took charge of the Exaltation of the Cross nurses. These nurses, who were unmarried or widowed women aged between 20 and 40, provided aid to wounded soldiers not only in the Crimean War, but also in the Russo-Ottoman War of 1877–1878, and served in military and civilian hospitals in peacetime.[16]

However, the sisters of charity who left St. Petersburg for Ethiopia in April 1896 would not be able to reach their destination. In order to avoid causing Italy offence through the dispatch of the medical team to help their adversaries, the Russians offered to send a similar team to the region, to be placed "at the disposal of the commander-in-chief of the Italian army." Italy rejected this proposal, but did tactfully grant permission to the Russian team already making its way to Ethiopia to disembark at Massawa, in Italian Eritrea. Nevertheless, when the medical team was in Alexandria, the Italians revoked their permission.[17]

This Italian decision placed the Russian Red Cross team in a difficult position. Alternative routes into Ethiopia from the Red Sea coast were "almost unknown" to the Russians. Moreover, the team was concerned about the possibility of getting bogged down during the rainy

season, which lasted from May to September in Ethiopia. As a result, the leadership of the team decided to send all the sisters of charity back to Russia, and have only the male members of the team proceed to Ethiopia. The medical team, thus reduced in number, continued on from Alexandria to Djibouti, in French Somaliland.[18]

The ROKK mission arrived in Djibouti on April 30, 1896 (NS).[19] According to one of the soldiers accompanying the medical team, Sub-Poruchik (Lieutenant) F. Krindach, the medical personnel intended to travel from Djibouti to Entoto (Addis Ababa) via the Ethiopian city of Harar. Before setting out from Djibouti, they wanted to urgently send word to Harar about their imminent arrival, but would not trust just anyone with the message. Cornet Aleksandr Bulatovich (1870–1919) volunteered for the mission, and proposed to travel to Harar by the French postal route, accompanied by two experienced African couriers. The French in Djibouti saw Bulatovich's idea as a rather bold one, given his lack of experience of travel on camelback, and the extreme heat of the desert.[20] Nevertheless, the Russian Red Cross team accepted Bulatovich's proposal, and he set off for Harar on May 3 (NS) with two couriers, one "Sudanese" and the other "Arab."[21]

The French, whom Krindach calls "our gracious hosts," decorated Bulatovich's camel as a farewell gesture and expressed their admiration for him as the first European who had decided to travel the route at the speed of a courier.[22] Bulatovich reached the Ethiopian border outpost of Gildessa on May 6 (NS) and Harar the following day, thus making the journey of approximately 350 versts (around 370 km) across a largely waterless desert in 90 hours, which was 6 hours faster than the usual speed of African couriers, to the Ethiopians' astonishment and the Russians' pride. According to Krindach, Bulatovich's prowess as a rider earned him sincere respect in a country where Europeans were not held in very high esteem. Thus, through his derring-do in the saddle (he ignored the warning of one of the couriers accompanying him that he would die if he kept up his pace), Bulatovich was able to kill two birds with one stone: he not only conveyed the message about the Red Cross mission's planned arrival in Ethiopia, but also aroused goodwill for the Russians in advance.[23]

Meanwhile, the rest of the Russian medical team proceeded at a much slower pace. According to a report on the expedition written in November 1896 by the head of the Russian Red Cross, Adjutant General Mikhail Kaufman (1821–1902), the ROKK team found it difficult to find a sufficient number of pack animals in Djibouti, as many of the mules previously to be found in the port had been either

rented by Italians (presumably for use in Eritrea), or taken away by the French on their Madagascar Expedition of 1894–1895. Eventually, the French authorities at Obock, a port in French Somaliland, lying across the Gulf of Tadjoura from Djibouti, helped the team find a sufficient number of "camels, mules and horses" for their needs. These, when rented at considerable expense, enabled the team to continue to Harar.[24]

The expedition arrived in Harar on May 27, 1896 (NS) after a "difficult journey" across the Danakil Desert, traveling a total of about 400 versts (approximately 427 km), and having already managed to provide medical care to 49 people. According to Kaufman (who was not present on the scene himself), the team suffered from the heat and most members of the team fell ill during the journey. Though Kaufman does not specify what the illness was, Krindach reports that the team had suffered from "multiple skin and stomach ailments" as a result of the heat in Djibouti. The ROKK medical personnel were expected in Harar, as Bulatovich had conveyed the news about their upcoming arrival. Ras Makonnen (1852–1906), the governor of Harar, was away at Entoto, and was thus not present to greet the medical team. His deputy, Gerazmach Bantye, asked the team to remain in Harar until further orders were received from Menelik.[25]

The ROKK mission began treating patients in Harar, who, in Kaufman's words, received this aid with "obvious trust and gratitude." Meanwhile, Shvedov decided to dispatch Bulatovich once again, this time to Entoto, in order to announce the news of the medical team's arrival in Ethiopia to Menelik and seek his permission for the team to join him in Addis Ababa. Bulatovich duly proceeded to the capital, and was able to travel the approximately 700 versts (747 km) in eight days, once again impressing his Russian colleagues. He met with some suspicion at Entoto, which he was able to allay by explaining the charitable nature of the Red Cross mission. Menelik then invited the ROKK team to proceed to Addis Ababa and ordered Ras Makonnen to return to Harar and personally greet the members of the team. Makonnen met the Russian doctors on July 2 (NS) and asked for some of them to remain in his city, as he believed there were about 1,500 people in Harar in need of medical treatment; this included those in the area who had been wounded at Adwa. As a result, the Red Cross team split in two, with some remaining in Harar and others proceeding to Addis Ababa.[26]

A fortnight later, Ras Makonnen wrote directly to Emperor Nicholas II of Russia to express his "gratitude" and "joy" for the

medical aid provided to Harar. Having informed Nicholas, whom he addressed, among other titles, as "the king of kings of Muscovy," that "Our wounded are being treated by your people, who have arrived from Russia," Makonnen wished him "long years of life and health."[27] His gratitude was well placed: by September 6 (NS), the ROKK team at Harar had treated not the expected 1,500 patients, but as many as 7,216.[28]

The bulk of the medical staff of the Russian Red Cross mission, however, made their way to Entoto. Their progress was made difficult by the onset of the Kiremt (rainy season), named "Kromt" by Lebedinsky.[29] The rains made the journey "extremely slow," according to Kaufman. In the valleys, the ground was muddy, while the hills involved fording rivers. The camels hired at Obock found it particularly hard to move under such conditions. The horses and mules brought from Obock had to take on some of the camels' loads, but since there was an insufficient number of these animals, the Red Cross team had to hire porters to carry some of their loads. The porters of different ethnicities would quarrel with each other, and the Russians found these disputes difficult to resolve. As the ROKK team entered the Menjar district of the central Showa province, however, the local authorities, on Menelik's orders, made a large number of pack animals available to the Russians. Finally, after a trek that had lasted as much as five weeks, the Russian medical team reached Entoto on August 5, 1896 (NS). During the journey from Harar, despite the difficulties it faced, the Russian medical team had managed to treat about 300 patients.[30]

Menelik placed an estate in Addis Ababa, at the foot of Mt. Entoto, at the disposal of the Russian Red Cross mission. The estate had previously belonged to the defunct British East Africa Company. Menelik now hired 500 workers to make urgent repairs, and personally inspected the ongoing work. He also greeted the doctors and expressed both his satisfaction at their safe arrival and his gratitude for the medical help they were giving his country. Once the repairs had been completed, the Russian team had several tents set up on the estate: one to receive outpatients, another to house inpatients, yet another for an operating theater, and a fourth as a dormitory for the Russian staff. The flow of patients increased as word got around about the ROKK mission's activities. By September 23, the Russian team had treated 5,188 patients in Addis Ababa. The portions of the team based in Addis Ababa and Harar together performed a total of 460 surgeries, only one of which had a "lethal outcome" for the patient. Both teams also provided rudimentary medical training to Ethiopians.[31]

Menelik himself, along with his wife Taitu Betul (d. 1918), sought treatment from the Russian doctors, which led to other members of the Ethiopian elite visiting the field hospital. Menelik also took an active interest in the activities of the field hospital even when he was not receiving treatment himself, and paid several visits to inspect the ambulatory, pharmacy, and storeroom of the hospital. He also observed a surgical operation in progress and asked what the functions of different medical instruments was. The Emperor observed that the activities of the ROKK mission were sure proof of Russia's friendship toward Ethiopia. For his part, Ras Makonnen also took an active interest in the activities of the Russian doctors who had remained in Harar.[32]

In late October 1896 (NS), the Russian Red Cross expedition began its journey home. In a farewell letter to the head of the mission, Shvedov, Menelik informs the general that the Ethiopian flag had now been raised over the erstwhile Russian field hospital to replace the Russian flag that had flown there. At the same time, he assures Shvedov that "you are inseparable from us and we have engraved you in our hearts," and that "the Russian people have shown…the kind of love for me that will never be forgotten." He then goes on to ask Shvedov to leave a reduced team of six medical staff behind.[33] It was becoming clear to the Russians that the Red Cross mission would not be a one-off event, but rather the beginning of an ongoing diplomatic relationship whose main pillar was to be Russian medical aid to Ethiopia.

As for Shvedov, he was clearly cognizant of the boost the Red Cross mission he had headed gave to Russian soft power in Ethiopia, but he also believed that the mission had served a greater purpose: to restore Ethiopians' trust in Europeans, damaged by Italian aggression, and to raise the prestige of Western science. In a report to Kaufman, he argued that the mission had garnered respect for "scientific medicine" in Ethiopia, as well as for the "great humane idea of the Red Cross." Additionally, it had "raised the prestige of Europeans, which had fallen badly after the war [with Italy]," and led to "an accurate perception of the Russians."[34]

The Diplomatic Mission of 1897 and Its Journey to Addis Ababa

Menelik did not limit himself to his letter to Shvedov; he also wrote to St. Petersburg, asking for new doctors to be sent from Russia. The

result of these requests was a decision on the part of the Nicholas II to send not only a new (albeit smaller) medical team, but also a diplomatic envoy accompanied by a convoy of Cossacks. This diplomatic-military-medical team was dubbed an "extraordinary mission," and was placed under the command of P. M. Vlasov (d. 1903), a Russian diplomat who had lived in Iran most of his life, and was thus, according to Lebedinsky, familiar with "the East, its requirements and needs." In Lebedinsky's view, Vlasov saw the medical component of the mission as a means toward the end of "spreading Russian influence" in Ethiopia, and, as a result, exerted his influence to have the medics "equipped as richly as possible."[35]

Meanwhile, Piotr Krasnov (1869–1947), a Cossack officer of the Life-Guard Ataman Regiment stationed in St. Petersburg, found out in October 1897 (NS) that the Guards Corps was seeking Cossack officers to accompany the planned Russian diplomatic mission to Ethiopia. Driven by a thirst for adventure and a desire to "travel through foreign countries" and "broaden the horizons of my life," Krasnov applied to join the expedition. Finally, on October 13 (NS), word came from the General Staff that the soldiers who would accompany Vlasov would consist of six Cossacks of the Life-Guard Cossack Regiment, six from the Life-Guard Ataman Regiment, and three from the Life-Guard Ural Cossack Company, as well as four artillerymen and one hussar. Originally, the General Staff had decided that the aforementioned Bulatovich would head the military convoy, but finally, a day before the departure for Ethiopia, changed their mind in favour of Krasnov for reasons to do with the internal organization of the Russian army: the army command considered it inappropriate that a hussar officer such as Bulatovich should command a group of Cossacks.[36]

The diplomatic role of the military convoy was paramount: Colonel Leonid Artamonov (1859–1932), who was also to accompany Vlasov to Ethiopia, instructed Krasnov to pick soldiers "of handsome appearance" and "respectable height." Furthermore, these soldiers were to be intelligent and possess a personality that would "impress the native population." Krasnov was satisfied with the final selection. According to him, all the Cossacks who formed the convoy were not only "tall people," but also "very literate." What is more, they all knew trades that might come in handy during the expedition: among them were cobblers, tailors, carpenters, and singers. On October 24, 1897 (NS), an Orthodox Christian worship service was held for the departing diplomatic-medical mission, and most of the Cossack officers who were

to be part of the convoy attended, as did the doctors, Lebedinsky and Brovtsyn, the pharmacist, Lukyanov, and the medical orderlies, Sason and Kuznetsov. The priest, in Krasnov's words, "explained to the Cossacks their duties as Christians in a foreign and distant country." On November 26, 1897 (NS), the mission set out from St. Petersburg by train, with the military convoy allotted a separate third-class carriage, in which some of the Cossacks passed the time reading about Ethiopia.[37]

During a stop in Moscow, the train picked up Haile Maryam Wondi, a 14-year-old Ethiopian boy who had lived in Russia for six years and was a cadet in the First Moscow Cadet Corps. He was to accompany the mission to Ethiopia, although Krasnov discovered, to his surprise, that Haile Maryam had forgotten his Amharic and spoke only Russian. Brovtsyn, Kuznetsov, and Sason, who had all been part of the 1896 Red Cross mission to Ethiopia, failed in their attempts to communicate with him in his native language.[38]

On November 29, the team arrived in Odessa, and set sail for Istanbul two days later on the steamship *Tsar'*, belonging to the Russian Steam Navigation and Trading Company. To underline the significance of the mission to the Russian state, Adjutant General Count Aleksandr Musin-Pushkin (1827–1903), the commander of the Odessa Military District, personally came to see its members off.[39] In Istanbul, the *Tsar'* took on several first-class passengers, including an Egyptian princess named Nazlı Hanım and her young son, "a most beautiful little boy with long, curly blonde hair and huge black eyes," accompanied by two maids and three eunuchs.[40] Nazlı spent some of her time on board the ship listening to songs by Cossacks from the military convoy.[41]

From Istanbul, the mission continued on board the *Tsar'* to Crete via Mytilene, Izmir, and Piraeus. At Crete its members transferred to the *Odessa*, belonging to the same company.[42] The Russian delegation proceeded to Port Said on board the *Odessa* via Alexandria.[43] At Port Said (which Krasnov describes as "a merchant court of steamships and [other] ships travelling from and to Europe"), they were received by the Russian consul, A. P. Pchel'nikov, who set them up at the Eastern Exchange Hotel. The Cossacks got busy constructing new wooden crates and repacking their supplies for Ethiopia, while the Italian consul kept a close watch on the proceedings, advising the Russian consul to make sure the Cossacks did not steal any of the gifts intended for Menelik.[44]

On November 16 (NS), the 24 members of the Russian diplomatic mission boarded the steamship *Pei-Ho*, belonging to the French

shipping company Messageries maritimes. They were seen off by a group of Italian musicians who performed the Toreador Song in their honor. The *Pei-Ho* had on board 15 French army officers heading for Madagascar, as well as a party of Zanzibari passengers, and a crew of Breton sailors. The sailors quickly struck up a friendship with the enlisted men among the Cossacks when one of the Bretons played the Russian national anthem on his accordion; the Cossack men, who did not speak French, nevertheless, were able to sing the Marseillaise in return. On the other hand, the Cossack officers, including Krasnov, all spoke French, to the surprise of the Madagascar-bound French officers.[45]

The Russian mission disembarked in Djibouti on November 21 (NS). The town did not impress Krasnov; according to him, it consisted of only "two sandy streets and a square." The Russians were met at the docks by a unit of Senegalese soldiers, who escorted them to the Hôtel des Arcades, where they were put up. The hotel was flying a Russian flag and had a sign with the inscriptions "*Vive la Russie*" and "*Vive la France*." Although Krasnov appreciated this gesture of friendship on the part of the French, his main impression of Djibouti was that it was a town of "deathly boredom." In his view, Djibouti was "a window into Africa being cut by the French, but a window that is still unfinished, with no frame, no glass, and just a lath framework, as is proper for a window in the Somali desert."[46]

After several failed attempts to hire mules for the journey to Harar, the Russian mission accepted the fact that there were few to be had, and decided to rely on camels instead. The reason for the mule shortage was that Ras Mangasha (1868–1906), the husband of Empress Taitu Betul's niece, had rebelled against Menelik, and the above-mentioned Ras Makonnen, the governor of Harar, had rented all the mules he could get his hands on to use in a campaign against Mangasha.[47] As a result, one of the Cossack officers had to rent over 200 camels in Zeila (in British Somaliland) with the help of the British authorities there (at the rate of 18 thalers per 8 poods or 131 kg to Gildessa in Ethiopia), and an additional 40 camels locally in Djibouti (at the rate of 24 thalers for the same weight and distance).[48] The mission awarded a local Arab named Said Muhammad a Russian medal, the Order of St. Stanislaus III Class, as a reward for his help with organizing the Red Cross expedition's caravan the previous year. To repay the Russians for the award, Said negotiated, on their behalf, with the Somali camel drivers with regard to the size of the loads each camel would carry.[49] According to Krasnov, what got the Cossacks successfully across

the Somali desert on their 250 rented camels was the attitude of self-assured superiority they took toward the Somali camel drivers, telling themselves: "Remember that you are white, a person of superior race" (*chelovek vyssheĭ rasy*).[50]

The caravan reached Gildessa after a 12-day journey.[51] The Russians' goods were reloaded onto camels and donkeys owned by local Oromo residents and arranged by the Ethiopian governor of the town, Ato Marsha. Before the new caravan set out for Harar, an Arab courier arrived from Djibouti, carrying mail for the mission from Russia. Reading reports about "concerts and balls, shipwrecks and floods" in the St. Petersburg newspapers while sitting "under the hot rays of the noonday sun," cut off from "the entire civilized world," caused no small amount of cognitive dissonance for the Russians.

On Christmas Eve, according to both the Russian (Julian) and Ethiopian calendars, and January 5 according to the Gregorian calendar,[52] the Russian mission arrived in Harar, to be greeted by the above-mentioned Gerazmach Bantye. The Ethiopian side clearly wanted to underline the significance of the arrival of the first ever Russian diplomatic mission, and as many as a thousand Ethiopian soldiers lined the road leading to Harar. Krasnov's main impression was that Harar was a city redolent of a bygone "Biblical age." The setting reminded him of nothing so much as the era of "Amalekites and Moabites," and the walls of the city made him think of the fall of the "walls of Jericho." Even the sight of the Ethiopian flag—a "little rag" dangling on a "crooked little stick"—seemed to Krasnov to be "savage and unusual."[53] In the evening, the Russians celebrated Christmas in their camp just outside Harar by singing hymns such as "Your Birth, O Christ Our God," while "the black Christians shouted and sang all night" inside the city.[54]

Four days later, the "officers, doctors and Cossacks" of the Russian mission were invited to have lunch with Ato Wondi (the father of the cadet, Haile Mariam Wondi), "one of the largest landowners of the Harar district," and his "clients," consisting of smaller landowners and low-ranking officers in the army. The Russians were very impressed with the extravagance of the lunch, which involved heaps of liver, as well as lambs baked whole. According to Krasnov, the members of the mission ate "until satiation; [they ate] like they had never eaten before and would never eat again; [they ate] in Homeric fashion." This dinner reminded Krasnov not only of the Homeric age, but also of the Romans, and simultaneously of "the books of Moses." As far as

Krasnov was concerned, the whole ancient world seemed to coalesce in the living reality of Harar.[55]

In order to continue on from Harar to Addis Ababa, the Russian mission needed to obtain over 300 mules, which were impossible to find because Ras Makonnen had taken all the available mules of his province on campaign, just as he had the mules of Djibouti, as mentioned earlier.[56] Finally, Gerazmach Bantye found a solution. Mules were available at Deru (120 versts or 128 km west of Harar), and the Russians' goods could be transported from Harar to Deru by Oromo porters.[57] Bantye assigned the Russians over 400 Oromo porters. Their working conditions aroused the sympathy of Krasnov, who, instead of the usual disdain he reserves for all non-Europeans, speaks of them with compassion. He describes them as "Gallas, by the labour of whose hands the fields were ploughed with spades and sowed with *mashella* [sorghum]" and points out that one of them, although "half-naked, barefoot," hungry, and cold, could carry a box weighing seven or eight poods (115–131 kg) up "steep mountains" and "on sharp, rocky cliffs." In his view, the Amharas subjected the Oromos to mistreatment: "The victorious Abyssinian, the conquering Abyssinian is cruel to the vanquished…[and] does not recognise anything human in the conquered nation." The Oromos forced to carry the Russian mission's supplies, as well as the Oromos the procession met along the way, were all Ras Makonnen's serfs (*krepostnye*). Once the procession reached Dera, the Russians dismissed the porters with a tip of 100 thalers.[58] Thus, although the porters had not been forced to work for free after all, they ended up costing a lot less to the Russian team than renting pack animals would have.

From Dera, the mission continued on hired mules. On February 1, 1898 (NS), the mission left the Harar province and entered what Krasnov refers to as "Abyssinia proper." The Russian doctors' services were now in demand, as the inhabitants of the area had had a positive impression of the Russian medical team in 1896 and had heard that there were doctors once more among the new Russian mission. Large numbers of both Amhara and Oromo patients showed up at the Russian camp located in the village of Buroma to seek treatment. Among the patients were three war veterans who had been wounded at Adwa, and Brovtsyn operated on all three. One of them had a bullet lodged in his body, while the other two had long-term bone injuries. According to Krasnov, conditions in the improvised, open-air field hospital were difficult, but the Russian doctors "worked, and

they worked successfully."[59] The Russians came within sight of Addis Ababa on February 15 (NS), and camped on the outskirts of the city the following day.[60]

At 8 a.m. on February 17, a ceremony began to formally welcome the Russian diplomatic-medical mission to the country. "Over a thousand" soldiers appeared outside the Russian camp, many carrying Ethiopian flags. At the head of the welcoming procession were Menelik's Swiss advisor, Alfred Ilg (1854–1916), and the head of Taitu's guard. The soldiers presented the wife of the Russian envoy, Vlasov, with four bouquets of flowers. Half an hour later, the Russian delegation, all of whose members, including the doctors, were dressed in parade uniforms, rode out of its camp to a large field where Menelik's uncle, Dejazmach Ubye, was waiting for them, surrounded by 6,000 troops. The Ethiopian soldiers presented Krasnov with something of a sensory overload: he perceived them as "a sea of black heads, a forest of rifle barrels…how much savage taste there was in this brightness, how much life in these colours." In a scene that reminded Krasnov of a ballet at the Mariinsky Theatre in St. Petersburg, the Russian delegation then continued on to Menelik's palace. On the steps of the palace, dressed in red turbans, stood an orchestra, conducted by a Russian *Kapellmeister*. The orchestra began to play the Russian national anthem, "Bozhe, tsaria khrani." The delegation walked past 70 captured Italian cannon, and Krasnov noticed that some of Menelik's artillerymen were dressed in sweaters donated by the Russian Red Cross in 1896.[61]

As soon as the members of the delegation dismounted and entered the palace, Krasnov once again experienced a time warp. This time around, he was not transported to the Biblical lands or to ancient Greece, but rather to seventeenth-century Russia. As Krasnov puts it, suddenly

> there is no St. Petersburg, no railways, no Germany, no France with which to conclude alliances, conventions, treaties. There are some far-off Germans, with whom it is pleasant to conduct intelligent discourse, who are "very experienced" in many matters. Tsar Alexei Mikhailovich the Most Quiet [r. 1645–76] is wisely ruling the Muscovite state, sometimes quarrelling and sometimes making up with the patriarchs, arranging matters in the state. And now he is holding a ceremonial audience, playing host to honoured ambassadors who have arrived from the German lands…We are those German ambassadors, who brought European civilization to Rus drop by drop. And Tsar Menelik, greeting us now with

> the kind smile of a hospitable host…is he not the tsar of the Muscovite state, some three hundred years ago?[62]

No longer was Ethiopia completely alien to Krasnov. The Ethiopians were not Moabites or Amalekites, and their cities were not Biblical Jericho, whose walls were about to fall. Rather, they were now Russians, albeit Russians from a bygone age. During the months he had spent traveling in the country, Krasnov had come to see something familiar in Ethiopia and could now identify with the people and their government, to some extent. Furthermore, Ethiopia no longer seemed to him to be a land stuck in ancient times. Although he did not believe it lived in the same era as the Europe he had left behind, he had come to think of the Ethiopians as being separated from the Russians by a mere 250 or 300 years of scientific progress. Their ruler was just like the ruler of Russia in the seventeenth century, eager for knowledge and "European civilization." And just as Russia had taken the baton of "European civilization" from the Germans, it was now prepared to pass it on to Ethiopia. This view of Ethiopia, as a potentially fraternal country in need of thorough civilizing, is quite typical of contemporary Russian writing on the subject.

In Krasnov's view, Russian doctors could and did act as the best representatives of Russia's civilizing mission in Ethiopia. According to Krasnov (who, of course, had not personally witnessed the original Red Cross mission of 1896), the Russian doctors, headed by Major General Shvedov, as well as the Russian orderlies and male nurses, had performed a feat that was nothing short of miraculous. As a result of their work, "the dying started getting off their beds and the sick, who had previously been lying immobile, quickly got well." The Russian doctors had not been looking for "lands…decorations or honours." Neither had they been interested in "the abundance of gold in Kaffa, nor in huge elephant tusks, nor the fertility of Ethiopia or its well-fed herds," unlike the representatives of other European powers, whether friends or foes to Ethiopia. Rather, they had performed their work "for the good of mankind" and "unto Thy [God's] name." In Krasnov's view, this attitude on the part of the members of the ROKK mission of 1896 had made the Ethiopians, from Menelik down to his subjects, uniquely well disposed toward the Russians. It was a direct result of the medical aid sent by Russia that a bishop of the Ethiopian Orthodox Church told the latest Russian mission (including Krasnov): "You are like angels. You are Christians and we are Christians. [We are] brothers."[63]

"Brother" is also the way Nicholas II addressed Menelik in his letter, much to the latter's satisfaction. During the February 17 audience, Vlasov handed this letter over to Menelik who had it read out to him and asked that the French word for "brother" contained in the letter—*frère*—be translated several times into Amharic.[64] Perhaps he was doing so for the benefit of the French diplomats also present at the audience: Menelik had invited them to witness the reception of the Russian delegation, and they stood to the right of the throne during the ceremony, with the minister resident, Léonce Lagarde (1860–1936), at their head.[65] The initial, half-hour-long audience was followed by a second audience on February 22 (NS), which lasted an hour and during which Vlasov and his delegation presented Menelik with gifts from Nicholas, including a German Sauer rifle; a sword in gold scabbard studded with diamonds and rubies and carrying the monogram of Nicholas; and a silver shield in the Ethiopian style, but with a Russian coat of arms depicted on it.[66] On March 2 (NS), Menelik wore the sword in public on the feast day of St. George, and exhibited the rifle and shield in public. Such public acknowledgment of the Russian gifts was, according to Krasnov, in marked contrast to his usual practice with regard to gifts from European monarchs, which he kept in a specially designated room of his palace. The reason for the distinction he accorded to the Russian gifts was, in Krasnov's view, because of the fact that while many European rulers sent gifts, the Russian monarch had "once again sent his physicians."[67]

Vlasov's report to St. Petersburg on his audiences with Menelik was almost identical in its details with Krasnov's observations.[68] On the other hand, a subsequent report filed by Vlasov reveals his thoughts about the true role that medicine could play in Russian diplomacy in Ethiopia, which are quite different from Krasnov's idealized notion of selfless Russian aid for the cause of humanity and Christianity. In a report to Count Mikhail Muravyov (1845–1900), the Russian foreign minister, Vlasov asks, "Can Russia have its own interests in Ethiopia, and which ones specifically?" He goes on to answer his own question from several angles. He first approaches the issue of trade and points out that Ethiopians did not have much interest in European-made consumer goods; that it would be hard to stimulate demand for such goods given that one would first have to "inculcate the demands and needs of cultured nations" in Ethiopians; and that, even if such demand existed, the Russians would find it hard to compete against British, French, and Italian exporters because of the necessity to pay

import duties first in the European colonies controlling the Red Sea coastline and then again in Ethiopia.[69]

Since trade could not be the defining bond between Ethiopia and Russia, something else should be found, and that something was religion. According to Vlasov: "The majority of Ethiopians are uncontestably Christians and consider themselves to be close to Orthodoxy." It is this factor that, to Vlasov, explained the "tokens of a certain trust and friendship" expressed by the Ethiopians toward Russia. As the "protector of Orthodoxy in the East," Russia could use religion as a policy tool, but that was likely to be hindered by "the fanaticism of [the Ethiopian] clergy," which was likely to resist any attempts to unite the Russian and Ethiopian churches. Vlasov proposed that a number of young Ethiopian clergymen based in Jerusalem be converted to Russian Orthodoxy and then sent back to their homeland as missionaries for the Russian Church.[70]

Given the practical difficulties of a religious union, Vlasov proposed a more pragmatic approach, based on mutual political benefits. What Russia could offer Ethiopia was its diplomatic support for "the autonomy and inviolability of [Ethiopian] territory within the borders declared by Menelik." Vlasov's hope was that, in exchange, Ethiopia would turn into an "obedient tool in our hands," and agree to move an army of 70,000–90,000 men to the borders of nearby British, French, or Italian colonies in the event of a Russian quarrel with any of those powers. The idea was not to have Ethiopia fight against those countries, but merely for Ethiopian armies to distract the powers' attention from any conflict they might have with Russia. In Vlasov's opinion, the single best way to get Ethiopia to agree to such a relationship was to appear as a disinterested party and to offer the Ethiopians aid—particularly in the form of "doctors and medicines," as well as arms and ammunition and religious objects such as icons.[71] Thus, the medical aid that accompanied the diplomatic mission is cast in rather a different light by Vlasov than it is by Krasnov.

The Russian Hospital in Addis Ababa

The physicians who accompanied Vlasov—Brovtsyn and Lebedinsky, both army doctors based in St. Petersburg—set up a field hospital in Addis Ababa a month after the arrival of the mission there. The site of the field hospital was the same as that where the 1896 ROKK mission's field hospital had been located: "on the western outskirts of the

city," on the high bank of the Kabana River, which was a tributary of the Akaki, itself a tributary of the Awash. The tents that the Red Cross team had left behind were sewn together two or three apiece, and these enlarged tents were then used as wards to house inpatients. Menelik donated a round "Abyssinian tent" made of cotton, with a diameter of about six meters, for the use of outpatients. The Russian medical staff divided this tent into three sections, using one section to register patients, and issue them queuing tickets and medicines; another section to examine patients who were in need of surgery; and the third to examine patients with "internal, venereal, skin, ear and eye diseases." Another tent, about four meters in diameter, also donated by Menelik, was used as an operating theater.[72]

This arrangement worked well until the rainy season began in "the second half of May" (early June NS) 1898. At that point, as a result of thunderstorms that would last several hours a day, the ground turned into "liquid porridge" surrounded by a "swamp," and the tents, which were permeable, began to rot. Furthermore, "crowds of patients" waiting for treatment started invading the outpatient tent to seek shelter from the rain, making it impossible for the doctors to treat the patients they were attending to. As for the inpatient tents, they were filled with smoke from the fires the patients lit for warmth and cooking, and piles of slaughtered sheep carcasses and cooked food accumulated. The patients also dug pit latrines inside the tents. Meanwhile, in the operating theater, water leaked from the roof of the tent onto those below.[73]

As a result of these difficulties, the Russian doctors asked Menelik to authorize the construction of a permanent, purpose-built hospital, the first of its kind in Ethiopia.[74] Menelik paid a two-hour visit to the field hospital on August 6 (NS). During this visit, as reported by Vlasov to Muravyov, the emperor witnessed an operation, and talked to 16 patients recovering from surgery, asking after their health. He then examined every single surgical instrument the Russian physicians had, and looked at the way medicines were prepared in the pharmacy. Menelik also asked the Russian medical team to prepare a pharmaceutical kit for him to use at home, with the indications and posology noted in Amharic for each drug.[75] Evidently, Menelik was satisfied with what he had seen, because he had his above-mentioned adviser Ilg, an engineer by profession, draw up the designs for a permanent hospital. Construction began in October 1898, a few days after Menelik went on campaign against the rebel Ras Mangasha, taking Brovtsyn and several assistants with him.[76]

In his introduction to Brovtsyn's field diary of the expedition, S. Chernetsov argues that Menelik took Brovtsyn and the male nurse Sason with him mainly because Brovtsyn had been regularly dressing the sores on his feet that were caused by syphilis, while Sason acted as his massage therapist.[77] Nevertheless, Brovtsyn and Sason proved to be far more useful to Menelik during the campaign, as Brovtsyn treated literally thousands of patients, from Menelik himself to the common soldier. In the 48-day period covered in his diary (December 30, 1898 to February 16, 1899 NS), Brovtsyn reports receiving or visiting 5,413 patients, which gives us a rate of about 113 patients per day. Moreover, during this period, he also performed 98 surgical operations, or about two per day. These included repairing a harelip (on January 9, 1899 NS), and extracting bullets (January 17, January 21, and February 3, 1899).[78]

This substantial contribution to Menelik's war effort did not go unnoticed. Thus, Menelik's chief justice, Nesiba, who carried the title Afa Negus, told Brovtsyn on January 14 that the Russians were Ethiopia's only friends among the Europeans, and that Menelik was disappointed in all other European powers.[79] On February 9, 1899, Menelik officially appointed Brovtsyn his personal surgeon and Sasson his personal massage therapist.[80] On February 12, Menelik told Brovtsyn that the Amharic language did not contain enough words to express his gratitude to the Russians for their medical aid.[81]

Meanwhile, Brovtsyn himself was not nearly as happy with the situation he was in: he was exhausted by the sheer number of patients he was required to treat.[82] When a Cossack arrived in Menelik's camp from Addis Ababa with a telegram from Nicholas II that announced the extension of the mission for another nine months, Menelik was overjoyed, while Brovtsyn and Sason felt "depressed, defeated, killed" and—perhaps only half-jokingly—started contemplating suicide.[83] Brovtsyn's mood improved somewhat when the title of personal surgeon was conferred upon him. The Russian medical team's performance also boosted the prestige of Vlasov at Menelik's court. When he visited Menelik at his camp, the emperor told him that the Russian doctors had done more in three months in the field than they could have in ten years in the capital. The post-Adwa Italian minister resident, Federico Ciccodicola (1860–1924), who had made friends with Brovtsyn, shared many meals with him, and become his patient, complained to the doctor that Vlasov was putting on airs. In a conversation between Vlasov and Ciccodicola, the latter informed the Russian envoy about his plans, while Vlasov told him nothing in reply, leading

Ciccodicola to conclude that Vlasov was trying to undermine Italy's role in the region.[84]

Meanwhile, in Addis Ababa, the hospital building was under construction, and was completed in the summer of 1899. The hospital was built of limestone, with a mixture of mud and straw used as cement. It was a square, one-storied building, measuring 24.5 m by 9.5 m. It contained six rooms, each with a window. Each ward was equipped with 4 beds, for a total of 24. When Menelik came back from his campaign against Mangasha, the Russian doctors persuaded him to have an additional building constructed to house the operating theater, a round, wooden building of "Abyssinian type." R. Wurtz, a Sorbonne professor who arrived in Ethiopia to launch smallpox and rinderpest vaccination programs, had to continuously ask for two months for the window of his workshop to be widened. Upon seeing the Russian hospital, he remarked, "I see that Menelik's attitude towards the Russian doctors is completely different from that towards anyone else, and you [the Russians] can be proud of that."[85]

The Russian medical team that had accompanied the diplomatic mission of 1897 was sent home in 1901. Between March 1898 and February 1900 (NS), this team (including Brovtsyn and Lebedinsky) had treated 338 inpatients and 10,237 outpatients at the Russian hospital. They had also carried out 629 operations, of which 160 were performed under chloroform and 184 under local anaesthetic. The hospital served all classes of Ethiopians, from Menelik and members of the political and religious elite (including a 95-year-old hierarch) to "half-starving, half-naked Gurage day labourers and Negro slaves." Non-Ethiopians who sought treatment in the hospital included "Frenchmen, Englishmen, Italians, Greeks, Armenians [and] Indians." Among them were the "envoys of the great powers." Religion-wise, the patients included Christians, Muslims, Hindus, and "pagans." The majority of the inpatients were of the "middle and lower classes."[86] In November 1899, Muravyov wrote to Vlasov to congratulate him on his success in establishing diplomatic relations between Russia and Ethiopia. While thanking Vlasov for his work, Muravyov reserved particular praise for the Russian doctors: "The selfless activities of our physicians serve as a clear expression of that sincere concern which we never ceased to feel for the vital interests and needs of the Abyssinian people."[87]

When Brovtsyn, Lebedinsky, Sason, and their pharmacist, Lukyanov, were recalled to Russia in 1901, they were replaced by a new medical team. Vlasov, too, was replaced by Konstantin Lishin (1851–1906),

who was to be a permanent minister resident (and not a temporary envoy like Vlasov). When dispatching Lishin to Ethiopia, the Russian Foreign Ministry issued him secret instructions, according to which he was to continue the good work done by Vlasov. The latter's great achievement, according to the instructions, had been to convince Menelik that "Russia is the only power whose attitude towards Ethiopia is marked with the seal of complete and sincere disinterestedness." To some extent, this was true: Russia had "at present no direct interests on the African continent." The only political benefit that Russia could derive from Ethiopia was to use it to pressure the European powers for concessions. But the ability to do so depended on maintaining Russia's friendship with Ethiopia as well as the independence and territorial integrity of the latter.[88] In other words, the aims of the Russo-Ethiopian relationship, as far as the Russian government was concerned, were much the same as those that had been elaborated by Vlasov.

When Lishin arrived in Ethiopia, however, he discovered that, more than anything, Menelik desired to have Brovtsyn, Lebedinsky, Lukyanov, and Sason back; to some extent, these medical specialists had become the face of the growing friendship between Ethiopia and Russia for Menelik. Hence, in August 1902, Lishin petitioned the Russian government to have them sent back. Menelik had sent word to Lishin via Abuna Mateos, archbishop of the Ethiopian Church, that "the entire Abyssinian people" would be grateful if those particular doctors and medical staff were to return to the country. From himself, Lishin adds that their return would strengthen Russia's "moral influence in Abyssinia." The petition, although addressed to the Foreign Ministry, made its way to Nicholas II himself, and the Emperor endorsed it with the words "should be done."[89]

Thus, Russian diplomacy in Ethiopia, which was pursuing the aim of a strategic alliance in furtherance of Russian goals in Europe, found itself bound by its own logic: by beginning efforts at friendly ties with Ethiopia through the medical mission of 1896, Russia itself had become indissolubly linked in Menelik's eyes with the personalities of a group of physicians, none more so than Brovtsyn. Brovtsyn and the three others were duly sent back to Ethiopia in 1903 and remained there until March 1905 (NS). During this time, they treated 355 inpatients and 21,237 outpatients, not including members of the elite, whose names the doctors usually did not enter into their daybooks. They performed 581 operations, of which 194 were under chloroform and 259 under local anaesthetic. They also inoculated 1,754 people against smallpox,

in a sense continuing the work of the above-mentioned Wurtz, who had managed to vaccinate 20,700 people in six months in 1898.[90]

In 1905, Brovtsyn and his team's final posting to Ethiopia ended, and they returned to Russia. They were replaced by a physician and a pharmacist who, along with a male nurse who was staying on, were now to make up a bare-bones hospital staff. Moreover, the new medical team (which, ironically given how briefly it lasted in Ethiopia, was supposed to be "permanent") was made up of civilian medics as opposed to military ones. Consequently, their salaries were now to be paid by the Russian Foreign Ministry.[91] Meanwhile, the staff of the Russian legation, it seems, were rather disappointed by the practical achievements of their work in Addis Ababa. Lishin's deputy, B. Yevreinov, sent a note to St. Petersburg proposing that the legation be closed down altogether. The main reason Yevreinov cites for proposing such a drastic measure was the seeming ingratitude of both Menelik and the French.[92]

Menelik, whom Yevreinov uncharitably describes as "miserly and always in need of money," was apparently disappointed that the Russians were not willing to provide him a financial subsidy, and did not see the free medical care the Russians were providing to him and his subjects as a worthy replacement for such a subsidy. Meanwhile, the French, contrary to Russian expectations, seemed to be in no need of Russian diplomatic support against their expansionist rivals, the Italians and the British. In fact, the three western European powers were able to come to an agreement regarding Ethiopia without any need for assistance from Russia. The French minister resident, Lagarde, had kept himself aloof from Lishin.[93]

Furthermore, Yevreinov argues that the idea of a common faith shared by the Russians and the Ethiopians was no more than an illusion, since the Ethiopian Church was a branch of the Coptic Church, which promoted "a heresy condemned by the Ecumenical Council" of Chalcedon in the year 451. Russia had no economic interests in Ethiopia either, as the Americans had the market for cotton cloth cornered, and the Ethiopians were not interested in importing much else. All that Russia had obtained for its pains was a gold concession in an inaccessible part of the country. Russia also could not send military instructors to Ethiopia as it lacked a standing army that the Russians could train. Such Russian officers as were sent to Ethiopia wasted their time hunting or writing "low-quality" articles for Russian magazines.[94]

The only aspect of Russian diplomacy in Ethiopia that had a material reality to it was the hospital, which ran on Russian government subsidies to the tune of 19,000 rubles a year. Yevreinov found such extravagance hard to justify, with the hospital providing free health care to Ethiopians at a time when many poor Russians back home lacked access to hospitals. He thus called for an end to the aid given to the "alien" and "ungrateful" Ethiopian people.[95] Count Aleksandr Izvolsky (1856–1919), the new Russian foreign minister, overruled Yevreinov with regard to the legation and kept it open, while acknowledging once again the lack of "direct political and trade interests in Abyssinia." Closing the office altogether would be tantamount to an acknowledgment of Russian weakness in the aftermath of the Russo-Japanese War (1904–1905), which had ended in a Russian defeat. Nevertheless, he was prepared to see the role of the mission reduced to that of a "listening post."[96] The hospital, as Yevreinov had persuasively demonstrated, would have to go.

Lebedinsky, a veteran of two deployments at the hospital in Addis Ababa, found it a pity that the hospital closed. He believed that "the cause" represented by the hospital ought to have been allowed to "gather strength and grow." Instead, the hospital was closed down in 1907; some of its contents were sold and the rest were moved to the legation proper. The empty buildings were returned to Menelik, where he set up a hospital of his own, putting the Caribbean-born French physician Vitalien in charge. According to Lebedinsky, "Russia can be proud" of its hospital in Ethiopia. He could foresee a time in the future when Ethiopia would have many hospitals, "but the first hospital is wholly the work of Russia, of Russian physicians."[97] In his view, this effort had brought "light" into the "dark consciousness" of the Ethiopians, and had done so "not through the path of violence, but through the path of reason and the high humane idea of aiding the sick and the wounded."[98]

Following the death of Lishin in 1906, the Russians reduced the size of their legation to "a chargé d'affaires, his wife, a dragoman [interpreter], two or three Russian servants, a few dozen Abyssinian servants," and a doctor named Kokhanovsky. The doctor was supposed to limit his medical activity to taking care of the other members of the mission and their Ethiopian employees. As a result, in Lebedinsky's view, the Russian legation's role as "a beacon of knowledge and a nursery of culture and humanitarian ideas coming from a coreligionist Russia" had "faded almost to zero."[99] Meanwhile, Kokhanovsky

remained in his post until 1913, the year of Menelik's death.[100] He was replaced by a doctor named Sayenko. In 1914, all but two of the European doctors resident in Addis Ababa left Ethiopia because of the outbreak of the First World War. Sayenko and a British doctor remained. Unlike the British doctor, however, Sayenko briefly resumed the old role played by the Russian diplomatic mission and offered his medical help to all and sundry. A diplomat working at the legation wondered when Sayenko could possibly be getting any sleep, as he was always rushing off from one patient to the next, "night and day."[101]

Epilogue

The traumatic events of the First World War, which, for Russia, included two revolutions in 1917, the coming to power of the Communists, withdrawal from the war against the Central Powers, and the beginning of a civil war, followed by the execution of Nicholas II, left very little possibility for a continuing engagement with Ethiopia. However, the medical aid that Russia had provided to all comers for ten years was not forgotten. When Emperor Haile Selassie (r. 1930–1974), the son of the above-mentioned governor of Harar, Ras Makonnen, came to power in Ethiopia, he wanted to bring Russian doctors back to the country. Haile Selassie established diplomatic ties with the Soviet Union in 1945, and immediately asked the Soviets to set up a new hospital in Ethiopia.[102]

The Soviets sent a medical team the following year, and in 1947 the Union of Red Cross and Red Crescent Societies of the Union of Soviet Socialist Republics opened a 65-bed hospital in Addis Ababa in a building provided by the Ethiopian government for a period of 50 years. In 1948, this hospital, named after the Ethiopian war hero Dejazmach Balcha (1863–1936), received 31,081 patients. The Soviet Union was dissolved in 1991, but the hospital remained, taken over by the Russian Red Cross. In 1997, its lease was extended for another 25 years. Since 2003, after coming close to bankruptcy, the hospital has been charging its patients fees for treatment. The physicians working in it come from the smaller Russian cities (the salaries are not high enough to attract doctors from Moscow) on one-year contracts, and the fees introduced a decade ago have put the hospital out of reach of Ethiopia's poor.[103]

In 2006, responding to an appeal by the Russian foreign minister, Sergey Lavrov, President Vladimir Putin authorized the donation of

US $1 million's worth of equipment and medicines to the hospital. Today, the Balcha Hospital is the only hospital the Russian Red Cross operates abroad.[104] Although the Russians who helped establish medical ties with Ethiopia in the era of Menelik II and Nicholas II saw the Ethiopians as benighted, they also viewed them as real or potential brethren. In a sense, their work is still bearing fruit, over a century later. Despite the vastly changed circumstances of both Ethiopia and Russia, medicine remains one of the key aspects of the relationship between the two countries.

Notes

1. I would like to thank the Indian Ocean World Centre at McGill University for providing me with funding from the Social Sciences and Humanities Research Council of Canada, as part of its Major Collaborative Research Initiative, which made this research possible.
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4. R. G. Patman (2009), *The Soviet Union in the Horn of Africa: The Diplomacy of Intervention and Disengagement* (Cambridge: Cambridge University Press), p. 28.
5. See Y. Berhan (2013), "The Evolution of Modern Medicine in Ethiopia," in *The Manual of Ethiopian Medical History*, ed. E. Mehari, K. Gebeyehu and Z. Asfaw (Addis Ababa: People to People), p. 19; C. P. Rosenfeld (1978), "The Medical History of Menilek II, Emperor of Ethiopia (1844–1913): A Case of Medical Diplomacy," *Munger Africana Library Notes*, nos. 45–46, 12; R. Pankhurst (2007), "Hospital(s)," in *Encyclopaedia Aethiopica*, ed. Siegbert Uhlig (Wiesbaden: Harrassowitz Verlag), p. 71.
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7. Birsen Bulmuş (2012), *Plagues, Quarantines and Geopolitics in the Ottoman Empire* (Edinburgh: Edinburgh University Press), pp. 152–154.
8. M. I. Lebedinskiĭ (1912), "'Pervyĭ gospital' v Abissinii (iz lichnykh vospominaniĭ)" (The First Hospital in Abyssinia (from Personal Recollections), *Istoricheskiĭ vestnik*, no. 11, 812 (available at http://www.vostlit.info, date accessed January 14, 2015).
9. S. B. Chernetsov (1999), "Ėfiopskiĭ dnevnik russkogo vracha (1898–1899 gg.)" (A Russian Physician's Ethiopian Diary (1898–99), *Vestnik Vostochnogo instituta: Acta Institutionis Orientalis*, 5 (2): 4.
10. Lebedinskiĭ (1912), 'Pervyĭ gospital' v Abissinii, 812.

11. A. Makeev (2013), "Gospital' Rossiĭskogo Krasnogo Kresta v Ėfiopii" (The Russian Red Cross Hospital in Ethopia), http://www.redcross.ru/?pid=50, date accessed December 17, 2013.
12. Lebedinskiĭ, 'Pervyĭ gospital' v Abissinii, 812.
13. G. N. Ul'ianova (2006), "Imperatritsa Maria Fëdorovna v rossiĭskoĭ blagotvoritel'nosti: Materinskoe popechenie o strazhdushchikh" (Empress Maria Feodorovna in Russian Charity: Motherly Concern for the Suffering), in *Imperatritsa Mariia Fëdorovna: zhizn' i sud'ba* (Empress Maria Feodorovna: Her Life and Fate), ed. S. V. Mironenko *et al* (St. Petersburg: Petroniĭ), pp. 103–119.
14. A. M. Oleshkova (2011), "Vzaimootnosheniia Rossiĭskogo obshchestva Krasnogo Kresta i Voennogo ministerstva v period voennykh deĭstviĭ (konets XIX—nachalo XX vv.)" (The Relationship between the Russian Red Cross Society and the War Ministry in Wartime from the Late Nineteenth Century until the Early Twentieth Century), *Science Prospects*, (22): 114–115.
15. Lebedinskiĭ, 'Pervyĭ gospital' v Abissinii, 813, 825; Chernetsov, 'Ėfiopskiĭ dnevnik russkogo vracha, 5.
16. S. V. Bolgachëv (2013), "Obshchiny sestior miloserdiia" (Communities of the Sisters of Charity), Saint Petersburg Encyclopaedia, http://www.encspb.ru, accessed December 17, 2013; E. E. Belova (2010), "Sëstry miloserdiia v period Russko-turetskoĭ voĭny 1877–1878 gg." (Sisters of Charity during the Russo-Turkish War of 1877–1878), *Iaroslavskiĭ pedagogicheskiĭ vestnik*, (2): 33–34.
17. Lebedinskiĭ, 'Pervyĭ gospital' v Abissinii, 813.
18. Ibid.
19. F. Krindach (1897), *Russkiĭ kavalerist v Abissinii: Iz Dzhibuti v Kharar* (A Russian Cavalryman in Abyssinia: From Djibouti to Harar) (St. Petersburg: Obshchestvennaia pol'za), p. 47.
20. Ibid., pp. 12–13, 41–43, 50.
21. Ibid., pp. 55–56.
22. Ibid., p. 59.
23. Ibid., pp. 79, 95, 103–104.
24. "Zapiska predsedatelia Rossiĭskogo obshchestva Krasnogo Kresta M.P. Kaufmana" (Russian Red Cross Society Chairman M. P. Kaufman's Note, October 23, 1896 OS (November 4, 1896 NS), Arkhiv vneshneĭ politiki Rossii (Russian Foreign Policy Archive), f. Politarkhiv, d. 2015, l. 2–9, in V. A. Krokhin and M. V. Raĭt (1960), "Materialy Arkhiva vneshneĭ politiki Rossii. Nekotorye novye dokumenty o russko-ėfiopskikh otnosheniiakh (konets XIX—nachalo XX veka)" (Materials from the Russian Foreign Policy Archive: Some New Documents on Russo-Ethiopian Relations in the Late 19th and Early 20th Centuries), *Problemy vostokovedeniia*, (1): 158 (available at http://www.vostlit.info, date accessed January 14, 2015).
25. "Zapiska predsedatelia," in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 159–160; Krindach, *Russkiĭ kavalerist v Abissinii*, p. 13.
26. "Zapiska predsedatelia," in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 159.

27. "Pis'mo rasa Makonena Nikolaiu II" (Ras Makonnen's Letter to Nicolas II), 10 Hamle 1888 (July 1896 17, NS), Arkhiv vneshneĭ politiki Rossii (Russian Foreign Policy Archive), f. Politarkhiv, d. 2014, l. 54, (trans. V. M. Ivanova), in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 157.
28. "Zapiska predsedatelia," in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 160.
29. According to Lebedinsky, Kiremt would begin in May and end in September. See Lebedinskiĭ (1912), "Pervyĭ gospital" v Abissinii, 814. Recent research based on data from the twentieth century indicates that, on average, Kiremt lasts from June to October in Addis Ababa and from July to September in Dire Dawa (near Harar), although there is a considerable degree of variability from year to year. See Z. T. Segele and P. J. Lamb (2005), "Characterization and Variability of Kiremt Rainy Season over Ethiopia," *Meteorology and Atmospheric Physics*, 89: 160.
30. "Zapiska predsedatelia," in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 159–160.
31. Ibid.
32. Ibid.
33. "Pis'mo Menelika II Nachal'niku sanitarnogo otriada Rossiĭskogo obshchestva Krasnogo Kresta N. K. Shvedovu" (A Letter from Menelik II to N. K. Shvedov, the Head of the Sanitary Unit of the Russian Red Cross Society), 12 Tiqimt 1889 (October 22, 1896 NS), Arkhiv vneshneĭ politiki Rossii (Russian Foreign Policy Archive), f. Politarkhiv, d. 2014, l. 69 (trans. V. M. Ivanova), in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 158.
34. Quoted in Chernetsov, "Ėfiopskiĭ dnevnik russkogo vracha," 5.
35. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, p. 815.
36. P. N. Krasnov (1900), *Kazaki v Abissinii: Dnevnik nachal'nika konvoia Rossiĭskoĭ Imperatorskoĭ Missii v Abissinii v 1897–98 godu* (Cossacks in Abyssinia: The Diary of the Head of the Convoy of the Russian Imperial Mission in Abyssinia in 1897–98) (St. Petersburg: Tipografiia Isidora Gol'dberga), pp. 3–4, 9.
37. Ibid., pp. 4–5, 7–10.
38. Ibid., pp. 11–12. On Brovtsyn, Kuznetsov and Sason's previous posting to Ethiopia, see Lebedinskiĭ, 'Pervyĭ gospital' v Abissinii, p. 825.
39. Krasnov, *Kazaki v Abissinii*, pp. 13, 17.
40. Ibid., p. 33.
41. Ibid., p. 36.
42. Ibid., pp. 37–46.
43. Ibid., pp. 50, 67.
44. Ibid., pp. 72–74. In the first six months of 1897, 19 Russian ships had called at Port Said, with a total net tonnage of approximately 62,000, compared to 39 Italian ships with a total tonnage of about 66,000. Neither power was remotely comparable to Britain in this regard, with its 908 ships and a tonnage of about 7,766,000. See Ethelbert Watts (1897), "Suez Canal Traffic," July 26, in United States (1897), *Consular Reports: Commerce, Manufactures, Etc.* LV, nos. 204–207 (Washington, DC: Government Printing Office), p. 400.
45. Krasnov, *Kazaki v Abissinii*, pp. 76–87.

46. Ibid., pp. 92–99. By calling Djibouti France's "window into Africa," Krasnov was ironically contrasting it with St. Petersburg. The young Russian capital was Peter the Great's "window into Europe," in an expression first used by the Italian poet and art critic, Count Francesco Algarotti (1712–1764), and popularized by the great Russian poet Aleksandr Pushkin (1799–1837) in 1833. See V. M. Mokienko and K. P. Sidorenko (2005), *Shkol'nyĭ slovar' krylatykh vyrazheniĭ Aleksandra Pushkina* (A School Dictionary of Aleksandr Pushkin's Aphorisms) (St. Petersburg: Neva), p. 56, s.v. "V Evropu prorubit' okno" (To Cut a Window into Europe). The allusion is particularly noteworthy as Pushkin was the great-grandson of Major General Ibrahim Hannibal (d. 1781), who was presumed to have been Ethiopian by birth. See T. Wolff, ed. (1986), *Pushkin on Literature* (London: Athlone Press), pp. 3–4.
47. Krasnov, *Kazaki v Abissinii*, pp. 99–103.
48. Ibid., pp. 133, 145, 147.
49. Ibid., p. 146.
50. Ibid., p. 202.
51. Ibid., pp. 201, 204–206.
52. Ibid., p. 210.
53. Ibid., pp. 217–218.
54. Ibid., pp. 223–224.
55. Ibid., pp. 242–246.
56. Ibid., p. 247.
57. Ibid., p. 252.
58. Ibid., pp. 260–263.
59. Ibid., p. 291.
60. Ibid., pp. 325–327.
61. Ibid., pp. 329–334.
62. Ibid., p. 335. Krasnov's admiration for Germany was eventually to prove his undoing. During the Russian Civil War, Krasnov was to become the ataman (head) of the Don Cossacks, during which time he received German assistance in fighting against the Red Army. He went into exile after the victory of the Communists and moved to Germany in 1936. There, he helped the Germans form Cossack units to fight against the Union of Soviet Socialist Republics during the Second World War. On the day of the German invasion of the Soviet Union, Krasnov issued an address to the Russian people containing the words "May the Lord help German arms and Hitler!" He was taken prisoner by the British at the end of the war and handed over by them to the Soviets, who hanged him in 1947. See Vladimir Medinskiĭ (2013), *Voĭna. Mify SSSR, 1939–1945* (War: The Myths of the USSR, 1939–1945) (Moscow: OLMA Media Group), p. 328.
63. Krasnov, *Kazaki v Abissinii*, pp. 351–352. "Unto Thy name" is a quote from Psalm 113: 9 in Orthodox numbering (Psalm 115: 1 in Protestant numbering).
64. Krasnov, *Kazaki v Abissinii*, p. 352.
65. Ibid., p. 336.
66. Ibid., p. 342.
67. Ibid., p. 351.

68. "Iz zapiski P. M. Vlasova o sledovanii Rossiĭskoĭ imperatorskoĭ missii iz Kharara v Addis-Abebu, o pribytii v posledniuiu i o vstreche, okazannoĭ Missii imperatorom Ėfiopii" (From P. M. Vlasov's Note about the Russian Imperial Mission's Journey from Harar to Addis Ababa, on the Arrival in Addis Ababa and the Way the Mission was Received by the Emperor of Ethiopia), February 18 (March 2, NS) 1898, Arkhiv vneshneĭ politiki Rossiĭskoĭ imperii (Russian Imperial Foreign Policy Archive), f. Politarkhiv, op. 482, d. 142, l. 4–10, in G. V. Tsypkin (1996), "Rossiia i Ėfiopiia: k stoletiiu ustanovleniia diplomaticheskikh otnosheniĭ" (Russia and Ethiopia: For the Hundredth Anniversary of the Establishment of Diplomatic Ties), *Vestnik MGU* 13 (3): 16–20 (available at http://www.vostlit.info, date accessed January 14, 2015).
69. "Iz doneseniia V. P. Vlasova ministru inostrannykh del Rossii M. N. Murav'ëvu otnositel'no kharaktera i perspektiv russko-ėfiopskikh otnosheniĭ" (From V. P. Vlasov's Report to Count M. N. Muravyov, the Minister of Foreign Affairs of Russia, Regarding the Character and Prospects of Russo-Ethiopian Relations), May 1 (May 13, NS) 1898, Arkhiv vneshneĭ politiki Rossiĭskoĭ imperii (Russian Imperial Foreign Policy Archive), f. Politarkhiv, op. 482, d. 142, l. 208, 234–238, in Tsypkin, "Rossiia i Ėfiopiia," 20–21.
70. "Iz doneseniia V. P. Vlasova," in Tsypkin, "Rossiia i Ėfiopiia," 21. By "close to Orthodoxy," Vlasov meant close to Chalcedonian Orthodox Christianity (which affirms the dual nature of Christ). He was perhaps already aware that the Ethiopians themselves considered their church to be fully orthodox, while affirming their "unionist" or miaphysite view of Christ. See David Appleyard (2010), "Ethiopian Christianity," in *The Blackwell Companion to Eastern Christianity*, ed. Ken Parry (Malden, MA: Wiley-Blackwell), pp. 118, 125.
71. "Iz doneseniia V. P. Vlasova," in Tsypkin, "Rossiia i Ėfiopiia," 21–22.
72. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, 814–816; Chernetsov, "Ėfiopskiĭ dnevnik russkogo vracha," 5.
73. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, 816.
74. Ibid.
75. "Donesenie nachal'nika russkoĭ diplomaticheskoĭ missii v Ėfiopii P. M. Vlasova ministru inostrannykh del Rossii M. N. Murav'ëvu" (A Report by the Head of the Russian Diplomatic Mission in Ethiopia, P. M. Vlasov, to the Minister of Foreign Affairs of Russia, M. N. Muravyov), July 28 (August 9, NS) 1898, Arkhiv vneshneĭ politiki Rossii (Russian Foreign Policy Archive), f. Politarkhiv, d. 143, l. 72–73, in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 161.
76. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, 816–818; Chernetsov, "Ėfiopskiĭ dnevnik russkogo vracha," 7.
77. Chernetsov, "Ėfiopskiĭ dnevnik russkogo vracha," 6.
78. Brovtsyn, in Chernetsov, "Ėfiopskiĭ dnevnik russkogo vracha," 10–42.
79. Ibid., 23.
80. Ibid., 39.
81. Ibid., 41.
82. Ibid., 28.
83. Ibid., 37.
84. Ibid.

85. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, 818–824.
86. Ibid., 825–826.
87. "Otsenka rossiĭskim MID deiatel'nosti pervykh russkikh diplomatov v Ėfiopii; instruktsii P. M. Vlasovu pered ego ot'ezdom iz Addis Abeby" (An Evaluation by the Russian Ministry of Foreign Affairs of the Activities of the First Russian Diplomats in Ethiopia; Instructions to P. M. Vlasov before His Departure from Addis Ababa), November 1899 (OS), Arkhiv vneshneĭ politiki Rossiĭskoĭ imperii (Russian Imperial Foreign Policy Archive), f. Posol'stvo v Konstantinopole, d. 7698, l. 44–47, in G. V. Tsypkin, "Rossiia i Ėfiopiia," 23.
88. "Direktivy rossiĭskogo MID glave Postoiannoĭ diplomaticheskoĭ missii v Addis-Abebe K. N. Lishinu otnositel'no tseley i zadach russkoĭ diplomatii v Ėfiopii" (Directives of the Russian Ministry of Foreign Affairs to the Head of the Permanent Diplomatic Mission in Addis Ababa, K. N. Lishin, Regarding the Aims and Goals of Russian Diplomacy in Ethiopia), July 13 (July 26, NS) 1902, Arkhiv vneshneĭ politiki Rossiĭskoĭ imperii (Russian Imperial Foreign Policy Archive), f. Politarkhiv, op. 482, d. 157, l. 53–54, in G. V. Tsypkin (1996), "Rossiia i Ėfiopiia," 24.
89. "Dokladnaia zapiska rossiĭskogo ministra-rezidenta v Ėfiopii K. Lishina v ministerstvo inostrannykh del Rossii" (A Memorandum of the Russian Minister Resident in Ethiopia, K. Lishin, to the Ministry of Foreign Affairs of Russia), August 11 (August 24, NS) 1902, Arkhiv vneshneĭ politiki Rossii (Russian Foreign Policy Archive), f. Politarkhiv, d. 58, l. 260, in Krokhin and Raĭt, "Materialy Arkhiva vneshneĭ politiki Rossii," 162.
90. Lebedinskiĭ (1912), "Pervyĭ gospital" v Abissinii, 825–826; R. Pankhurst (1965), "The History and Traditional Treatment of Smallpox in Ethiopia," *Medical History,* 9 (4): 351.
91. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, 825.
92. "Russkiĭ diplomat o kharaktere russko-ėfiopskikh otnosheniĭ i o netselesoobraznosti soderzhaniia v Addis-Abebe Postoiannoĭ diplomaticheskoĭ missii" (A Russian Diplomat on the Character of Russo-Ethiopian Relations and on the Inexpediency of the Maintenance in Addis Ababa of a Permanent Diplomatic Mission), 1906, Arkhiv vneshneĭ politiki Rossiĭskoĭ imperii (Russian Imperial Foreign Policy Archive), f. Politarkhiv, op. 482, d. 170, l. 92–95, in Tsypkin, "Rossiia i Ėfiopiia," 26.
93. "Russkiĭ diplomat…," in Tsypkin, "Rossiia i Ėfiopiia," 26; "Agreement between the United Kingdom, France, and Italy, Respecting Abyssinia, Signed at London, December 13, 1906" (1907), *American Journal of International Law* 1 (2): 226–230.
94. "Russkiĭ diplomat…," in Tsypkin, "Rossiia i Ėfiopiia," 27–28.
95. Ibid., 28–29.
96. "Dokladnaia zapiska ministra inostrannykh del A. P. Izvol'skogo Nikolaiu II o neobkhodimosti sokhranenia v Addis-Abebe Postoiannoĭ rossiskoĭ diplomaticheskoĭ missii" (A Memorandum from the Minister of Foreign Affairs, A. P. Izvolsky, to Nicholas II on the Necessity to Maintain in Addis Ababa the Permanent Russian Diplomatic Mission), December 22, 1906 (January 3, 1907 NS), Arkhiv vneshneĭ politiki Rossiĭskoĭ imperii (Russian

Imperial Foreign Policy Archive), f. Kantseliariia, d. 1, 1906 g., l. 155, in Tsypkin, "Rossiia i Ėfiopiia," 29.

97. Lebedinskiĭ, "Pervyĭ gospital" v Abissinii, 824.
98. Ibid., 810.
99. Ibid., 810, 825.
100. Information displayed at the Peter the Great Museum of Anthropology and Ethnography in St. Petersburg, visited on December 1, 2012.
101. Aleksandr Krylov (October 23, 2006), "Rossiia v Afrike. Russkie vrachi v Abissinii. Chast' 4" (Russia in Africa: Russian Physicians in Abyssinia, Part 4), *Novaia politika*.
102. Makeev, "Gospital' Rossiĭskogo Krasnogo Kresta"; Patman, *The Soviet Union in the Horn of Africa*, p. 28.
103. Makeev, "Gospital' Rossiĭskogo Krasnogo Kresta"; D. Andersen (January 18, 2012), "Russia Abroad: In Ethiopia, Russian is the Language of Healing," *Moscow Times*.
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6

Tropical Disease and the Making of France in Réunion

Karine Aasgaard Jansen

Owing to the Indian Ocean's vast network of maritime connections, local medical knowledge and medicines have spread across the sea for centuries.[1] The circulation of people, goods, and ideas has also facilitated the diffusion of disease,[2] a distribution cleverly described as a "Swahilian swap of pathogens" by Howard Phillips in his key note lecture given at the "Histories of Medicine in the Indian Ocean World" conference (Montreal, April 26–27, 2013), which initiated the publication of this book. This exchange of people and pathogens is also the focus of David Arnold's[3] seminal article, "The Indian Ocean as a disease zone, 1500–1950," on the transmission of cholera, plague, smallpox, and influenza in the region.

The spread of diseases and epidemics within the Indian Ocean World (IOW) is thus neither a new empirical phenomenon nor of only current scholarly interest. More recently this "Swahilian swap" was illustrated by the 2004–2007 epidemic of the vector-borne disease of chikungunya. Chikungunya is transmitted via the aedes mosquito, and leads to painful symptoms of arthralgia. The epidemic first broke out on Lamu Island off the Kenyan coast in June 2004, and spread to the Seychelles, Madagascar, the Comoros, and Mayotte before reaching Réunion and Mauritius in March 2005.[4] Despite the biomedical identification of the chikungunya virus and its carrier in Tanzania in 1953,[5] this was the first documented occurrence of chikungunya on the islands in the western Indian Ocean. The prevalence of infections varied across the region, with the highest estimated number on Lamu

Island (75 percent of the total population),[6] and the lowest in the Seychelles (25 percent).[7]

This chapter is based upon a total of eight months of ethnographic fieldwork during 2009 and 2010, focusing on local experiences with the chikungunya epidemic in the French overseas department (*Département d'outre-mer* [DOM]) of Réunion. I investigate how disease may be an issue related to not merely health, but also geopolitics: In order to ensure that Réunion remained French in the years following departmentalization in 1946, pro-French forces strategically used disease as a marker of difference between Réunion and its neighboring Indian Ocean islands. By combining anti-independence and anti-communist propaganda with public health rhetoric, Réunion was "made" French through a juxtaposition of the island against the so-called disease-ridden, underdeveloped, and African countries nearby. Using the chikungunya epidemic as a case study, I discuss how this discourse has had a lasting impact on local conceptualizations of tropical disease as foreign to Réunion, despite the island's geographical location. My main argument is that the transmission of disease in the Indian Ocean is an illustration not only of Phillip's "Swahilian swaps," but also of ongoing post-Cold War tensions in the region with regard to Réunion's status as a DOM.

Historical Context: Réunion as an Indian Ocean Island and a French Overseas Department

Réunion is located approximately 940 kilometers east of Madagascar, and 220 kilometers southwest of its closest neighbor, Mauritius, in the western Indian Ocean. With its 2,500 square kilometers of rugged mountainous inland and fertile coastal areas, Réunion is the biggest of the Mascarene Islands, which, in addition to Réunion, include Mauritius and the Mauritian dependency of Rodrigues.

Similar to other Indian Ocean islands, Réunion constitutes a highly heterogeneous society characterized by linguistic, cultural, and religious syncretism caused by historical patterns of immigration, exogamy, and various cultural processes of creolization.[8] There was no indigenous population on the island until French and Malagasy settlement in 1664. The demographics on the island were, however, radically changed as a result of the French East India Company's introduction of sugarcane, and the development of large-scale monocultural plantation systems around 1750.[9] This agricultural expansion encouraged a significant intensification of the importation of

slaves.[10] Inhabitants of African, Malagasy, or mixed origins today constitute around 44 percent of Réunion's population, while descendants of French colonial settlers make up around 15.5 percent.[11] When slavery was finally abolished in 1848, Indian indentured laborers (18 percent) were brought to the island to replace the slave workforce.[12] In addition, from around the 1860s to the 1890s, Chinese (4.5 percent) and Indian Muslim (4.3 percent) tradesmen and scholars emigrated to the island in order to set up various types of businesses and practices,[13] contributing as such to the already highly multiethnic and religious makeup of the island. Réunion has also received a steady migratory flow of Mahorans since the territorialization of Mayotte in 1974, and not the least since its departmentalization on March 31, 2011. From a juridical and administrative standpoint, French territories and departments differ considerably: Whereas territories are semiautonomous, overseas departments are fully integrated parts of France. Like the Réunionese, the Mahorans have full French citizen rights, including passports. As a result, Mahorans (2.4 percent) together with metropolitan French civil servants (10.6 percent) are today the largest recent immigrant groups in Réunion.[14]

Up until 1946 when Réunion obtained status as a DOM, the island shared, to a large extent, the historical and cultural conditions resulting from various migratory flows that continue to characterize the IOW. Departmentalization marked, however, the beginning of Réunion's somewhat complicated position with regard to its neighboring Indian Ocean islands. While each of these islands (with the exception of Mayotte) took the path of colonial emancipation and national independence during the period of decolonization, Réunion chose full inclusion within its "mother country." The departmentalization of Réunion was not imposed by the French Republic, but was rather the result of several years of local struggles for increased assimilation with France. Although this type of colonial dissolution has been rare, it has been formally recognized by the United Nations Resolution 1541 (1960) as a legitimate strategy on the condition that the outcome has been based upon self-determination through democratic election, such as, for instance, referendums.[15] In the case of the former French colonies of Martinique, Guadeloupe, and French Guiana in the Caribbean, and Réunion in the Indian Ocean, their departmentalization was acknowledged by international law. However, in 1960, the United Nations General Assembly adopted the "Declaration on the Granting of Independence to Colonial Countries and People." This declaration has had international precedence regarding colonial relations since.

The departmentalization of Mayotte was therefore highly controversial, not least due to its national and geopolitical splitting of the four islands within the Comorian Archipelago.[16]

In Réunion, there is little, if any, contestation over the island's status as a DOM. Most Réunionese acknowledge that the island has its own regional cultural identity separate from France, but they also consider Réunion to be an integral part of the French Republic.[17] Moreover, Réunion is a member of the European Union, the local currency is the euro, and Réunion's prospect for inclusion within the Schengen Area is under discussion.[18] The island's departmentalization has not, however, managed to erase social inequalities: As of 2010, Réunion had, for example, the highest level of unemployment in all of France (over 30 percent).[19] Nevertheless, the island has been spared of the serious social and political challenges that are currently facing Mayotte: Owing to Mayotte's relative closeness to the African horn, in contrast to Réunion, it is, for example, more vulnerable to the polarizing power politics currently taking place in the Indian Ocean, such as the war on terror, and its relation to the control of natural resources. Furthermore, the departmentalization of Mayotte has led to large disparities in living conditions between the island, the rest of the Comorian Archipelago, and the East African coast. This has encouraged the arrival of several thousand illegal immigrants yearly, many of whom never make the 60-kilometer boat crossing from Anjouan.[20] Illegal immigration has also contributed to the establishment of large social inequalities between the inhabitants of the island. Over 50 percent of the residents in Mayotte live in shantytowns that are located on the fringes of the island's capital of Mamoudzou. As I discuss further on in this chapter, environmental risk factors, such as poor living conditions, increase the probability of contracting diseases.[21]

The Chikungunya Epidemic in Réunion, Health Inequalities, and Disease

With 266,000 cases and 250 deaths,[22] chikungunya infected almost 30 percent of the total estimated population of 802,000 inhabitants[23] during the two years (2005–2007) that the epidemic lasted in Réunion. The term "chikungunya" has been adopted by biomedicine from the Makonde language on the border between Tanzania and Mozambique, where the first case of the virus was isolated from the blood of a febrile patient.[24] Chikungunya means "that which bends up," and refers to an

infected person's characteristically bent back resulting from symptoms of arthralgia, as the virus attacks the joints, and leads to painful swellings and substantially reduced motor functions.[25] Other symptoms are high fever, headache, and rash. As there is no known vaccine or medicines against the disease, medical and sanitary authorities consider eradication of mosquito breeding grounds to be the most efficient preventive measure against contamination. Once infected, you become immune.

The first cases in Réunion were registered by the French "Institut de veille sanitaire" (INVS) in March 2005. This was disclosed in a press conference held by the "Direction régionale des affaires sanitaires et sociales" (DRASS) on April 14, 2005, while medical and sanitary experts assured the general public of their close surveillance and control of the epidemic, and its nonfatal nature.[26] DRASS, which was responsible for vector control and eradication during the epidemic, additionally claimed that medical estimates calculated that the epidemic would be over by the end of July 2005.

None of these statements proved correct. The epidemic peaked in the first two months of 2006, with more than 25,000 new registered cases in the last week of January, and 45,000 cases in the first week of February.[27] However, only when the first fatality (a ten-year-old boy) occurred in January 2006 did the public health authorities acknowledge the potential gravity of the disease and the French government started to respond to the situation with increased economic, medical, and preventive support. This was almost a year after the virus had first been documented in Réunion, and almost two years since the epidemic broke out on Lamu Island in June 2004. Furthermore, the increase in aid occurred at the same time as it was discovered that the aedes mosquito also exists in parts of southern France, and that the epidemic could, as such, spread to the mainland.[28] It was also only after this realization that the INVS included both chikungunya and dengue in the national notifiable French disease surveillance system,[29] despite the lasting threat of subtropical and vector-borne diseases in all the DOMs throughout the Indian Ocean and the Caribbean. Mayotte is, for example, considered to be an endemic area for malaria.[30] Although malaria was eradicated in Réunion in 1979, the island is still vulnerable to transmission owing to the presence of the vector, the anopheles mosquito.

In addition to its vast outreach, the 2005–2007 chikungunya epidemic led to a major public health crisis in the entire western region of the Indian Ocean.[31] This crisis was, on one hand, caused by the

personal traumas and social and economic consequences of the disease, and on the other hand, by political polemics resulting from inadequate public preventive and protective interventions, as illustrated by the case of Réunion.[32] The French public health authorities and government were subjected to massive criticism from the Réunionese media and general public. They were criticized for being unprepared; for underestimating the impact, gravity, and expansion of the epidemic; and for neglecting the needs of the Réunionese population at a time of severe crisis and trauma. Although the late response may be linked to the rapid propagation of the unfamiliar disease on the islands, part of the problem was also "structural," and caused by health inequalities. According to Raude and Setbon,[33] "the relationship between the socioeconomic position and the risk of chikungunya disease is relatively well established." The risk of contracting chikungunya increases with exposure to the vectors' breeding grounds in stagnant water, which is gathered, for example, in flower pots, bottles, plastic containers, and discarded car tires in domesticated environments.[34] Poor sanitary conditions, which are more likely to be found in impoverished areas, may thus contribute toward the infection of vector-borne diseases, chikungunya included.[35] Moreover, the vector's urban adaption in the western Indian Ocean also meant that the virus could affect large sectors of the islands' populations, particularly those living in densely populated areas.[36] Furthermore, inequalities in health are produced as access to prevention and medical care are disproportionately distributed. In Mayotte, where a total of 38 percent of the population was infected,[37] it may be assumed that the majority of these were illegal immigrants, who did not have access to adequate housing and sanitary conditions.

Literary Review and Research Methods

Although the chikungunya epidemic in Réunion has received a substantial amount of scholarly attention, this has been predominantly from entomologists and epidemiologists. To my knowledge, very few publications on chikungunya, which are based primarily on qualitative methodologies, exist. The exceptions are Watin,[38] Weinstein, and Ravi,[39] and my own discussion of representations of the epidemic in the public printed press,[40] together with a medical anthropological inquiry into local etiological reasoning.[41] Some biomedical-oriented reports do, however, include sociological factors to their analyses: examples

include Taglioni and Dehecq,[42] as well as Gaüzère and Aubry.[43] Nevertheless, their primary research focus is on the medical aspects of the epidemic, and not its economic, social, or political impacts on people's lives.

As a trained social anthropologist, my study in Réunion consisted mainly of participant observation and interviews with a selection of informants such as laypeople, health and sanitary staff, entomologists, and epidemiologists. In contrast to biomedicine, medical anthropology (and medical history) understands disease as a cultural construction, and not merely as a biophysical fact. In order to examine the multisided-ness of the chikungunya epidemic, that is, its personal, social, and political consequences in Réunion, I drew upon cultural analysis as proposed, among others, by Ehn and Löfgren.[44] Cultural analysis is a critical ethnological approach that incorporates, for example, texts and images, discourses and practices, in the examination of various cultural phenomena. An analysis of written sources on chikungunya, such as local and national newspapers, public health reports, and preventive campaign material has thus informed this study. Furthermore, focusing on the communication of science, public health, and media, and their interpretations by the public at large, enabled an investigation of how various stakeholders related to the epidemic. I also looked into governmental and newspaper reports of the massive antimalaria campaigns on the island during the 1950s at the Departmental Archives in Réunion's capital, St. Denis. This was done in order to compare public health discourses on chikungunya, with those of a previous vector-borne disease (malaria), its spread, and the preventive measures that were adopted. Informants, in particular elderly informants, often made comparisons between the public health interventions against malaria in the 1950s and those taking place during the 2005–2007 chikungunya epidemic. Although cultural analysis is primarily based on the social and cultural present, it emphasizes the role of history as a determining factor in contemporary ways of living and thinking. In this chapter, I stress the centrality of historical contexts in examining disease and epidemics, particularly in the study of local medical knowledge and practices: As mentioned previously, the population often made sense of chikungunya using already existing narrative frameworks of disease transmission and prevention. These, in turn, were, to a large degree, influenced by public health discourses, in which the postcolonial relationship between Réunion and France has figured prominently.

Malaria, Departmentalization, and the Political Struggle for Equal Social Rights in Réunion

Réunion's first case of a vector-borne disease, malaria, was discovered in the island in 1868,[45] and occurred concurrently with the 1867–1868 "great fever epidemic" in Mauritius. According to Arnold,[46] the arrival of Indian indentured laborers in Mauritius from 1839 onward brought a radical change in the island's disease environment, causing, among other things, a series of major outbreaks of malaria. A public health report in Réunion from 1949 to 1950 pointed out:

> It was around the turn of the last century that malaria started to appear in Réunion following the great immigration of Indians and Chinese already severely affected by the disease. (my translation)[47]

As the population on the island grew, more pressure was put on the environment. Land was increasingly cleared to make room for settlements and expand the sugarcane plantations, creating favorable conditions for the proliferation of anopheles (or malaria) mosquitoes. It was only in 1914, however, that a preventive service was put in place when prisoners were set to hand out quinine to the population, and destroy the anopheles' breeding grounds through the drainage of latrines.[48] Their work was later supplemented by a professional prophylactic team, which from 1915 onward also provided the population with information on protection against mosquitoes with the use of nets, and by smoking them out of the house by burning eucalyptus twigs. All the same, the results were wanting. Owing to the long-lasting monocultural reliance on sugar and decades of failed crops, the majority of the Réunionese suffered from appalling economic and sanitary conditions even at the time of the island's departmentalization in 1946:

> The plasmodium (or malaria parasite [my comment]) has found a prolific possibility to spread in the department on basis of the considerate number of anopheles mosquitoes present on the island on one hand, and the majority of the population's lack of hygiene and undernourishment on the other hand.[49] (my translation)

Nevertheless, as pointed out by Arnold,[50] little was done to contain the transmission of malaria until after the Second World War. In 1948 malaria was therefore still responsible for 38 percent of the annual deaths in Réunion.[51] Despite the fact that the Réunionese had obtained French citizenship, this was far from equal to that of other French

nationals.[52] With the introduction of DDT (dichlorodiphenyltrichloroethane) in 1939, however, the fight against various blood-feeding athropods, the anopheles included, accelerated. Between 1949 and 1952, the problem of malaria was addressed with several intensive preventive campaigns in Réunion.[53] This work was undertaken by the governmental "Service de Prophylaxie" (SDP), which by the time of the 2005–2007 chikungunya epidemic, had been replaced by DRASS. The SDP sanitary agents conducted house inspections, and, if necessary, sprayed both the insides and outsides of peoples' houses with large amounts of pulverized DDT mixed with petrol. This method was known locally as "house painting," and considered to be highly efficient as it rid people not only of mosquitoes, but also of lice, bedbugs, fleas, scabies, and ticks.

No such vigorous effort was implemented to improve Réunion's poor sanitary and economic state. It took, for example, nearly 20 more years before the implementation of French social legislation and welfare schemes. By then, the political tensions on the island had reached a critical point. While the decolonization movement represented by the French Communist Party's Federation in Réunion had previously considered departmentalization the best option to improve the island's social situation, the dissatisfaction with the island's dire economic conditions and the lack of an identical republican resident status cumulated in a declaration of the island's right to self-determination on May 19, 1959.[54] This proclamation was made by the newly founded "Parti Communiste Réunionnais" (PCR), which had separated from its French counterpart in protest against the party's lack of focus on colonial oppression. The leader of the Communist Federation, Raymond Vergès, had passed away in 1957, and his son Paul was elected the general secretary of PCR. The radicalization of the party's ideological position on the question of departmentalization did not occur in a vacuum. The atrocities of the Algerian War between 1954 and 1962, in particular, severely challenged their hopes for equal French citizenship. It also discredited inclusion as a strategy for decolonization, and assimilation as a viable option for citizenship. In addition, PCR's claim for autonomy coincided with the establishment of the Fifth Republic and its new constitution in 1958, and the début of Charles de Gaulle's presidency (1959–1969) and his nationalist project of French imperial grandeur. Part of de Gaulle's strategy to (re)establish France's position as an independent world power free from foreign dominance, be it by the Soviet Union or the United States, included a continued control of as many of the republic's colonies as possible. Neither of these objectives sat well with the PCR.

Political Antagonism and the 1963 Election: Michel Debré versus Paul Vergès

By the late 1950s and the beginning of the 1960s, the political climate in Réunion had evolved into two opposing camps represented by the pro-autonomous communists and the pro-French conservatives.[55] On basis of the island's lack of indigenous inhabitants, the conservatives argued that the "people of Réunion" had always been French, and should continue to be so in order to achieve full and equal citizenship rights. In their struggle to counter the communists' demand for Réunion's autonomy, and its increasing support among the Réunionese electorate in the aftermath of Algeria's independence, the conservatives turned to the former prime minister of France, Michel Debré, for assistance.[56] Debré was the first prime minister of the Fifth Republic, and had served under de Gaulle until 1962. He was an uncompromising anticommunist and a fervent Gaullist. Whereas de Gaulle finally succumbed to Algeria's demands for independence in 1962, Debré had a hard time accepting the defeat. As a consequence he resigned from his post as prime minister.[57] When the conservatives in Réunion contacted Debré to run as candidate for the island's first district (St. Denis) in the upcoming reelection for the French National Assembly in May 1963, he was presented with an opportunity to continue his patriotic political ambitions. While accompanying de Gaulle on a brief visit to Réunion in July 1959, Debré developed a particular fondness for the island. He had been immensely impressed and moved by the Réunion islanders' overwhelming welcome of de Gaulle, especially given the population's diverse racial origins. He interpreted this as "the love of Réunion Islanders for France." According to Finch-Boyer,[58] however, the crowd of 40,000–50,000 Réunionese who had turned up to listen to de Gaulle speak did not necessarily do so because they supported his political agenda, but rather because they considered him to be a Second World War hero.

Réunion's national "destiny" as autonomous or as a continuing DOM was finally decided during the 1963 election, which Debré and the conservatives won with an overwhelming 30,908 votes against 7,365.[59] Debré became a deputy in the French Assembly, and remained a legislative representative for Réunion for a further 25 years.[60] The conservatives' victory was, to a large degree, the result of an anticommunist electoral campaign rhetoric that contrasted freedom with communism: They argued, for example, that a vote for Michel Debré was a vote for Charles de Gaulle and for France, whereas a vote for Paul

Vergès was comparable to a vote for Khrushchev and the Soviet Union, or even to Mao and China.[61] The political differences between the two communist leaders were largely ignored. The point was to establish Paul Vergès and communism as fundamental enemies of France, and the republic's ideals of freedom, liberty, and equality. According to Debré's campaign rhetoric, one was either pro-French or pro-communist. It was simply not possible to be both.[62]

In addition, in order to attract voters, including potential communists, Debré and the conservatives promised the Réunionese electorate substantial social and economic improvements in exchange for their "loyalty." For a population suffering from severe hardship, this was a particularly persuasive argument. Equal citizenship and access to the same social rights and services as those of the inhabitants of mainland France, which the Réunionese Communist Federation had fought so hard for in the years prior to decolonization, was finally within reach. Besides, clientelism was a well-established part of Réunion's politics already.[63] People on the island had always been "rewarded for voting for the right candidate with welfare, protection, jobs, housing."[64] In comparison, the communists offered no promises of recompense in exchange for the population's votes. To many Réunionese, considering the difficult conditions in recently independent neighboring nation-states, such as Mauritius and Madagascar, autonomy might have appeared to be less rewarding than its sacrifices, that is, continued poverty. Réunion had also been hit hard by the cyclone Jenny in the year preceding the election, resulting in 35 deaths, 4,000 destroyed houses, and substantial damage to the island's sugar crops.[65] As most planters lost between 30 and 70 percent of their harvest, many sugarcane workers were out of jobs. However, in order to boost Debré and the French Republic's popularity among the Réunionese electorate, France followed this up with a disaster relief program only in 1963, at the same time as Debré posed his candidacy for the elections taking place in May.[66]

Cold War and Public Health Discourse, and the Making of France in Réunion

In contrasting freedom with communism, Debré and the conservatives combined tactics of ingratiation with scare propaganda:[67] A well-known slogan from Debré's campaign warned, for example, the electorate to "Vote for Debré, or tomorrow you will all be Russian!"

This also demonstrates how Debré perceived Réunion as an important piece in Cold War proxy struggles.[68] Furthermore, as mentioned in the previous section, the question of welfare provision was intrinsically tied to the outcome of the upcoming election. If the Réunion islanders were "disloyal" to the republic, they would continue to suffer and to go hungry. If they voted for Debré (= de Gaulle = France), they would finally be able to leave their destitute economic and social situation behind. According to Debré, Paul Vergès, communism, and autonomy would lead the island into even more pressingly impoverished conditions than those that the population currently suffered under.

The use of such rhetoric marked the beginning of a discourse of dependence between the previous colony and its mother country in which the Réunionese were led to believe that the island would never be able to "make it" on its own without France. Centuries of sea-trade connections throughout the Indian Ocean, in which Réunion had been an intrinsic part, were conveniently ignored. Instead Debré juxtaposed Réunion and the other islands in the region.[69] It was, for example, claimed that if Réunion was "de-departmentalized," it would become "African" like the recently independent Mauritius and Madagascar, and, as a consequence, suffer similar hardships. Not only would Réunion be subjected to a totalitarian communist regime, but the population would also suffer from African "underdevelopment" and "primitiveness." In contrast, Debré could offer Réunion and its inhabitants inclusion within the enlightened, civilized, and democratic world of European France.

With Michel Debré's clear victory over Paul Vergès in the 1963 election, Réunion was firmly established as a geopolitical part of France rather than the Indian Ocean. Disease, however, can obviously not be stopped by such envisioned frontiers, as has been confirmed time and again with the spread of epidemics across the region. Arnold[70] claims, for example, that from the 1850s onward the Indian Ocean was given an "epidemiological identity as a constant zone of danger and disease, ever poised to threaten Europe or those Europeans who ventured to its shores." Although various means for movement and communication increased throughout the 1950 and 1960s,[71] it did not erase such Eurocentric perceptions of the colonies as naturally and intrinsically diseased.[72] According to both Ostherr[73] and Wald[74] such colonial images of disease and the diseased as inherently "tropical" and "non-white," were rather reinforced throughout the 1950s as the Western world's paranoia against communism provided favorable conditions for the growth of a public fear of any type of foreign "invasion," be

it through war, immigration, or disease. In addition, communism was considered to be the worst viral threat of all because of its high risk of "contamination":

> While the threat of Communism was undoubtedly a crucial component of the postwar social imaginary, the language of anti-Communism was itself entwined with the cultural discourse of world health. With its rhetoric of invasion by invisible enemies who spread the ideology of Communism like a highly infectious contagion, the language of anti-Communism was heavily influenced by the imagery and anxieties of world health.[75]

This merging of communism with contagion and disease also appeared to be applied to Paul Vergès as the perceived personification of communism in Réunion: Local Right-wing newspapers in favor of Debré, such as "Le Journal de l'île de la Réunion," questioned, for example, Vergès's loyalty to France on the basis of his mixed racial origins as white Creole and Indo-Chinese. Allegedly his Indo-Chinese mother had infected the paternal blood running through his veins with an anti-French virus,[76] making him a "contagious" threat to the wholesomeness of the French Republic. It should be noted, however, that the racist representations of the communist party's leader were never supported by Debré, who, on a number of occasions, spoke wholeheartedly and convincingly for the acceptance of multiracial (French) citizenship.[77] To him, the idea of nation was superior to that of race—a highly unconventional stand at the time, but also a necessity in multicultural Réunion.[78]

Debré's making of France in Réunion was, however, not merely done on a discursive level as he followed up on his promise of economic, social, and sanitary improvements. During the latter half of the 1960s, substantial infrastructural changes were, for example, initiated on the island with regard to housing, schools, roads, and electricity.[79] Furthermore, welfare was provided through health insurance, social and family allocations, and social housing laws.[80] Gradually, Réunion was not only "relocated" to Europe on the basis of its geopolitical attachment to France, but also made to mirror its mother country materially: Social housing estates were, for example, built after French architectural models and preferences for ways of living,[81] the problem being that the houses were intended for a much cooler climate, and thus not suitable for a subtropical one. In addition, owing to the warm temperatures, most Réunionese spend large parts of their domestic

lives outside, something that was obviously difficult to continue doing in an apartment.[82] Although such housing was put in place to improve the local living conditions, Finch-Boyer[83] argues that the projects had inbuilt cultural presumptions corresponding to French ideals of urban living, tidiness, and conformity. Debré's welfare programs were, for example, repetitively criticized for being "colonialist," particularly since welfare and social legislation were used to undermine support among the Réunionese electorate for the island's autonomy. Nevertheless, according to Finch-Boyer[84] such "colonialist" criticism is somewhat misplaced as it tends to overlook or ignore the underlying reasons why so many Réunionese chose to vote for Debré rather than for Vergès: In contrast to previous ideas of the Réunionese colonial subjects as naturally poor, Debré's plans for welfare challenged such views by aiming toward social equality for all French citizens irrespective of race, religion, or class. To very many Réunionese, social legislation and new housing, cyclone-proof nonetheless, were perceived as a long-desired possibility for considerable social mobilization. Based on these facts, they made informed and pragmatic choices measuring the benefits of the state-funded welfare programs. Finch-Boyer[85] claims thus that if Debré's policies represented a new colonial move, it was one of welfare-led colonialism, "in which financing a French presence overseas in La Réunion was more important than any outmoded ideas about inferior or dangerous races or of a 'civilising mission.'" Nonetheless, I still believe that the rhetoric of this so-called welfare colonialism was very much influenced by the merging of colonial ideas of cultural superiority, with Cold War paranoia and public health rhetoric. As argued by Ostherr[86] and Wald,[87] the influence of anticommunist rhetoric on public health discourse, and vice versa, produced an understanding of both communism and disease as incompatible with Western ideas and way of life. Within such rhetoric, health itself was an indicator of civilization,[88] an argument used by Debré and the conservatives in Réunion against autonomy. In establishing Réunion as part of France rather than the Indian Ocean, they simultaneously managed to discursively erase tropical disease from the island's health chart. Poverty and disease were, at least according to the conservatives' strategic political discourse, part of Réunion's colonial past, and as such eradicated by the island's belonging to France. "Look at the situation in Asia and Africa and compare!" shouted Débre in 1967 when the recently independent neighboring countries were economically struggling, while Réunion was about to become "European."[89] One might thus argue that the civilizing mission of the French colonial project was not replaced by a

new form of "welfare colonialism" as such, but that it was, arguably, rather fully realized through Debré's state-imposed welfare programs.

Local Response to the 2005–2007 Chikungunya Epidemic: Criticism and Speculations

So how then did this so-called making of France affect local conceptualizations of the epidemic disease of chikungunya nearly four decades later?

During my fieldwork in Réunion, many of my informants, particularly the elderly, questioned the etiology of chikungunya. Despite substantial access to public health information concerning the disease, many Réunionese disputed the fact that chikungunya was a vector-borne disease. Instead they claimed that the epidemic had spread through the air, in a fashion similar to how disease transmission is explained by miasma theory. Although germ theory largely replaced miasma as an explanation of contagion after the 1870s, Herring and Swedlund[90] argue that it is still commonly used as a metaphorical explanation for contagion because it provides the conceptual tools to understand disease. Furthermore, they describe how ideas of plagues continue to burden epidemics with moral content and judgments about the people who fall ill. To them, the distinction between epidemic and plague is not primarily historically anchored, but rather displays two different ways of thinking about infectious disease. In Réunion, a blaming finger was, for example, pointed toward Mayotte and Mahoran immigrants for having allegedly brought chikungunya with them to the island. This also points to Réunion's somewhat peculiar situation in the Indian Ocean: Although Mahorans and Réunionese share French citizenship, Réunionese consider themselves to be fully French for the reasons discussed in the previous section, perceiving Mahorans as "African" and "foreign" on the basis of their religious and cultural differences. When it comes to distributions of blame and responsibilities for the contagion and spread of diseases, the links between imagining disease and imagining foreignness, or a disease as coming from elsewhere, are, according to Sontag,[91] universal. This may, however, also contribute toward the stigmatization of a disease, its sufferer, and carrier (or vector),[92] all of which occurred in Réunion during the chikungunya epidemic. As discussed elsewhere,[93] vector-borne diseases were often thought of as stigmatizing in Réunion on the basis of mosquitoes' breeding grounds in stagnant and dirty water,

commonly associated with the poor sanitary and hygienic conditions before the island was made French. Furthermore, mosquitoes' role in spreading the disease was sometimes compared by lay informants to that of rats, the classic symbol of the bubonic plague. Moreover, the house inspections conducted by DRASS fieldworkers, both during and after the epidemic, appeared to provoke memories of SDP and their "house-painting" services in the 1950s. Such reasoning was particularly noticeable among informants from the age of 55 to 75. According to local medical anthropologist Laurence Pourchez,[94] this age group tends to set everything French on a pedestal owing to their historical representativeness of the grand epoch of French political intervention on the island. Drawing upon the anticommunist rhetoric of Débre and its equation of disease with "Africa," vector-borne and tropical diseases, such as chikungunya, appeared to be considered contradictory to the island's current (French) social and sanitary situation. One informant, in particular, compared, for instance, the previous poor health and sanitary conditions of Réunion to what she believes to be the present status of Réunion's neighboring island of Mauritius. She even proclaimed that, owing to this fact, Mauritius probably regretted obtaining independence.[95] Such reasoning may be traced back to Débre's days in Réunion from 1963 to 1988, as the period in which Réunion turned away from the Indian Ocean in favor of Paris.[96] As a result, orientalist perceptions of the surrounding IOW and their "primitive" and "exotic" diseases are still reflected in many Réunionese narratives of disease transmission. This is also reinforced by science communication: Weinstein and Ravi[97] mention, for example, how the dust jacket of the well-known popular scientific book "Le chik, le choc, le chèque" (The chik[ungunya], the shock, the check) of 2006, by the locally based medical doctors Gaüzère and Aubry, introduce chikungunya to its readership: "Réunion has painfully reconnected, due to the interference of chikungunya, with its ancestral tropical and African roots. What is this mysterious virus with a cannibal name which bends the spine and eats at the cartilage and pride?"

To claim that chikungunya was not transmitted by mosquitoes was, however, not merely an etiological explanation restricted to older Réunionese with firsthand experience with the post-departmentalization years. As the epidemic progressed, etiological speculations came to form a part of the general criticism of the French government and public health authorities. Before the peak of the epidemic in January and February 2006, the central point of the allegations concerned the adequacy and appropriateness of the public health response. The

Réunionese felt neglected and abandoned by France, and complained that more precautions were taken in the mainland to avoid the possible emergence of bird flu than to protect its overseas citizens from the very real and current threat of chikungunya.[98] When the epidemic claimed its first victim, a young child, the criticism not only increased in frequency and volume, but also became highly polemical and speculative. The French government was no longer "merely" accused of negligence and mismanagement, but of deliberate under-communication and concealment of the so-called real etiological causes of the disease, and its spread in Réunion. At the peak of the epidemic, the transmission of chikungunya through the air took on an additional meaning, and was no longer merely concerned with rotting organic material wafting with the (monsoon) winds across the Indian Ocean. Instead, this air was considered to have been polluted by a medical or a military experiment, by a chemical outlet, or even by biological terrorism caused by Bin Laden and his alleged Comoro Muslim accomplices. Prestholdt[99] mentions, for example, how Cold War superpower imagery has been replaced by new potent symbols, in particular Bin Laden, which mark post 9/11 polarities of international power politics across the Indian Ocean. As local post-Cold War ("outbreak") narratives are being reshaped, the Réunionese blamed the epidemic not only on the French government's inability to protect the island against regional health hazards, but also possible terrorist threats within the Indian Ocean.

Concluding Remarks

Potential reasons for terrorist attacks on the island and its inhabitants were not given by either informants or the press. Nevertheless, the epidemic provides knowledge on distributions of blame and responsibilities for its spread, and how these appear to mirror ongoing regional tensions borne out of Réunion's status as a DOM in the Indian Ocean. Diseases spread, after all, as people meet. The interactions that facilitate the transmission of diseases, particularly across national borders, entail, as such, both the necessity and danger of human contact. When Arnold describes the Indian Ocean as a disease zone, it not only is a reflection on disease as a matter of exchange in the Indian Ocean, but also sheds light on how contagion, in the words of Wald, "is more than an epidemiological fact. It is also a foundational concept in the study of religion and society, with a long history of explaining how beliefs circulate in social interactions." [100] While research on the Indian Ocean

commonly stresses the importance transoceanic exchanges of people, goods, and ideas have had in creating points of contact across the region, in the case of Réunion, such connections have been perceived as threats against French strategic interests. According to Trostle,[101] diseases and epidemics are expressions of society and should be read as a metaphor, as well as an infection. In the island's postcolonial and post-departmentalization period of the late 1950s and the beginning of the 1960s, contagion entailed much more than the mere transmission of disease, and was, to a large degree, a critical question regarding geopolitics: Paradoxical perhaps, but if Réunion was to remain French, it had to be made French. This was achieved by contrasting the island against its independent Indian Ocean neighbors, in which process, tropical disease as a marker of difference was drawn heavily upon. During the 2005–2007 chikungunya epidemic in Réunion, this discourse rose once more to the surface as people not only questioned the etiology of the disease, but also blamed the French government for its inability to protect the island against perceived threats from the surrounding Indian Ocean. Arnold's[102] observations of disease (and medicine) as contributing toward defining the "non-white societies of the Indian Ocean region as the antithesis of Europe, as the threat lurking in Europe's backyard," thus appears to continue to haunt ideas of the spread of disease, and, of late, terrorism, in the DOM of Réunion. The backyard is, after all, unavoidably encircling the very island.

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7

Medicine on the Edge: Luso-Asian Encounters in the Island of Chiloane, Sofala

Cristiana Bastos and Ana Cristina Roque

Introduction

In this chapter we address colonial perceptions of African botanical knowledge and healing practices as expressed in the writings of two different social actors, both connected with the Portuguese empire in the Indian Ocean, both living in the island of Chiloane (Sofala, Mozambique) in the 1870s: Arthur Ignacio da Gama, a graduate of the Medical School of Goa (India) placed in Sofala in 1876; and Ezequiel da Silva, a third-generation Portuguese local teacher whose ancestors had first moved from Portugal to Macau (China) and from there to Mozambique. We analyze their writings within the context of the shifting European imperial politics in Africa and within a large-scale circulation of people, things, elements of knowledge, practices, and experiences across the Indian Ocean. They stand for distinct styles of circulation through the Indian Ocean: Arthur Ignacio da Gama was part of a flow of Goan skilled professionals who sought work outside Goa and saw themselves as part of a project of civilizing the world using modern standards, European medicine among them; Ezequiel da Silva belonged to the more mobile group of Indian-Ocean-born Eurodescendants who lived close to local populations and used local knowledge for practical purposes, including healing.

Goan Physicians and Empire

Between 1842 and 1961, hundreds of young men and a much smaller number of women studied medicine, surgery, or pharmacy in the Medical School of Goa. After graduation, many of them served in the Portuguese colonial health services in Asia and Africa, in places like Macau, in China, the eastern section of the island of Timor near Australia, the Cape Verde islands in the mid Atlantic, the West Africa coast of Guinea, or, in larger numbers, Angola and Mozambique (Figure 7.1). Regardless of what might have been the personal motivation behind each of the individual trajectories, the collective endeavor of Goan physicians in Africa during the nineteenth century would later be celebrated as a pillar of the Portuguese empire. In oral lore, in public ceremonies, or in print, Goan doctors were depicted as those who had been out there where no one else wanted to be, risking their lives for the safety of the troops and for the noble mission of treating the indigenous populations. Rather than products of empire, Goan physicians were presented as agents of empire-building. Such views were solemnly expressed at the centennial anniversary celebrations of the medical school in 1942.[1]

Figure 7.1 Indian Ocean map showing Chiloane, Goa, and Macau

Given the political atmosphere of the 1940s, it is not surprising that the government-appointed directors of the school chose to cheer, celebrate, and befriend the Portuguese administration, present and past, rather than criticize it. Indian nationalism was at its peak, the British rule in the subcontinent was near the end, and Goa was then—after having been neglected to quasi-irrelevance through the eighteenth and nineteenth centuries—under pressure to take advantage of its connections to Portugal and keep away from the surrounding upheavals. When India became a new nation, in 1947, Goa remained one odd "Portuguese pimple on the face of Mother India," as in the quote attributed to Nehru. Neither diplomacy, nor the nationalist struggle of the *satyagrahas* through the 1950s, or international pressure, changed the stubborn position of Salazar's Portugal; the annexation to the Indian Union occurred only in 1961, after a display of military power followed by peaceful surrender. In 1987, Goa became a state of the Indian Union, after a referendum (the 1967 Opinion Poll) in which Goans showed their preference for remaining a small state rather than merging with Maharashtra.[2]

Back in the 1940s, Goa was at the crossroads of major changes in world politics. The Portuguese administration insisted on following an idiosyncratic path against decolonization and presented empire as an imagined transcontinental community in which different identities happily combined with one another and merged in a single destiny. Goa was assigned a prominent role in that imagined community. Goa was the evidence that West and East could meet. Goa evoked the golden age of sea trade, great churches, and heroes like Vasco da Gama and Francis Xavier. Lusotropicalism, the ideological cement fabricated in the 1950s and adopted in the 1960s by the Portuguese just at the moment when the European empires were collapsing for good, was yet to be available with its repertory of friendly colonialism and of Portuguese easy ways in the tropics.[3] In the 1940s, the rhetoric of empire was still about conquest, precedence, bravery, and the civilizing mission. Those were also the key words in the speeches made at the centennial of the medical school.

It is not clear whether those who actually served in the African health services were imbued with the sense of mission that was later attached to their trajectories. Did they choose serving in Africa and caring for the African bodies and souls, or was their route more of a contingency? Did they take sides with the Portuguese and feel that they were treated like equals in a shared mission of civilizing by colonizing, or were they treated as colonial subjects and kept in secondary roles? On other occasions, we have addressed the ambiguities experienced by

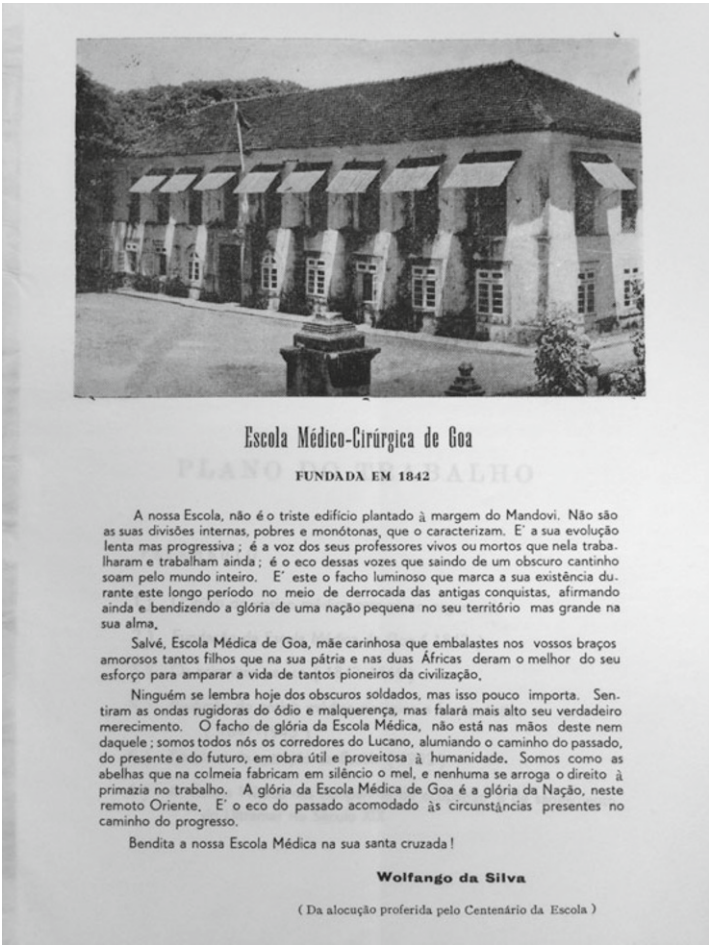
Goan doctors in Africa. In this chapter we read further into the writing of one of those doctors, Arthur Ignacio da Gama, and compare him with his contemporary Ezequiel da Silva. Both men lived in the island of Chiloane (Sofala) during the 1870s.[4]

Arthur Gama: A Christian Brahmin from the Goa Medical School

Arthur Ignacio da Gama was born in 1851 in Verna, Salcete, into a family of Christian Brahmins. He attended medical school in nearby Panjim and graduated in 1875.[5] Although we do not know enough about his childhood and teenage years to assert why, when, and if he wanted to become a doctor, we know that it was a choice of election among the social group with the peculiar reference of Christian Brahmins, about whom some comment should be made.

Christianized since the sixteenth century, when pressured by the Portuguese to convert or otherwise leave their land—which some preferred to do, and fled to the neighboring counties[6]—many families had adopted the language, religion, clothing, architecture, and tastes of the Portuguese, while keeping relatively intact their role in the local social hierarchies. Christian Brahmins represented the upper crust of the accommodation between the European ways and the caste-evoking traditional social hierarchy. Highly influential in the Catholic Church, Brahmins competed with the Chardo, another prominent, caste-evoking group that was influential in other spheres, and with the small minority of Luso-descendants, who claimed direct lineage from the ruling Portuguese and received the highest privileges in the administration.[7]

Some Christian Brahmins had long been familiar with medicine, by learning from their elders, from assisting Portuguese physicians and surgeons in the military or religious hospitals, or via one-on-one transmission of knowledge by the head physician in charge. The institutionalization of the Medical School of Goa—which should be credited to this group, who provided the majority of the student body—should be seen as one step in this process, rather than an initiative of the Portuguese administration.[8] Partly a continuation of a long process, and partly a rupture with the past and an attempt to endorse European modernity, the school allowed no compromise with traditional medicines (Figure 7.2). Whatever might have been the students' previous knowledge of local healing traditions, they were supposed to leave it outside the walls of the Maquineses palace, where, in the



Escola Médico-Cirúrgica de Goa

FUNDADA EM 1842

A nossa Escola, não é o triste edifício plantado à margem do Mandovi. Não são as suas divisões internas, pobres e monótonas, que o caracterizam. E' a sua evolução lenta mas progressiva; é a voz dos seus professores vivos ou mortos que nela trabalharam e trabalham ainda; é o eco dessas vozes que saindo de um obscuro cantinho soam pelo mundo inteiro. E' este o facho luminoso que marca a sua existência durante este longo período no meio de derrocada das antigas conquistas, afirmando ainda e bendizendo a glória de uma nação pequena no seu território mas grande na sua alma.

Salvé, Escola Médica de Goa, mãe carinhosa que embalastes nos vossos braços amorosos tantos filhos que na sua pátria e nas duas Áfricas deram o melhor do seu esforço para amparar a vida de tantos pioneiros da civilização.

Ninguém se lembra hoje dos obscuros soldados, mas isso pouco importa. Sentiram as ondas rugidoras do ódio e malquerença, mas falará mais alto seu verdadeiro merecimento. O facho de glória da Escola Médica, não está nas mãos deste nem daquele; somos todos nós os corredores do Lucano, alumiando o caminho do passado, do presente e do futuro, em obra útil e proveitosa à humanidade. Somos como as abelhas que na colmeia fabricam em silêncio o mel, e nenhuma se arroga o direito à primazia no trabalho. A glória da Escola Médica de Goa é a glória da Nação, neste remoto Oriente. E' o eco do passado acomodado às circunstâncias presentes no caminho do progresso.

Bendita a nossa Escola Médica na sua santa cruzada!

Wolfango da Silva

(Da alocução proferida pelo Centenário da Escola)

Figure 7.2 Medical School of Goa

Source: J. Pacheco and D. E. Figueiredo (1960), *Escola Médico-Cirurgica de Goa—Esboço Histórico* (Bastorá: Tipografia Rangel)

annex of the military hospital, facing the Mandovi River, the school had functioned since its foundation in 1842. Meanwhile, life went on beyond the school walls, and head physicians reported that students and graduates were so immersed in local healing that they would rather use traditional medicines when sick and, sometimes, included them in their clinical practice.[9]

We do not know if the young Arthur Gama had much exposure to traditional medicines before he attended medical school. We do know

they were not encouraged in its all-European curriculum, fashioned after those of the Medical-Surgical Schools of Lisbon and Porto, which had started in 1836, offering a modern, hands-on training, as opposed to the old scholastic ways of the legendary University of Coimbra.

Whether Arthur had hands-on training or sat through a more scholastic type of teaching is debatable. There is evidence that students objected to using their hands in general and in dissections in particular; faculty members condescendingly accommodated themselves to the use of anatomical models rather than human corpses, which, they claimed, were in shortage at the hospital.[10] Therefore, it is likely that Arthur did not have to perform dissections as part of his schoolwork routine. He attended classes lectured in Portuguese by Portuguese-born professors or by Goan doctors trained in Portugal; he took his exams in Portuguese, after studying French, Portuguese, or English textbooks, and used supplies shipped from Europe. He learned what was learned in Europe, and came out of school with a degree in European medicine. Then he went on to Africa.

From Goa to Mozambique

Besides Africa, what other options were there for the graduates of the Medical School of Goa? Not that many. Some of Arthur's classmates would never even practice medicine; a number of them went into the public administration, something that a college degree—regardless of its discipline—helped make possible.[11] Opening a local clinic was hardly viable; at the time, not even the higher-ranking Portuguese-certified physicians stationed in India could make their living from the earnings of a private practice. They complained that there was not enough local clientele for their services, noting that most people would rather go to traditional healers, and the only clients for European medicine were the few Portuguese residents who felt entitled to be treated for free by their compatriots.[12]

Entering a career as a military physician was a more likely option for the graduates of the Medical School of Goa, and many of them found that this path led them to distant locations in Asia and Africa. Some of their routes followed preexisting paths and connections through the Indian Ocean and into the Atlantic, with Portugal as one possible destination, but also including Bombay, the Gulf, and other parts of the world as viable places to settle, serve, come back from, and eventually go back to, in one or another's generation. These trajectories followed broadly the routes framed by Engseng Ho for the centuries-

old spread of Muslim families throughout the Indian Ocean, as well as those recently depicted in detail by Pamila Gupta, Selma Carvalho, and Stella Mascarenhas-Keyes for Goan diasporas in Mozambique, the Gulf, and East Africa.[13]

Among the many routes across the Indian Ocean, the path to the coast of Mozambique had been attracting generations of Goans and other populations from the northwestern coast of India.[14] Mozambique had been under the jurisdiction of Goa until the eighteenth century and many Goan families extended their trans-Indian Ocean networks into the eastern coast of Africa; when João Julião da Silva referred to the district of Sofala, he listed Goans as regular residents.[15]

Collating a number of different sources for the nineteenth century, we were able to identify 40 graduates of the Medical School who held official positions in the health services in Mozambique (see appendix 7.1). Willingly or unwillingly, they provided a steady workforce at a relatively low cost for the Portuguese government, given that their training had mostly been self-financed and their earnings were meager. Goan graduates were kept in secondary positions and could only progress in their careers if they went for further training in Portugal—which most did not. Many complained about what they regarded as an intrinsically unfair system that made them eternal subalterns, regardless of their quality.[16] Adding insult to injury, some had to work under Portuguese supervisors who scorned their medical degrees and laced their comments with anti-Asian prejudice.[17]Despite these difficulties, the idea that Goans would provide the ideal workforce for the Portuguese health services in Africa was first suggested by a Goan doctor; not just any doctor, but Rafael Antonio Pereira (1847–1916), a Benaulim-born Christian Brahmin who studied medicine in Portugal and returned to Goa, where he attained higher positions and directed the medical services between 1884 and 1893. At a time when the school was under siege and the Portuguese administration considered closing its doors, Rafael Pereira developed an argument about the special qualities of Goan doctors for the colonial services: they were the best intermediaries between Europeans and Africans, knowledgeable enough to be the carriers of civilization, and accustomed to tropical harshness and illnesses.[18] The same line of argument was later presented to the Portuguese parliament in favour of the Medical School of Goa—with success.[19]

Yet before Goan physicians were defined as the doctors of empire in Africa, their lives in the colonial outposts were often random experiences of disorder and improvisation under harsh conditions and with little support from the colonial administration. It was largely on his

own, albeit carrying a sense of mission, that Arthur Gama acted when he took his position Chiloane, in 1876, at the young age of 25, where he would stay until his premature death in 1882.

Into the Island of Chiloane

The capital of the Sofala District was transferred from the mainland port of Sofala to the Island of Chiloane, located nine leagues southward, in the year 1860, owing to environmental constraints and political instability that included warfare and retaliation by African groups.[20] Portuguese sailors had been using the island as an alternative to the mainland port of Sofala since the mid-sixteenth century, but there was no political or military role assigned to the place (Figure 7.3). Described in the sources as of "six leagues north and south, and the same east and west,"[21] it was either presented as a potentially welcoming location for settlers, with its deep and sheltered bay, well supplied with pastures, fish, wood, and plant resources, or as a barren desert with no comparison to the fruitful land of the continent where people had their farms. In the absence of an official census, it is believed that until the 1860s the island was inhabited seasonally by fishermen or used as a sort of trade station, for transshipment and distribution of goods, by local traders. In 1890, there were about three thousand people in the place, of which fifty were classified as "white";

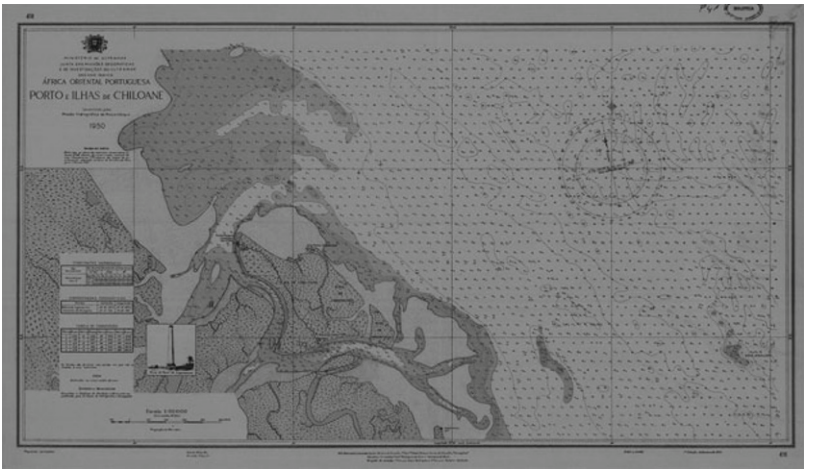


Figure 7.3 The Harbor and Islands of Chiloane (IICT—CDI-0483–1952). (courtesy of the Historical Overseas Archive [AHU] and the Tropical Research Institute [IICT], Lisbon.)

there were eight European-descent "children of the land," plus some Luso-Asian families, while the majority were drawn from the indigenous population.[22]

When Arthur Ignacio da Gama was appointed to Chiloane, in 1876, he was estranged by what he considered its wilderness, and did not abstain from exhibiting his impressions in the official report.[23] In contrast with Ezequiel da Silva's appreciative depictions of the place (see infra), Gama's writings were all about disillusionment with the local lack of infrastructure, lack of civilization, lack of perspectives, and lack of viability. He suggested that the Portuguese administration should not insist on colonizing the place, which might better be left to the clouds of insects that emanated from its swamps.[24] In his opinion, there were more appropriate environments for settlers in the mainland; he did not refer to the reasons why the capital had moved to the island in the first place. The Portuguese would indeed move back to the mainland in due time; in 1892, the capital of Sofala was transferred to Chiveve, renamed City of Beira in 1907, which would have a notorious future as Mozambique's second city. Gama would not live to see the new capital: he died in 1882, succumbing to the fevers that plagued the island.

Ahead of Gama were the many tasks assigned to colonial physicians. They had to handle the patients—mostly soldiers and settlers, as the indigenous populations were reluctant about receiving medical care from the Portuguese;[25] they had to report to their superiors in the Ministry of Navy the morbidity and mortality figures; and they had to provide an inventory of the causes behind the health conditions in the place, according to the prevailing beliefs on the influence of climate on human health. Apart from these duties, they also had to act as naturalists and gather scientific data, samples, and objects; they had to observe, collect, and report on zoological, botanical, and mineralogical matters. They were required to send specimens, plants, grains, seeds, and whatever objects might be of interest to the museums and scientific collections of the kingdom—such as the *Real Gabinete de História Natural da Ajuda* in Lisbon, the institution that later evolved into the Museum of Natural History.[26]

People in the position of Gama were pressured to compile, amass, and report, not just for the sake of knowledge as a goal, but also because knowledge was a commodity in the inter-European competition for the political and economic control of Africa. Lisbon was a center of knowledge compilation, with multiple outsourced data gatherers, but the whole endeavor did not match up to the ambitious claims held by Portuguese governments for Africa. Colonial officers in

the field were required to help fill the gaps. Explorers sponsored by the Geographical Society had the mandate to map river sources, mountains, and potential mines.[27] Practicing physicians had to compile local knowledge on plants and remedies. In a booklet clearly made for the purpose of inter-European competition, Joaquim Almeida Cunha, an officer of the colonial administration in Mozambique, gathered the knowledge on medical plants that had been compiled in the first place by Ezequiel da Silva in Chiloane.[28]

Arthur Ignacio da Gama did not show much personal interest in the medical uses of local plants. He wrote the report using secondhand knowledge, for, he claimed, he could not afford the time to go out in the field to collect data when he was needed as a doctor in what was often a life-and-death struggle. He was neither eager to survey, collect, and report on the minerals, flora, and fauna, nor to know the indigenous peoples close enough to report their lifestyles and ship their artifacts into some distant European destination; he was not trained as a knowledge-collector, but as a doctor, who did not trade his place at the patient's bedside for the outdoors, wandering for bits and pieces that might, or might not, be relevant for humankind.[29]

For someone who was so nonchalant about data collecting, Gama's depiction of the healing rituals practiced by the indigenous peoples of Chiloane is impressive—making it a sort of ethnomedical narrative all too similar to those produced in the twentieth century. He depicted the role of the "inhamessoro" (*nyamasoro*), the people's quest for his or her services, the sort of afflictions they brought to the healers, the worldview they espoused, the instruments, gestures, dress code, sounds, smokes, substances, and other material elements involved in diagnosis and treatment. He also made an attempt to attribute meaning to all these things. His prejudice, though, was patent all through the narration. Gama could not help but formally distance himself from traditional healing, perhaps as a good child of his alma mater, perhaps as someone who had to always emphasize, more than others who took it for granted, his Europeaness and his commitment to civilization and science.

Trying to be objective, yet unsympathetic, Gama displayed his prejudice against African islanders' lifestyles, which he regarded as marked by a negligent attitude of living for the moment, founded upon what we would refer to today as gender inequities: women had to perform all the hard labor, and men measured their wealth by the number of wives they controlled.[30] Gama's opinions seem to accord with the established views about Africans held by Portuguese settlers,

administrators, and missionaries. What stands out in his writings is that despite his distance and disdain for empirical work, he provides a detailed, ethnographic-like account of African healing. Could he have obtained it from Ezequiel da Silva, who was so immersed in the local life to the point of being depicted as a *Ganga,* the "halfway witch-doctor," by the officer Cunha in 1883? Or perhaps from Cunha himself? With no record of their interaction, we can only guess by comparing their writings—and conclude that Gama's depiction is a much more diluted and impressionist approach to local knowledge than that of Ezequiel, who was fully immersed in local culture.

Plants, Healing, and Knowledge

It is unlikely that in such a small place as Chiloane Arthur Ignacio da Gama and Ezequiel da Silva never met, as both were part of the inner circle of those upon whom the Portuguese authorities relied. The Portuguese community living in Sofala had always been quite small.[31] People from Portugal (*reinóis*) were very few and most of those who qualified as Portuguese had first gone to India or Macau before settling in Sofala. There were also convicts or prisoners, who did not represent mainstream European culture. In other words, the local Portuguese community was socially, culturally, and historically distant from Europe; they might rather be regarded as belonging to the Indian Ocean World (IOW). Unlike Gama, who had come from India imbued with a sense of mission about rescuing and "civilizing" Africans, people like Ezequiel did not feel obliged to follow any external agenda regarding the indigenous peoples—in fact, Ezequiel and his folks were regarded by the Portuguese authorities as halfway natives who shared much of the lifestyle of the actual indigenous population.

Ezequiel was the son of Zacarias Herculano da Silva, who began his career as a military man in Sofala in 1810. His grandfathers were João Julião da Silva, a second-generation Portuguese who was born in Macau in 1769 and moved to Sofala in 1790, and Francisco Honorato da Costa, who in the early nineteenth century had been director of the "Cassange fair," a trading post in the Cuango, Angola. Ezequiel's family was closely connected to the Portuguese colonial administration, like many others; unlike many others, however, was their profound knowledge of Africa and of the experience of the IOW. Joining the Portuguese administration at a young age, Ezequiel da Silva took the position of schoolteacher in Chiloane. He was already there when Ignacio da Gama was appointed to Sofala.

Besides their differences in social background and education, Ignacio and Ezequiel had different worldviews and different attitudes about the place they were in and the people who lived there. Ignacio was a passerby; Ezequiel was a resident. Ignacio was an outside observer; Ezequiel was part of the community. Those different positions are apparent in the ways they observe and describe the island of Chiloane, its characteristics, resources, and potentialities. The worthless, unsuitable island described by Ignacio is referred to by Ezequiel da Silva as a complex ecosystem, providing different resources that local people knew how to use and capitalize upon.[32] Unlike Ignacio's, Ezequiel's observations were the direct result of his own knowledge of the region. He combined observation and living experience in a continuous learning process legitimized by local traditional uses and practices. Therefore he was able to look far beyond the "poor lands of Chiloane," identifying resources and potentialities, namely, medicinal herbs and plants that, once analyzed, could come to integrate the Western pharmacopoeia and be a source of income for the colony.[33]

Informing on the different medicinal herbs and plants existing in the island of Chiloane, Ezequiel da Silva provides data on the local ecosystem and specific different habitats—sandy lands, sandy dry lands, wetlands, sandy wetlands, mangroves, beaches, and coastal lagoons—all of them testifying to the island's biodiversity and his own knowledge on the territory. For this reason Cunha refers to him as a *Ganga*, the "graduate healer," the one to be consulted whenever the community had a health or a political problem.[34] When informing on traditional knowledge and practices related to the knowledge, identification, and use of medicinal flora, Ezequiel shows how he was an insider to local culture. Moreover, he supplies additional information on the way people exploit and manage the local natural resources. This "being part of the group" became essential either to report uses and prove its effectiveness or to substantiate traditional knowledge.

As a physician and having to face the many difficulties related to the operability and effectiveness of the health services in Mozambique (lack of funds to guarantee basic operating services, lack of facilities, lack of human and technical resources, and lack of medicines), Gama gave priority to clinical observations, seeking to act according to his scientific background and neglecting a more empirical approach to the local medical solutions. This approach would have required long-term research, for which he had no time to spare and was not convinced would be worthwhile. [35]

Thus, although both Ignacio and Ezequiel looked into the problems of disease and healing, their perspectives were rather different. Ignacio advocated the defense of scientific medicine and its role as a vector of civilization; whether or not he might be personally sympathetic to traditional healing, or even exposed to it outside medical school, his formal training was all about rejecting the argument that non-European knowledge might be valuable and effective; for him, only European medicine should be supported, used, and promoted. In such a corner of the world, with so many adversaries, he might have felt that his task was immense and perhaps he was alone as the paladin of scientific medicine. Unlike Ignacio, Ezequiel was well aware of his lack of "scientific training" in medicine; on the other hand, he had a profound knowledge of the place, its resources, and the uses people made of them—particularly in the field of herbal medicine. He stressed the importance of making a rigorous and systematic survey of the local medicinal-pharmaceutical flora, which required learning about its uses from the local practitioners; the results of such research, he foresaw, would have an impact not only in Sofala and Mozambique but also in the other Portuguese overseas territories and even in Europe.[36]

This particular position of Ezequiel does not mean he completely supported the healing practices performed by the local healers. In fact, though he understood the role of the healers in the community, he was very critical of their performance and even doubted that their practices could be aptly named medicine, although he referred to them as "Kaffir medicine."[37] He distinguished clearly between the healer's performance and the healing properties of certain plants when applied to practical situations. He regarded the healers' procedures with suspicion; only in a very few situations did he consider the efficacy of the way the healer acted. As for the medicines used, they were worth considering because they proved to be effective.[38]

While pointing out the lack of a pharmacopoeia in the Western sense and the difficulty of compiling recipes in the absence of preestablished doses, Ezequiel's work combined modern scientific methods of registry and collection of samples for study (Figure 7.4 and Table 7.1) with traditional procedures of diagnosis and treatment.[39]

Ezequiel's work reveals a profound knowledge of Sofala's natural environment and of the local phytotherapeutic practices based on the perceived relationship between disease, plant, and habitat of occurrence. His aim was to identify possible solutions for health problems both in Sofala and in other regions under Portuguese rule. He collected and identified 74 different specimens of medicinal herbs and plants

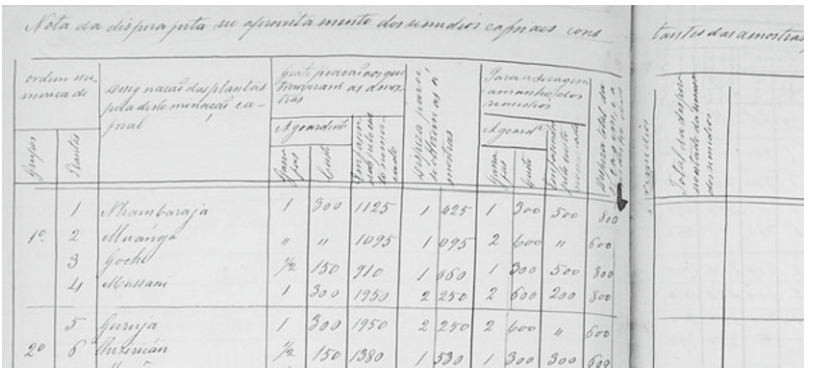


Figure 7.4 Excerpt from the registry book of the plant samples collected by Ezequiel da Silva (1883), IICT, AHU, Códice_SEMU_2186. (courtesy of the Historical Overseas Archive [AHU] and the Tropical Research Institute [IICT], Lisbon.)

used in Chiloane and Sofala District, and compiled the different recipes listed in 1883 by Cunha in his booklet.[40]

As often acknowledged, "one could take considerable advantages from the use of most of these medicines"—and thus he advocated the use of the local medicinal flora and its study (including both plant potentialities and habitat of occurrence), assuming that certain health problems, in other regions, could be avoided with the introduction of specific medicinal plants that did not grow naturally there.[41]

Ezequiel illustrated this point with the cases of *Durura*, *Chicarafunda, Gambacamba*, and *Mutivari. Durura* and *Chicarafunda*, if introduced into regions with similar habitats, could provide possible solutions to decrease the neonatal mortality rate. That could be the case for the Inhambane District (south of Sofala), noted Ezequiel, who knew that none of those plants were growing there either because he had the opportunity to go there or because he had a good informant on those matters.[42]

As for *Gambacamba* and *Mutivari*, introducing them to other areas could provide good local substitutes for the marshmallow roots (*Althaea officinalis*) and the extract of liquorice (*Glycyrrhiza glabra*), thereby minimizing the constant failures of these drugs in the pharmacies of hospitals and health care centers.

Knowing the diversity and specificity of each habitat and the way it influences the occurrence or absence of certain species and, consequently, the fact that they are used there or not, Silva underlines that the use of each plant for the treatment of a specific disease is

Table 7.1 Registry table for the collected samples. Reproduction of the table used by Ezequiel da Silva for the registry of the medicinal herbs and plants collected (AHU Manuscript, fl.8v–9)

Number of plants providing these samples			3
Designation of the species of the several samples and weight	Root	Pounds	1
		Ounces	”
		Octaves	”
	Bark	Pounds	
		Ounces	
		Octaves	
	Leave	Pounds	
		Ounces	
		Octaves	
	Resin	Pounds	
		Ounces	
		Octaves	
Local name	*Goche*		
Type and *habitat*	Trailer with long and rough leaves living in sandy areas		
Areas of ocurrence	Chilluane Island and Sofala		
Quantities used	Root	Pounds	
		Ounces	
		Octaves	
	Bark	Pounds	
		Ounces	
		Octaves	
	Leave	Pounds	
		Ounces	
		Octaves	
	Resin	Pounds	
		Ounces	
		Octaves	
Medicinal virtues	Fevers, marsh-fevers, and urinary problems		
Preparation and application	Decoction of the leaves, branches, and roots. Drink hot for the fevers and cold for the urinary problems		
Observations	Efficient results in both cases though it seems that it is not relevant the fact it is taken hot or cold. The reason I mention this is because I was told these were the right procedures accordingly to each disease.		

an important part of the cultural heritage of each community, thus revealing both a solid knowledge of the local natural resources and the capacity of using them to solve their basic needs.[43] This explained how, in a small island such as Chiloane, the inhabitants of the sandy lands knew that the leaves and flowers of *Muanga (Gynandropsis gynandra)* (Figure 7.5) would heal fevers associated with colds, while those living in the mangroves of the same island, where *Muanga* do not occur, knew that *Mutungumuja* leaves would cure the same symptoms.[44]

Figure 7.5 *Gynandropsis gynandra*

Source: Hermann Herbarium, Natural History Museum, London (http://www.nhm.ac.uk/research-curation/research/projects/hermann-herbarium/search/detail.dsml?PageBarcode=000594432) [45]

All these references underline what is common knowledge based on life experience and traditional use, complementing the more specific know-how of the traditional healer that no community can decline, with that of each specific habitat, so that people find different solutions to solve trivial daily problems always in view of preserving their balance and welfare as a community. Just as in Paracelsus's saying that "each country has specific diseases and for each country nature provide[s] the solution to heal them,"[46] Ezequiel's findings reveal different types of herbs and plants with medicinal virtues—in wetlands, salt-marshy areas, dried, or sandy lands. These herbs were applied to solve or slow down the most common ailments and diseases.

Concluding Note

In brief, in the context of establishing the Portuguese colonial rule in Mozambique there is evidence that many actors—Africans, Europeans, Luso-Africans, and Luso-Asians—were involved in different forms of knowledge exchanges, some of them with therapeutic value. The brief analysis of two different colonial actors who lived at the same time in the island of Chiloane, Sofala, and referred to local knowledge of plants and healing practices, show that the scope of interactions across the Indian Ocean is multisided, complex, and irreducible to a monolithic understanding of the relationship between colonizers and colonized, foreigners and locals, and external and indigenous knowledge. Arthur Ignacio da Gama went to Mozambique like many of his Goan peers—a colonial subject born into a local elite, achieved higher education in Goa, and started his career in colonial medicine by serving in Africa. In Africa he enacted Europeanness and expressed reservations regarding the lifestyles of local populations, their healing practices, and their knowledge about them—at least, those that he got to partially know. Ezequiel da Silva, on the other hand, was a third-generation Eurodescendant whose grandparents had been crossing the Indian Ocean and serving the empire in several locations. He lived closer to local populations and adopted much of their knowledge—particularly in matters of potentially healing plants, which he compiled carefully. Ezequiel had no higher training, yet he used his skills and proximity to the local population to gather knowledge and make it available to the colonial and European circles, which used them in ways that are yet to be known in detail and deserve further research.

Appendix 7.1: The Flow of Medical Graduates from Goa Serving in Mozambique

Sources include Peregrino da Costa's publications about Goan physicians in the overseas medical services (Costa, 1943, 1943a, 1944, 1957, 1957a) and manuscripts from the Overseas Historical Archives: AHU, sala 12, Índia—Informações anuais 1856–1907, 2070, «Mappa dos Empregados de Saude no Estado da India no dia 30 de Setembro de 1863», Eduardo de Freitas e Almeida (físico mor do Estado da Índia); AHU, sala 12, Índia—Informações anuais, 1856–1907, 2070, "Relação nominal por graduação e antiguidade dos facultativos e pharmaceuticos do quadro de saude do Estado da India, a quem dizem respeito as informações juntas, referidas ao dia 31 de dezembro de 1898," 21–01–1899 (ass. ilegível); AHU, sala 12, Índia—Informações anuais, 1856–1907, 2070, "Relação nominal por graduação e antiguidade dos officiaes do quadro de saúde d'este Estado, a quem dizem respeito as informações juntas referidas ao dia 31 de dezembro de 1900," 1901 (ass. ilegível); AHU, sala 12, Índia—Informações anuais 1856–1907, 2070, «Relação dos facultativos e pharmaceuticos do quadro de saude, cirurgiões militares e sargentos ajudantes e primeiros sargentos da companhia de saude, com informações referidas a 31 de dezembro de 1901», José Maria da Costa Alvares (chefe do serviço de saúde); AHU, sala 12, Índia—informações anuais 1856–1907, 2070, «Modelo n.º 1 (Regulamento disciplinar do exercito). Quadro de saude do Estado da India. Informação annual referida ao facultativo de 1.ª classe abaixo mencionado [Miguel Caetano Dias]», Rafael António Pereira (Chefe do serviço de saúde) [1897]; AHU, sala 3, Liv. 53–5202 N.º V.º 450, Livro Mestre—processos individuais [Índia 1859–1912]. AHU, sala 3, Liv. 62—5207 N.º V.º 455, Livro Mestre—processos individuais [Moçambique 1883–1896].

Name	*Year of graduation*	*Place of birth in Goa*
Joaquim Francisco Colaço	1847	Margão, Salcete
Caitano António de Melo	1851	Mercês, Ilhas
Albino Pascoal da Rocha	1851	Aldoná, Bardez
José Francisco Cornélio Filipe Dias	1853	Margão, Salcete
Caetano Florêncio Colaço	1853	Margão, Salcete
Aleixo Mariano Fernandes	1854	Piedade, Ilhas
José António Miranda	1854	Margão, Salcete

Continued

Name	*Year of graduation*	*Place of birth in Goa*
António Francisco Pais	1854	Sangoldá, Bardez
João José Salvador Crisóstomo de Figueiredo	1854	Loutolim, Salcete
José Dionísio Carneiro de Sousa e Faro	1859	Ribandar, Ilhas
Martinho da Paixão Xavier Soares	1859	Loutolim, Salcete
Aleixo Caetano de Sousa	1861	Parra, Bardez
André Eustáquio Francisco Monteiro	1861	St.º Estêvão, Ilhas
José Agostinho Maria de Sousa	1870	Nova-Goa, Ilhas
Cláudio Henrique Barreto	1871	Vernã, Salcete
Aureliano José de Assunção Rodrigues	1872	Neurá, Ilhas
António Higino Xavier Faria	1873	Loutolim, Salcete
João Olegário Pestaninho da Veiga	1874	Curtorim, Bardez
Claudino António da Silva	1875	Ribandar, Ilhas
Damasceno Isaac da Costa	1875	Navelim, Salcete
Artur Inácio da Gama	1875	Verná, Salcete
Agostinho Gabriel Arcanjo Salustiano Pinto	1876	Nova-Goa
António Mariano Gabriel do Rosário e Sousa	1876	Mapuçá, Bardez
Caetano Francisco Dias	1877	Ibo (Moçambique)
Custódio Joaquim Barreto Xavier	1878	Margão, Salcete
Aristides Luciano Evaristo de Menezes	1880	Batim, Ilhas
Baltazar Custódio Epifânio de Sá	1880	Betalbatim, Salcete
Jesús Octaviano José Pedro Lobo	1881	Calangute, Bardez
Roque Francisco Gonçalves	1881	Santa-Cruz, Ilhas
Pedro Paulo Fermiano de Sousa	1884	Aldoná, Bardez
Caetano Paulo Maria de Melo	1885	Saligão, Bardez
Hipólito Cassiano Xavier do Rêgo	1886	Santa-Cruz, Ilhas
Servinio Agostinho Colaço	1887	Margão, Salcete
Luis Caetano de Santana Álvares	1887	Margão, Salcete
António Maria da Cunha	1887	Arporá, Bardez
João Mariano Gonzaga	1889	Ibo (Moçambique)
Francisco Xavier de Brito	1889	Ibo (Moçambique)
António Francisco Zacarias Dias	1890	Taleigão, Ilhas
Adriano José Ernesto Couto	1890	Salvador, Bardez
António Carneiro de Sousa e Faro	1893	Ribandar, Ilhas

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Notes

1. The centennial speeches were compiled in the volume *Escola Médica: Comemorações centenárias* (Bastorá: Rangel, 1955). Other important sources are the writings of Dr. Pedro Joaquim Peregrino da Costa, a prolific narrator of the role of Goan physicians in Africa: in 1943, he published two articles titled "Médicos da Escola de Goa nos Quadros de Saúde das Colónias (1853–1942)" in the *Boletim do Instituto Vasco da Gama* (no. 57, pp. 1–43 and no. 58, pp. 1–66); in 1944, "Notas Biográficas de Médicos dos quadros de Saúde das Colónias—Médicos pela Escola Médica de Nova Goa, pela Universidade de Bombaim e pela Escola Médica de Goa, que repetiram o curso nas Faculdades de Medicina de Portugal," in the volume *Médicos da Escola de Goa nos Quadros de Saúde das Colónias (1853 a 1942)*, published in Bastorá; in 1957, the articles "A Escola Médica de Goa e a sua Projecção na Índia Portuguesa e no Ultramar" and "Notas Biográficas e Relatórios dos Médicos dos Quadros de Saúde do Ultramar só com o Curso da Escola Médica de Nova Goa," both in the volume *Escola Médico-Cirúrgica de Goa (1842–1957)*. For a discussion on the topic, see C. Bastos (2006), "Goa em 1942: A Retórica do Império e as Ambiguidades do Nacionalismo," in *Portugal Não É um País Pequeno: Pensar Império na Pós-Colonialidade*, ed. M. R. Sanches (Lisboa: Cotovia), pp. 229–247.
2. There is a vast literature on the specificities of Goa—e.g. Teotonio de Souza (1979), *Medieval Goa* (New Delhi: Concept); G. V. Scammell (1988), "The Pillars of Empire: Indigenous Assistance and the Survival of the 'Estado da India' c. 1600–1700," *Modern Asian Studies*, 22: 473–489; Rowena Robinson (1988), *Conversion, Continuity and Change: Lived Christianity in Southern Goa* (Delhi: Sage); Pratima Kamat (1999), *Farar Far (Crossfire): Local Resistance to Colonial Hegemony in Goa, 1510–1912* (Panaji: Institute Menezes Braganza); Alexander Henn (2000), "The Becoming of Goa: Space and Culture in the Emergence of a Multicultural Lifeworld," *Lusotopie*, 333–339; Ângela Barreto Xavier (2008), *A Invenção de Goa* (Lisboa: Imprensa de Ciências Sociais); Robert Newman (2001), *Of Umbrellas, Goddesses, and Dreams: Essays on Goan Culture and Society* (Mapusa, Goa: Other India Press). For a discussion on the referendum, see Ashley D'Mello, "Portuguese Colonial History and Contemporary Goan Elections: Impact of the Catholic

Church on the Electorate," Lecture at Yale University, April 5, 2013, as part of the *Goa: A Postcolonial Society between Cultures* conference (org. K. David Jackson).

3. The ideological source of those politics is expressed in Marcelo Caetano (1951), *Colonizing Traditions, Principles and Methods of the Portuguese* (Lisboa: Agência Geral das Colónias). For a discussion on the development of the Portuguese ideologies of empire, see Claudia Castelo (1998), *'O Modo Português de Estar no Mundo': O Luso-Tropicalismo e a Ideologia Colonial Portuguesa (1933–1961)* (Porto: Afrontamento); Omar R. Thomaz (2002), *Ecos do Atlântico Sul* (Rio de Janeiro: Ed. UFRJ); Cristiana Bastos (2001), "O Espelho de Goa: Paradoxos do Pantropicalismo Lusófilo de Gilberto Freyre," in *Brasil-Portugal: Entre o Passado e o Futuro—O Diálogo dos 500 Anos*, ed. Amélia Cohn, Aspásia Camargo, and Boaventura Sousa Santos (Rio de Janeiro: ECM), pp. 133–148.
4. Arthur Ignacio da Gama (1879), *Relatório da Ilha de Chilonane, capital de Sofala, apresentado pelo facultativo de 2ª classe em comissão do quadro de saúde de Moçambique, Arthur Ignácio da Gama (1878)*, AHU 1506 DGU 5ª Rep. Mç 1848–1890/Serviço de Saúde de Moçambique; Hermenegildo Ezequiel da Silva (1884), *Breves noções sobre a medicina cafreal do districto de Sofalla (Chilluane, 4 de Março de 1884)* Sociedade de Geografia de Lisboa (SGL), Res.1—Pasta E—nº22 fl.8. Gama's report was preliminary analyzed in C. Bastos (2004), "O Médico e o Inhamessoro: O Relatório do Goês Arthur Ignacio da Gama em Sofala, 1879," in *A Persistência da História: Passado e Contemporaneidade em África*, ed. C. Carvalho and J. P. Cabral (Lisboa: Imprensa das Ciências Sociais), pp. 91–117; and C. Bastos (2005), "Race, Medicine and the Late Portuguese Empire: The Role of Goan Colonial Physicians," *Journal of Romance Studies, 5* (1): 23–35. Ezequiel da Silva's report was published and analyzed by A. C. Roque (2001), "'Breves Noções sobre a Medicina Cafreal do Districto de Sofala' ou sobre o conhecimento que os portugueses tinham das virtudes e usos das plantas e ervas medicinais na costa sul oriental de África na segunda metade do séc. XIX," *Anais de História de Além-Mar,* 2: 211–272.
5. Using, as a source, the list of graduates provided by Peregrino da Costa, the combination of family names, and place of birth helps to identify the social background of most graduates. See C. Bastos (2006), "A Escola Médica de Goa," in *Os Portugueses e o Oriente*, ed. Rosa Maria Perez (Lisboa: Dom Quixote), pp. 167–192; C. Bastos (2007), "Medical Hybridisms and Social Boundaries: Aspects of Portuguese Colonialism in Africa and India in the Nineteenth Century," *Journal of Southern African Studies*, 33 (4): 767–782; and C. Bastos (2010), "Medicine, Colonial Order and Local Action in Goa," in *Crossing Colonial Historiographies*, ed. Anne Digby, Waltraud Ernst, and Projit Mukharji (Newcastle: Cambridge Scholars), pp. 185–212.
6. Paul Axelrod and Michelle Fuerchs (1996), "Flight of the Deities: Hindu Resistance in Portuguese Goa," *Modern Asian Studies,* 30: 387–421.
7. See Maria Aurora Couto (2005), *Goa: A Daughter's Story* (Harmondsworth: Penguin); and Ângela Barreto Xavier (2008), *A Invenção de Goa* (Lisboa: Imprensa de Ciências Sociais).

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9. José António de Oliveira (1853), *Relatório do Estado das Repartições de Saúde do Estado da Índia (Julho 1853)*, AHU, Serviço de Saúde da Índia, sala 12, Maço 1987; Eduardo de Freitas e d'Almeida, *Oficio* (July 11, 1854), *Oficio* (February 8, 1856); *Oficio* (April 6, 1861), Arquivo Histórico Ultramarino, Sala 12, Índia, Serviços de Saúde, Maço 1987.
10. Francisco Maria da Silva Torres, José António de Oliveira, and António José da Gama (1845), *Anexo ao Regulamento para a Escola Médica de Goa*, Doc. # 5, Arquivo Histórico Ultramarino, Índia, Serviços de Saúde, Ofícios dos empregados, 1840–1868, Maço nº 1987; Eduardo de Freitas e d'Almeida, *Oficio* (July 11, 1854).
11. Eduardo de Freitas e d'Almeida *Oficio* (8 February 8, 1856).
12. Ibid.
13. Engseng Ho (2006), *The Graves of Tarim: Genealogy and Mobility across the Indian Ocean* (Berkeley: University of California Press); Pamila Gupta (2009), "The Disquieting of History: Portuguese (De)colonization and Goan Migration in the Indian Ocean," *Journal of Asian and African Studies,* 44: 19–47; Selma Carvalho (2010), *Into the Diaspora Wilderness* (Goa: 1556 Trust, and Broadway); Stella Mascarenhas-Keyes (2011), *Colonialism, Migration and the International Catholic Goan Community* (Saligão, Goa: 1556 Trust).
14. Susana Trovão Pereira Bastos and José Gabriel Pereira Bastos (2001), *De Moçambique a Portugal: Reinterpretações Identitárias do Hinduísmo em Viagem* (Lisboa: Fundação Oriente).
15. José Fialho Feliciano and Victor Hugo Nicolau (orgs.) (1998), *Memória de Sofala (1790–1884), de João Julião da Silva, Zacarias Herculano da Silva e Guilherme Ezequiel da Silva* (Lisboa: Comissão Nacional para as Comemorações dos Descobrimentos Portugueses).
16. A. J. Sócrates da Costa (1880), *Os Médicos Ultramarinos: Mais um brado a favor dos facultativos formados pela Escola Médico-Cirurgica de Nova Goa* (Lisboa: Tip. Universal); for a discussion, see C. Bastos (2001), "Doctors for the Empire: The Medical School of Goa and Its Narratives," *Identities*, 8 (4): 517–548; C. Bastos (2002), "The Inverted Mirror: Dreams of Imperial Glory and Tales of Subalternity from the Medical School of Goa: Special Issue 'Mirrors of Empire,'" *Etnográfica,* 6 (2):59–76; C. Bastos (2007), "Subaltern Elites and Beyond: Why Goa Matters for Theory," in *Metahistory: History Questioning History*, ed. C. J. Borges, and M. N. Pearson (Lisboa: Vega), pp. 129–141; C. Bastos (2007), "Medicina, império e processos locais em Goa, século XIX," *Análise Social,* 182: 99–122.
17. José d'Oliveira Serrão d' Azevedo (1893), *Relatorio do Serviço de Saúde da Província de Moçambique—1893*, Arquivo Histórico Ultramarino, Serviço de Saúde do Ultramar, maço 2817. For a discussion, see Bastos, "Medical Hybridisms."
18. Rafael A Pereira (1889), *Relatório, 30 Outubro 1889*, Arquivo Histórico Ultramarino, Serviço de Saúde da India, maço 1987; see Bastos, "O Ensino de Medicina na Índia."

19. Miguel Bombarda (1902), "Escola de Nova Goa," *A Medicina Contemporânea*, série 2, 5: 93–95.
20. René Pelissier (2000), *História de Moçambique: Formação e Oposição* (Lisboa: Editorial Estampa).
21. "Account of the Portuguese possessions within the captaincy of Rios de Sena written by, Captain of Sena, and translated and published by Captain W. F. W. Owen, of His Magesty'ship Leven," in *Records of South-Eastern Africa*, Vol. 7, 1964: 371.
22. Hypollito Cassiano Xavier do Rego (1891), *Delegação de Saúde do Districto de Sofala em Chiloane—Relatório sobre o Serviço de Saúde do mesmo Districto referido ao anno de 1890,Chiloane, 30 de Abril de 1891*, AHU 1506 DGU 5ª Rep. Mç 1891/Serviço de Saúde de Moçambique.
23. Gama, *Relatório*.
24. Ibid., ff. 9v–10.
25. See, for instance, *Boletim sanitário de Moçambique*, Novembro 1899. AHU, 1514 DGU 5ª Repartição, Moçambique 1897, Serviço de Saúde. See Bastos, "Medical Hybridisms."
26. Decree of September 14, 1844…(Boletim 1867: 384); A. da Silva Lúcio (1890), *Apontamentos sobre a organização do Serviço de Saúde das Províncias Ultramarinas* (Lisboa: Tipografia Viúva Sousa Neves),p. 41. The procedures for collecting and surveying were inspired in the *Breves Instrucções aos correspondentes da Academia das Sciencias de Lisboa sobre as remessas dos productos e notícias pertencentes à História da Natureza para formar um Museu Nacional* (Lisboa, 1781) and the structure of reporting was established in legal documents, like the *Portarias,* August 14 and September 12, 1838; *Regulamento Geral do Serviço de Saúde das Províncias Ultramarinas*, October 20, 1860; *Decreto*, December 3, 1868.
27. C. Bastos (2013), "Das viagens científicas aos manuais de colonos: A Sociedade de Geografia e o conhecimento de África," in *O Colonialismo Português—Novos Rumos na Historiografia dos PALOP*, ed. Centro de Estudos Africanos da Universidade do Porto and Instituto de Investigação Científica Tropical (Porto: Húmus), pp. 321–346.
28. Joaquim d'Almeida Cunha (1883), *Breve Memoria sobre a Medicina entre os Cafres da Provincia de Moçambique, offerecida ao Illmo Exmo Sr. Conselheiro Agostinho Coelho, Governador da Província de Moçambique* (Moçambique: Imprensa Nacional).
29. "Não devo, Exmo. Sr. abandonar a cabeceira do enfermo, que tenho de disputar à morte, para voar em cata de conhecimentos, que não sei se adquirirei, ou se aproveitarão à humanidade" (I should not, your honor, leave the patient's beside, one I have to rescue from death, just to fly after elements of knowledge, which I am not sure I will achieve, or whether they will have any interest for the humankind) (Gama, 1878: f.2).
30. Gama (1878), ff. 5–5v.
31. A. C. Roque (2012), *Terras de Sofala: Persistências e mudança. Contribuições para a História da Costa Sul-Oriental de África nos séculos XVI–XVIII* (Lisboa: Textos Universitários de Ciências Sociais e Humanas, Fundação Calouste Gulbenkian/FCT).

32. A. C. Roque (2011), "'Breves Noções sobre a Medicina Cafreal do Districto de Sofala' Ou sobre o conhecimento que os portugueses tinham das virtudes e usos das plantas e ervas medicinais na costa sul oriental de África na segunda metade do século XIX," *Anais de História de Além-Mar*, 2: 228–229.
33. A. C. Roque (2012), "Conhecimento versus ciência: Circulação de saberes e práticas fitoterapêuticas em Moçambique nos finais do século XIX," *Actas do VIII Congresso Ibérico de Estudos Africanos—CIEA 8*, Madrid, June 14–16, 2012, http://www.ciea8.org/ocs/index.php?conference=CIEA2012&schedConf=pan10&page=schedConf&op=presentations.
34. Cunha, *Breve Memória*, p. 7.
35. Gama, *Relatório*, f. 2.
36. Silva, *Breves Noções*, fl. 1.
37. Ibid., fl. 8v.
38. A. C. Roque (2013), "Historical Information on Biodiversity and Traditional Knowledge: Medicinal Plants and Phytotherapeutic Practices in Central Mozambique," *Revista da Rede Internacional de Gestão de Conflitos Ambientais*, 2 (1): 32–44.
39. Silva, *Breves Noções*, fl. 8.
40. Ibid., fl. 4–7v; and Cunha, *Breve Memória*, pp. 10–19.
41. Silva, *Breves Noções*, fl. 1.
42. Hermenegildo Ezequiel da Silva (1883), *Descripção de várias amostras dos remédios que os povos do sertão de Sofalla empregão nas suas doenças (Chilluane, 24 de Setembro de 1883)*, Arquivo Histórico Ultramarino (AHU), Cod. 2186, fl. 25. This is a very interesting remark as it also testifies to Ezequiel's knowledge on the potentialities and problems of other areas in Mozambique. For this same period, Inhambane district was under deep political and military instability and there is very little information on the territory ("Inhambane," *Arquivo—Boletim do Arquivo Histórico de Moçambique*, nº8, Outubro de 1990, 198pp.).
43. A. C. Roque and M. M. Torrão (2011), "Collecting Medicinal Plants in Tropical Africa: Historical Approach and Present Day Perspectives," in *VIIIth International Ethnobotany Symposium—Proceedings*, ed. O. Silva, R. Serrano e R. Chaves, Friends—The University for Peace Foundation/Faculty of Pharmacy, Lisbon University, pp. 267–286.
44. Identified by Jansen and Mendes as *Gynandropsis gynandra,* Muanga is one of the local names for the African spiderflower. It is widely distributed as a weed in the world's tropical and subtropical regions and largely used as a medicinal plant in Africa and in the Indian Ocean zone. It is not likely Ezequiel da Silva had any knowledge on the use of this plant in India or in Sri Lanka, where the leaves are commonly used for ear infections and the seeds as an antihelmintic, but he was well aware of its local traditional use to calm fevers. P. C. M. Jansen and O. Mendes (1990), *Plantas Medicinais: Seu uso tradicional em Moçambique, Tomo 3* (Moçambique: Ministério da Saúde, Gabinete de Medicina Tradicional), pp. 230–237.
45. This sample of *Gynandropsis gynandra* is part of one of the most important collections of dried plants, collected in the seventeenth century in present-day Sri Lanka—Ceylon or Colombo, as it was called by the Portuguese—by

Paul Hermann, a medical officer to the Dutch East India Company in 1672–1677. This plant was mentioned in 1612 by Manuel Godinho de Erédia as one of the medicinal plants widely used in India: Manuel Godinho de Erédia (2001 [1612]), *Suma das Árvores e Plantas da Índia Intra Ganges*, ed. J. G. Everaert, J. E. Mendes Ferrão, and M. C. Liberato (Lisbon: CNCDP). However, there is no information on any existent herbarium sample in Portugal that was collected at the time in India or Mozambique.

46. Paracelsus (1493–1541), quoted by M. L. Carrion (2000), *Las hierbas del Monasterio* (Barcelona: Oviedo, Ed. Nobel), p. 26.

8

Zigua Medicine, between Mountains and Ocean: People, Performances, and Objects in Healing Motion

Jonathan R. Walz

Being displaced from the control of some of the conditions of research by the people and events a scholar encounters in the "field" can generate transformative insights.[1] To gain a deep familiarity with a community's experiences, practices, and expressions calls for vulnerability,[2] a social condition that arises from living with and listening to people and understanding the forms of story-performing that they deem valuable.[3] During three years in northeastern Tanzania, I found that Zigua villagers who live in the coastal hinterland often employ healing performances to assuage traumas and disenchanting changes in their lives (many of them external in impetus). Healing draws from and treats all phases of community experience in a hermeneutic circle that enchains antiquity to the future.

But this account begins with the contemporary.

In the remainder of the chapter, I discuss the theater of Zigua experience, ancestors and nature spirits, and healing performance. I further consider the influences of these threads on Zigua notions of space-time, including as a Zigua *intervention* of sorts against an alternative future. Lastly, I reflect on the implications of this case for practicing a different kind of "archaeology": a more vulnerable approach attuned to people, their defining experiences, and everyday expressions across space and through time. At lowland places, Zigua lives and medical practice draw from a geographical, historical, and cultural borderland of mountains and the Indian Ocean to comprise a worldview in motion.

To highlight the Zigua and this hinterland space of eastern Africa begins to diversify historical narratives of the region that emphasize the hegemonic presence of the coastal Swahili and their Indian Ocean ties.[4] Elements of Zigua healing negotiate links between this African hinterland and Indian Ocean influences.

Trauma and Traces

As close as 20 kilometers from the Indian Ocean, the dramatic mountains of northeastern Tanzania present frightening disaster scenarios. I have memories, for instance, of one terrible day in Mombo, a town positioned along the skirt of the West Usambara Mountains in Korogwe District. A rush of coffee-colored water—a literal waterfall, where none previously cascaded—appeared ominously along a precipice uphill and rushed into town along roadways and paths as it hurtled down following the course of least resistance. Plastic basins, chairs, and chickens swirled past our residence. Our anxiety heightened as the water and mud swelled around us. Houses dissolved. After the flood, we found bodies exposed at the graveyard just downhill. The local landscape lay ravaged and the stench of human feces filled the air. Shortly thereafter, villagers scattered to check on their families and neighbors. That moment of trauma reoriented and extended what, up to that point, had been my more traditional archaeological project, to account for human vulnerabilities and the forms of story-performing that the Zigua find meaningful.

Afterward, community discussions about serpents became profuse. For the Zigua—farmers who also keep some cattle and small stock in the arid lowlands intermediate to the West Usambara Mountains and the Indian Ocean coastline[5]—giant snakes are central to the semantic domain. As ancestral spirits, serpents have influenced the Zigua worldview since before Europeans arrived in the nineteenth century[6] and, likely, into antiquity.[7] These days, the prevalence of stories about snakes addresses changes in lifeways deemed negative by most Zigua villagers.[8] The general genealogy of tumult and loss has deep roots for most of the Zigua: a pronounced nineteenth-century slave trade, the violence of colonization (in the late 1880s through to mainland independence in 1961), ecological exploitation, and the plantation production of cash crops based on migratory labor.[9] Since independence, "villagization"—a policy of forced relocation for cooperative living and labor, which began in the 1970s—and, more recently, the neoliberal policies of the postcolonial government have further traumatized people living in the lowlands of Tanga Region.

In the lower Pangani (Ruvu) Basin, the predominance (and expanding prevalence) of certain referents, especially serpents (as ancestors and nature spirits), speaks to profound but uneven changes in Zigua lifeways linked to continuing global influences, state policies, and local exigencies. The last of these factors includes an agriculturally risky (arid) environment. Zigua healers promote to their communities that current difficulties derive, in part, from villagers' failures to attend to "traditions": the veneration and propitiation of ancestors and nature spirits and honoring, through preservation, their sacred places.[10] The Zigua negotiate the tensions of past/present and local/foreign in their daily lives by consciously and unconsciously sharing their vulnerabilities and attempting to rebalance their eco-social world by referencing serpents:

> The snake inhabiting Tongwe [a sacred mountain] is Kimondo [a serpent name] and cannot be seen. The snake rises when there are clouds at the mountain top. This is when the snake climbs to the roof and when people know an elder has died. This occurs during the rainy season [*masika* in Swahili] but not the summer [*kiangazi* in Swahili]. When elders need rain they climb to the top [of the mountain] and perform ancestral rites [*matambiko* (pl., Swahili)]…On their [the men's] descent and when they reach the base of the mountain, it rains.
>
> There is another snake that resides in the ocean. The ocean swallows everything. Nothing escapes it. All the trash from floods [the foreignness that is washed away] is eaten there. But, the ocean returns and those things are gone.[11]

As Gonzales[12] notes, people in this coastal hinterland "[pay] homage to antecedent generations [ancestors] because antecedent generations [hold] the power to affect the lives of their corporeal descendants." Natural, constructed, and conceptualized landscapes[13] anchor and legitimize—in fact, naturalize—stories about ancestors and spirits (in the form of snakes) that seemingly have grown intense in recent decades. Snakes help to counter stresses and to negotiate and manage the outcomes for communities and their environments.

Landscape features (including mountain pinnacles, sacred forests, caves, whirlpools, and waterfalls that house ancestors and nature spirits) and the material residues of pasts, including traumas,[14] offer a means to balance "tradition" (familiarity) and "change" (uncertainty).[15] Serpents mark unique geographical features and eco-social intersections relevant to long-term regional contests over power: places where intensive connectivity and external impacts,

especially with the Indian Ocean, have had and continue to have a disproportional influence. The Zigua use these places and objects to make and debate space-time, including how they represent their historicity, how they negotiate and resolve contemporary tensions, and how they intervene against the anticipated future. To do so, they draw from a reservoir of past experiences that integrates all episodes—ancient, colonial, and modern—to produce meaning that radiates through time (see below).[16]

But, beyond this aspect—namely, ancestors, nature spirits (snakes), and community mythologies of origin[17]—of their semantic domain, how do traces (material and otherwise) of past experiences, whether of local and/or external origin, impact the contemporary scenario for Zigua healers and communities? In other words, how do the Zigua wrestle with their experiences in a borderland between prominent mountains and the Swahili Coast?

Healers throughout eastern Africa are well placed to *negotiate and remake* the experiences of their communities, including the impacts and outcomes of the slave and ivory caravan trade in the mid-nineteenth-century, which, in effect, launched a jolting era for northeastern Tanzania. Slaving, resource extraction, and, eventually, colonial rule produced new commodity flows and networks of circulation that impacted certain social relations and Zigua livelihoods at multiple scales.[18] Such influences, defined by intense motion (new systems of production, transportation, and consumption)—a "culture of circulation,"[19] if you will—confronted fundamental systems of knowledge in the lower Pangani (Ruvu) Basin and its surrounding lowland territory, a long-term corridor of movement and exchange. The relative intensity of circulation left residues: pathways, nodes, and residues of exchange and interaction. On the landscape and in the proximal seascape new systems of power and influence emerged alongside seemingly resilient ones.[20]

For the Zigua, residues of history derivative of "tradition" (familiarity) and "change" (uncertainty) empower their developing notion of space-time, a notion distinct from that found in Western museum displays. The latter signals that hands are not to touch relics *of the past*.[21] Zigua healers' excursions along historic caravan routes and their assembly of items (to an archaeologist, "artifacts") gathered from unique loci (tied to ancestors and nature spirits, as outlined above), alongside other acts, forge something new—treatments—from places and objects. Hinterland healers perform and practice to restore social balance and to position the moral order to meet ongoing needs and

anticipated challenges.[22] Healers' medicines and their public and private ritual ceremonies restore familiarity, ensure bounty and stability, or prevent future harm.

Experiences on landscapes and fluency with the performances and paraphernalia of healers are essential for a critical "medical archaeology." Accounts about serpents (heard throughout my interactions with Zigua villagers) alongside my own experiences with vulnerability (e.g., at Mombo during the flood) alerted me to the reservoir of places, items, acts, and words that signal certain tensions for the Zigua. These traces suggest potential danger (harm) but simultaneously enable social healing. Thus, healers (in the most general terms, diviner-doctors, or *waganga* [pl., Swahili]) became a principal source through which I comprehended the Zigua worldview, Zigua history, and the concept of treatment that informs their healing. Zigua healers grasp history and negotiate community experiences in a complex way. They reference places that shelter ancestors and nature spirits (e.g., serpents), collect clippings of trees and other plants (often with pharmacological properties) as well as material residues mnemonic of past traumas (e.g., the slave trade), and deploy medicines in ceremonies where their words enable treatment.

Aspects of healing (elaborated below) and their significance in the Zigua worldview find resonance in the representations of Zigua historians themselves. For example, Zakayo Chabai—a Zigua authority on regional history[23]—surreptitiously divulged to me in 2003 that his first manuscript, which presented Zigua history framed in terms of landscapes and medicine, had been "lost."[24] According to Chabai, church officials where Chabai was baptized (the town of Korogwe) persuaded him that it was blasphemous to their biblical traditions and, therefore, should be burned. Church funding soon surfaced, which enabled the publication of Chabai's subsequent texts that render Zigua pasts couched in a format that does not offend church officials.[25]

My time with Rashidi Janja (see below), a senior healer, confirms Chabai's original account: that unique landscape features, as "dangerous" (unstable) spaces, are powerful loci capable of both destruction and healing. In this region, human-made objects ("artifacts") and/or natural objects (clippings of certain trees and other plants said to house ancestors and nature spirits and/or cure illnesses) from these and other localities are essential components of healers' medicines. In healers' object collections coalesce items from multiple past episodes of experience that facilitate treatments of "one period…through the lens of another,"[26] a possibility enabled by the complex palimpsest of time written on landscapes and in material objects.

As I intend to demonstrate, such "traces," repurposed for healing, can remake our understanding of the reverberations of pasts in Africans' lives today.[27] Attuned narratives capture the remarkable dynamism that undergirds people and cosmologies in Tanga Region, a primary conduit of Zigua, Zanzibari, and European trade more than a hundred years ago.[28] For the Zigua, residents living between the Usambara Mountains and the oceanic littoral, healing treats space-time, including the accretion of traumatic and disenchanting experiences, a construction that is unburdened by the divisions that place material versus immaterial. As liminal or ambiguous spaces, borderlands such as this coastal hinterland (where different societies have intersected through the ages) inspire Zigua healers' excursions along historic caravan routes and their assembly of material items. Healers' practices make possible a "medical archaeology" of sorts from the circulations (both material and immaterial) that address and treat African and Indian Ocean linkages.

Healers and *Bricolage*: Performance and Objects

For healers, three acts initiate a process of social rebalancing for the community. In the healers' view and in my interpretation, the purpose of performance is to domesticate[29] (see below) experience and to create the possibility of an alternative future (as against the anticipated future that the Zigua expect to further alienate them). Thus, one of the goals of healing is to familiarize what seems foreign or corrosive. These acts by healers include, first, retracing historic caravan routes during annual pilgrimages to the Indian Ocean coast. Second, healers collect objects from historic caravan nodes, old marketplaces, and other locales while retracing and improvising routes. Finally, healers "articulate" route itineraries during healing rituals that use the assembled objects. Performance and materials mutually constitute Zigua healing treatments. A healer's skill and the appropriate accompanying words during treatment authorize and activate the potency of the medicine, as the public's participation in rituals confirms their faith.

Rashidi (Rajabu) Ali Janja—a renowned healer-historian from Lewa (a small village in Muheza District)—retrieves surface objects along a route that he traces from a Zigua sacred mountain, Mount Tongwe, to the coralline shore of the Indian Ocean 15 kilometers away. Janja's excursion to the coast and back, an annual circulation, finds its midpoint at the coast. Then, he returns home empowered with the ingredients for his potential treatments. Janja's trajectory mimics a primary

corridor of interaction known from nineteenth-century European documents[30] and Zigua and other oral traditions.[31] Beginning in 1999, ethnographic research, interviews with residents, and systematic archaeological assessments, including a pedestrian surface survey and test excavations, reidentified residues of this general corridor at multiple sites in the vicinity (see below).[32]

Janja ambles ahead of me during his annual pilgrimage, his Muslim cap balanced precariously on his head. With purpose, he navigates the winding dirt path that intermittently marks the landscape or disappears beneath our feet. At more than 70 years in age, he brushes aside grass that laps against his pant legs. After a few moments, he diverts to a nearby clearing and bends slowly to the damp ground. Among the debris at this abandoned marketplace, he identifies a glass bead. The weather is somewhat wet, and the iron-rich clay gathers at his fingertips as he brushes it back from the small, white object. We are standing at the edge of a thin pathway that connects two hamlets set on a gently undulating landscape with panoramic views. The glint of the Indian Ocean and the distant river escarpment sparkle on the eastern horizon.

Striding forward, the healer inscribes his way through his movements. After a kilometer or so, Janja collects another small item along the pathway. In this manner, he assembles the objects metonymic of the historic route and its associations. All the while, as he proceeds, Janja navigates the shifting terrain, the uneven surfaces of eroded or obscured trails, and the characteristic vegetation that frequently slows his progress. On occasion, he halts, usually within sight of a sacred mountain (Mount Tongwe or its male gendered twin, Mount Gendagenda) or a prominent ridge that flanks the nearby river. In other words, certain features foster his manner of negotiating the landscape. The engagement of healers maintains and establishes relationships among places with somewhat different temporalities linked by paths constitutive of the landscape.

On rare occasions, Janja briefly speaks about certain scents or the sounds of a distant body of water (whether the ocean or a waterfall along the proximal river). These sensory revelations assemble *and* make the region's landscape for him. As Cuelenaere[33] emphasizes, recalling the observations of de Certeau:[34]

> Motion itself grounds speech. Moreover, for de Certeau a walker actualizes a wide range of possibilities…"In that way," says de Certeau, "[the walker] makes them exist as well as emerge." In other words, the body

> in motion frames possible paths and segments a field of action…Thus, the walker not only engages possible paths, but also creates a path as she walks.

In this manner, movement signifies and emplaces meaning, even more so than "speech acts," which occur infrequently in Janja's excursion. As Fabian[35] remarks when discussing performance, "The closer the process gets to actual performance the less 'talk' there is to record, transcribe, and make into 'texts.' Even the talking that can still be recorded is now all acting."

During the first day of Janja's progress, his walking and halts seem to address the landscape in fragments. However, as his itinerary continues, the relief of a more holistic rendering emerges. An unfamiliar outsider needs experience on the ground to grasp the underneath meanings.[36] Of note, in certain stretches, segments of "the" way vanish completely due, in part, to the effects of the short rains that inspire lush vegetation. When the exact path cannot be identified, Janja employs his knowledge of landscape features, memories of his past pilgrimages, and improvisation in areas where "the" way is futile. For three days Janja makes a path, as a bricoleur might draw from experiences and objects to build an iron-smelting furnace and manage its uncertainties. Often he is within clear view, although frequently he is without any audience but me.

Back at his home, a medicine gourd (*bahari* in Swahili, meaning "ocean") operates as Janja's principal ritual paraphernalia.[37] It contains, among other additives, components of 40 plants (a number of significance in Islam; the identities of plants were verified using multiple sources[38]) and other items (used to treat ailments) that he gathers from the wider landscape throughout the year. The *bahari* is particularly empowered by clippings from certain trees species (e.g., baobabs, or *mibuyu* [pl., Swahili]) preferably situated atop seven mountains sacred to the Zigua: Tongwe, Potwe, Kizara, Gare, Sambani, Kimbe, and Kwa Lagulu.

Janja explains the rationale for his preference to gather plants from high spaces (vertical axes):

> Mountains cure. The elders go to mountains because they see everything there. The ocean is visible. It [the ocean] takes and collects everything, coming and going. This gourd is like an *mzimu* [meaning "spirit dwelling" in Swahili]. It collects [*-sanya* in Swahili] and cools [*-poza* in Swahili] foreign things.[39]

According to Janja, at mountain apexes the total landscape—*all of time*—is manifest and, therefore, can be contemplated and treated.

In addition, objects from unique places or spatial intersections empower the *bahari* and its medicine (*dawa* in Swahili), including items collected from *misitu saba* (meaning "seven forests" in Swahili; a type of place that, for the Zigua, embodies and shelters ancestors and nature spirits, *masoko saba* (meaning "seven market centers" in Swahili, always located in the lowlands), and *njiapanda saba* (meaning "seven intersections of paths" in Swahili). *Maji ya bahari* (meaning "salt water" or "ocean water" from the coast in Swahili) is a final additive of significance. This is the order in which Janja mentions these items/places. The *sequencing* is critical. The first localities Janja voices are "local"/ancestral (i.e., sacred forests). Next, he denotes places that were foreign-influenced loci (markets with "*wagonjwa wa mbalimbali*," sick people from far away). Third, he marks intersections (meeting points of paths). Lastly, Janja highlights the locale of resolution (the ocean).

To recount, healers ply the landscape. *Throughout the year*, they collect plant clippings as healing items associated with intact trees that house ancestors and nature spirits (these places are known in Swahili as *mizimu*), including serpents. During "hot" periods of the year, healers follow corridors previously traversed by caravans, such as the one between the continental hinterland and the coast in Muheza and Pangani political districts (between the towns of Lewa, Chogwe—a nineteenth-century hinterland outpost of the Zanzibari state—and Pangani). This reenactment commemorates and begins a reconciliation of past events captured in Janja's healing calabash. The power of the "medicine" in each *bahari*, then, partially derives from *performances of collection*. The *bahari* cleanses (or "rebalances") trauma by referencing terrain features that shelter ancestors and nature spirits—trees, sacred forests, and mountain pinnacles—as well as the traditions imbued in such places critical for restoring order.

In the second healing act, Janja assembles the previously referenced "foreign" objects: glass beads or, much less frequently, Eurasian shards of glass or ceramic fragments collected from caravan route nodes, often marketplaces with historic origins or sites of foreign impact during the early (German) Colonial Period (representative of circulation and metonymic of routes). Janja locates alien objects (signs of impact) during "hot" months (dry seasons), a period during which much of the countryside is more easily accessed because of diminished tropical vegetation. Like many societies in coastal eastern Africa, the

descriptor "hot" associates with "harm" and "chaos" (or illness), in this case the impacts of imperial and colonial outsiders during a previous period.

In the third act, back at his home (having returned from his pilgrimage to the coast), Janja adds the items (now made into a powder) to the *bahari* that already contains a mix of remains, including pulverized plant parts. Simultaneously, he articulates, in the *reverse order* of his passage along the route, the objects' points of origin (from the coast to the interior). Again, notice the sequencing: from the Indian Ocean coast (from whence many "foreign" influences, including Islam and capitalism, came through circulation) to the interior, the latter a place more insulated and familiar.

These additives (objects or "artifacts") are what Janja identifies as "garbage" (*takataka* in Swahili) collected from markets (current and abandoned) because, as I was told, sick or cursed people congregate there, a reference to the transformative impacts of new capital at indigenous market nodes during the late nineteenth century. In my interpretation, the figurative collapsing of the landscape—from both fixed features and associated circulating objects—into a container enables the contemplation of all of time, the familiarization of the "foreign," and the resolution of cultural intersections. In other words, this process is a materialization of the rationale through which healers and their communities envision and come to terms with social ruptures and resilience.

Attending to "tradition" heals or rebalances the eco-social world, which occurs by propitiating ancestors and nature spirits at *mizimu* (pl., Swahili, ancestor and nature spirit houses or shrines) and participating in rain cults.[40] Therapeutics explain and ameliorate change and uncertainty by "cooling" tensions. In Beidelman's[41] words, people seek to "remove undue hotness" (chaos). During the late precolonial and colonial periods, rituals practiced at landscape features naturalized power relations between the community and its rainmakers and chiefs, controllers of special knowledge. Unique places (e.g., sacred forests and caves) referenced during healing performances continue to enable treatments of the wider landscape via points with encompassing views and/or the flow of water out from them (and its associations with serpents that rush to the ocean, cleansing the land of foreign impacts, e.g., the slave trade, colonization, and intrusions of the modern state). Thus, places given meaning by thought and action capture the extent of the "temporality of landscape."[42] This is how Zigua healers comprise space-time and redress it.

Rural Tanzanians, in fact, work hard not to reconcile "tradition" and "modernity," but to make something *new* from the two. In such circumstances, tradition (the familiar past) is represented as legitimate while the future is represented skeptically as change (uncertainty). The interlacing of these themes, for example, in the materials collected in the medicine calabash, produces a metonymy that transposes each onto the other, resulting in an imagination that change is ancient and that continued tradition is inevitable. In other words, on the grand landscape (via special features) and in objects (e.g., healing calabash), social cosmologies rooted in metonymies bind space-time categories. In this form and through ritual enactments informed by recounting object itineraries (emplacements, motion, and object repurposing) experience is more easily negotiated. In this process, healers and Zigua communities make an *intervention against a future of estrangement from themselves*.

The container and its diverse objects, transformed and repurposed, serve to heal the social discontent felt by many Zigua people through the moral authority and creativity of Janja and other healer-historians. But there is a differential knowledgeability in Janja's actions.[43] Some of his practices are witnessed by members of the community (e.g., segments of Janja's annual excursion). Other practices of his remain unknown to the others (e.g., the ultimate origin of his healing gourd and the manner in which Janja pulverizes the calabash's additives). In this manner, the healer maintains his authority to heal while cultivating ambiguities (categories of objects and multiple spaces and episodes) that mask the healers' "conflicting obligations, intentions, and feelings, even while at the same time striving to force others, especially those they [the healers] hope to control, to divulge their explicit allegiances and needs."[44] That healing rituals frequently occur in public raises the prospect of community debate about the core narratives that sustain the Zigua.

Hinterland Intersection: "Archaeology" and Africa-Ocean Ties

For anthropologists and historians, Tanzanian cases play an influential role in comprehending African healing.[45] Steven Feierman,[46] a historical anthropologist, asserts that medical practice in eastern Africa serves distinct social purposes. In his estimation, it helps African communities and individuals to familiarize the "foreign" (including influences

and impacts of origin in the western Indian Ocean), initiate therapeutics, and (re)assert their power. To "domesticate" extra-local residues is to enfold them into a system of signs to process the "deeper histories of an interconnected [and coeval] world."[47] Treating traces like nineteenth-century European glass beads from caravan halts strictly as *of the past*, as archaeologist tend to do, misses the significance of how African healers "domesticate" alien items and, in the process, repurpose them to meet contemporary cultural needs.[48]

Items and public affirmations and debates about healing occur within one space at one time. But domestication also, perhaps most importantly, arises across spaces and/or times and *through movement*.[49] Janja and other Zigua practitioners *set in motion* objects lying at "knots," localities that represent social entanglements and that tend to bundle spaces and times.[50] Such objects—when *assembled* by the healer through performance and publicly valorized—comprise a thing-tension rooted in multiple spaces and times that ultimately can yield relative social equilibrium (a partial resolution to social turbulence and traumas).

But the medicine calabash is, too, a materialization of bodily practices and the motion that informs it: "Containers as metaphors rely on phenomenological universals of human bodily experience … and others on specific environmental or historical material, thus they are neither universal and objective, nor radically relative and subjective."[51] The container draws the itineraries of objects *into close proximity*: a knot whose itineraries may be deployed or transposed onto one another. In material terms, the gourd contains the assemblage and simultaneously authorizes the healer's power in a regime of signs while concealing the ambiguity with which it operates. This ambiguity is particularly productive in borderlands, such as the lowland hinterland of eastern Africa, where experiences draw from intersecting influences at points in time and through the ages. Places delineated by motion, such as routes linked to the ocean (and its communities, cultural influences, practices, and commerce), are especially optimal localities from which to gather objects (cultural and natural) to represent and to treat *bundled* experience.

In this manner, the Indian Ocean is integrated into Zigua historical experience, cultural practices, and community debates. The figurative collapsing of the landscape and circulating objects into a discrete and intimate container (*bahari*) enables the contemplation of all of space-time and the intersections that comprise Zigua experience. To recount, the name of the healing gourd—"ocean"—signifies

a space that "takes and collects everything, coming and going…[and that] cools [domesticates] foreign things."[52] The healing calabash, an heirloom of Janja's family, holds the pulverized objects that metonymically represent space-time: ancestors and nature spirits, traces of historical impacts, and all news and stories ("*habari na hadithi zote*" [Swahili]). Janja distributes its medicine throughout the year as he performs healing. In his practices, Janja rebalances communities by referencing landscape features that shelter ancestors and nature spirits and the traditions imbued in such places critical for restoring order. These acts and the repurposed objects ensure an element of Zigua perseverance in a climate of increasing uncertainty, an intervention against alienation from themselves.

To highlight the Zigua and this hinterland space of eastern Africa begins to diversify historical narratives of coastal East Africa.[53] Existing narratives tend to emphasize the hegemonic presence of the coastal Swahili, Swahili towns and city-states (some with origins as early as the late first millennium AD), and the cosmopolitan linkages of Swahili people to "maritime" contexts and developments.[54] The Swahili and their creole nature (drawing from African and Asian influences, problematized beginning in the middle 1970s[55]) developed from opportunities to direct and transport people, ideas, and materials among multiple, invested communities on the continent and overseas. But other Africans who occupied the region, including those in the hinterland, in deep time *also* engaged the Indian Ocean to varying degrees.[56] Based on ancient traces, the hinterland of northeastern Tanzania served as a place of intersections. The vicinity's long-term past reveals a genealogy of connectivity that incorporates oceanic aspects.[57]

A regional scale, interdisciplinary project recently assessed the long-term archaeology of lowland northeastern Tanzania using a caravan route strategy (the above ethnographic account of healing derives from this research, which began in 1999). Through the project, I examined the vicinities of nineteenth-century caravan routes and halts in deep time. What I recovered is remarkable: long-term settlement in these same locations and connectivity with the Indian Ocean at places such as Mombo, the site of the flood, and Gonja in eastern Kilimanjaro Region (150 kilometers inland).[58] These findings challenge established narratives that characterize eastern Africa's ancient hinterland as separated from the coast prior to AD 1800. In hinterland northeastern Tanzania, traces from language, mythology, oral history, and, now, archaeology indicate long-term and substantial

ties among regional vicinities: the (lowland and highland) hinterland, littoral, and ocean.[59]

The unique character of northeastern Tanzania's landscapes (with both prominent mountains and steppe that approach the oceanic coastline), its diverse human communities (multiple, divergent lifeways based on different subsistence strategies and the presence of all four language families of Africa), and its remarkable recent history (since the eighteenth century; outlined above) enable the symbiotic and competitive relations among communities spelled out in the various historical sources about the wider region. The body of evidence for oceanic ties in recent centuries[60] includes elements of medical practice—Islamic numerology, the lunar scheduling of Janja's coastal pilgrimages, and uses of artifacts of foreign origin—that integrate with indications of Africa-derived practices and objects with more ancient origins.[61]

Recovered archaeological traces verify that a more balanced (in quantity and quality of research) approach to the region's constituent areas ("coast" and "hinterland") can reveal connections that erode a "denial of coevalness."[62] Socioeconomic networks interlinked people and places. And interrelated groups, including the hinterland predecessors of the Zigua, influenced regional developments at multiple scales, as systematic archaeological investigations reveal dense settlement, productive activities, and interactions in the corridor of the lower Pangani (Ruvu) Basin. Objects derived from overseas that reached the interior at an early date (e.g., late first millennium AD) mark influences that also inevitably required management, especially at points of concentrated impact, such as near Mombo at the base of the West Usambara Mountains.[63] Rather than serving as an economic and cultural periphery, this coastal hinterland appears to be a point of intersection critical for regional flows of people, raw materials, goods, and, putatively, ideas.

Yet, archaeologists (as opposed to some linguists) who work in this region and elsewhere in East Africa have not made significant forays into ancient "medicine," certainly not in the manner that I suggest by the phrase "medical archaeology." Ethnographic explorations are a beginning, not an end, in this larger endeavor. This region, situated as it is between mountains and the Indian Ocean, has produced and, I argue, will continue to produce evidence of coast-hinterland linkages and a resonance between more recent times and deep antiquity. Zigua healing practice is remarkably important to the Zigua and to "archaeologists." It is essential for comprehending Zigua worldviews

(and community debates about them) in a new and important light and, perhaps more importantly, for revealing localities of regional confluence and historical significance across the ages.

The circulations in this account are unlike many of those articulated in the secondary literature of coastal Tanzania. The silences and mentions of people, landscapes, and objects and their *perpetual stories* are no longer just historical, but now are of multiple times and spaces simultaneously. This chapter recounts performances of healing and considers space-time, social geographies, and critiques of Western-trained scholars' "chronicity" of discourse.[64] An unsettling of accepted practice can generate alternative histories. Janja's practice and this chapter—the latter informed by an illness that I suffered and a healing treatment that I received in Tanzania, which alerted me to ways that the Zigua perceive, understand, and negotiate their lives—inspire a new representation of historical and cultural intersections in a largely forgotten space.

A different kind of "archaeology" facilitates a more fruitful engagement with people, healing performance, and the material world. Invested archaeologists must be "articulate":[65] a social condition requiring familiarity with the acts and discourse (i.e., signs) that healers use to address space-time, which Meskell, among others,[66] describes as a type of "witnessing" or "deep hanging out" (à la Geertz). My experiences and my struggle to be "articulate" directed me to Zigua vulnerabilities.[67] Ethnographic and/or experiential archaeology here involves listening to, participating in, and accepting the authority of Janja and community members to determine the theater of performance. They emphasize the most meaningful qualities and associations of their expressions, for instance, their serpentine stories and the places that shelter them.

By better knowing Tanzanians' perspectives, regional landscapes, and the itineraries of objects, I gained insights into how an archaeologist might repurpose his or her practice to account for the Zigua worldview and notion of space-time. By merging my archaeological practice with observations of healing performance, I recognized the transformative potential of accounting for things in motion. For me, becoming "articulate" in the pleats of culture and history that enfold traces developed through a set of experiences and social relationships that I fostered. This unique approach "moves beyond the division that has afflicted most inquiries . . . between the 'scientific' study of an atemporalized nature, and the humanistic study of a dematerialized history."[68]

Conclusions

Performances, landscapes, and object itineraries offer a means to know people and how they wrestle with and reformulate their social condition, in this case, through healing. Janja's pilgrimages and assemblages—his story-performing, if you will—makes connective webs that empower the possibility of continued transformation and resilience in this borderland. As objects at the edge of experiences, items such as historical beads and plant clippings redefine Zigua experiences through the actions and articulations of powerful healers, supplicants, and a discerning public. As such, healers and their performances generate knowledge that yields possibility and meaning.

A critical archaeology of healing enriched my comprehension of Zigua experience by eroding the autonomy and recalcitrancy in people, places, episodes, things, actions, and words. Practices and expressions gathered at the outskirts of power—intermediate to the regional highlands and Swahili towns of the coast—provide somewhat different depictions of pasts and the present because boundaries are places of interaction and heterogeneity. Moreover, they lie beyond nodes of strict political authority that amplify narratives told at cores. Expressions at boundaries prod and elicit aspects of time because change and flux define these vicinities. I am closer to such an awareness because of Janja and my experiences with the Zigua. I continue to grapple with my time among the people, ancestral spirits, landscapes, and objects of the lower Pangani (Ruvu) Basin. Janja and the villagers with whom I interacted wrested the conditions of research from me, changing my scholarly practice. They redirected me to a deeper engagement: a medical archaeology that addressed them and their changing social condition through their space-time.

The "archaeology" rendered here suggests that healing ameliorates Zigua estrangement from themselves as they navigate the impacts and obligations of a changing world. This process began in antiquity, when the intersection between Africans and Indian Ocean communities began to emerge. As it turns out, external impact does not render Zigua practices as separate from Zigua social and political control. While some of the expectations of Zigua elders and healers have not necessarily been fulfilled in recent generations, the trustees of community heritage still find ways to process pasts and to make something new in changed times. Landscape performances, oral expressions, and interactions with ancestral places and mnemonic objects, in effect,

make healing *about* treating and debating societal disenchantment, as healers *domesticate the future* and forge new possibilities.

Through motion in space-time, healers manage traumas and improvise futures at the dynamic hinterland intersection. The linkages and influences between contemporary Zigua villagers and their hinterland predecessors in deep time *and* the influences and communities of the African littoral and seascapes beyond it intersect in the outlooks and acts of Zigua healers and their African followers.

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9

Indian Ocean Worlds: Tracing South African "Indigenous Medicine"

Julie Laplante

My research takes place at one of the edges of the Indian Ocean at the southern tip of Africa, in Cape Town, South Africa. Baptized the "Cape of Storms" in 1488 by the Portuguese explorer Bartolomeu Dias, it was later renamed the "Cape of Good Hope" in keeping with optimistic hopes of opening a sea route to India and the East. The land around the Cape was home to the Khoikhoi, San, and Xhosa before the Dutch first settled there in 1652, slowly moving inland and leading up to a hundred years of wars over land and cattle beginning in 1779, wars that the British joined from 1795 onward.[1] These histories as well as other more recent histories sometimes surface in the stories I heard while in the Cape from 2006 to 2010. In this chapter, my interests lie in teasing out how Indian Ocean worlds (IOWs) emerge in the practices I followed: not only as a hopeful trade route, but also as shared worlds within turmoil involving land, winds, and waters. More specifically, I am interested in exploring how a notion of IOWs might offer a way to understand people's engagements with plants for healing in the Cape, namely, by using water's fluidity as an analogy.

The notion of Indian Ocean has been useful to understand some of the practices that I encountered upon studying anthropologically the preclinical trial of an indigenous plant medicine (*umhlonyane* or *Artemisia afra)* in the Cape.[2] With the city of Cape Town geographically situated near the meeting of the Atlantic and Indian Oceans,[3] the notion appeals to the imagination as well informs some of the tensions felt within the preclinical trial. Ideas about medicines coming

from the West could be conceptualized as cold, colonial, biomedical, and allied to those principles that progressively rendered "indigenous medicine" practices illegal from as early as the 1860s.[4] Ideas coming from the East could be imagined as warm, enriching, Ayurvedic, and capable of being woven into indigenous practices with much more camaraderie, although not without adding to tensions already prevailing within the multiplicity of South African indigenous medicines, or *muti*.[5] Although many ways of thinking about medicine within the plural healing cultures of South Africa are quite opposed to the idea of singling out a part of nature to test on an assumed universal biological body, the preclinical trial of an indigenous medicine, nevertheless, initially sets out to select a molecule to bring back to the laboratory for scrutiny. While this process is connected to the need for a new drug on the global health market, a full understanding of the meaning of the indigenous medicine must be sought within several lived practices.

The preclinical trial of *A. afra* I followed in Cape Town is part of a global health initiative to find a novel drug, in this case, one that might work as a solution to the tuberculosis pandemic. The scientific gold standard model of the randomized clinical trial (RCT) is, however, challenged in its application in sub-Saharan Africa as the plant to be tested is qualified as "indigenous" in terms of its medical use as well as its biological occurrence. This classification is one applied to a number of substances and practices that have been grouped together as "South African Indigenous Medicine" as a result of national politics regarding indigeneity. Yet, this classification itself appears to be challenged by the very diversity of South African medical practice, including many elements of Ayurvedic and other originally foreign healing practices. This diversity is the result of South Africa's particular medical history. The unique decision made by white legislators in 1891 to license *izinyanga* (herbalists) while criminalizing *izangoma* (healer-diviners)[6] practices had the effect of enabling *izinyanga* to travel across the country as traders as well as to open the trade to herbalists of various healing traditions, including Indian immigrants working with Ayurvedic approaches and Rastafarian *bossiedoktors*.[7] While Indian immigrants mostly settled along the Indian Ocean coast and are physically less present in the Cape, the large community of Rastafarian *bossiedoktors* in Cape Town appears to have incorporated some Indian practices, or at least practices that echo with those of Brahman priests, into their healing. In the end, it was a clinical model designed by Indian researchers and developed in testing Ayurvedic medicine that appeared more appealing to the South African scientists leading the preclinical trial of

A. afra in Cape Town. How this may point toward a shared "world" across the Indian Ocean will be discussed. More specifically I aim to bring a phenomenological notion of world in anthropology in conversation with a concept of IOWs as an alternative to a notion of One World.

The "One World, One Medicine, One Health" initiative[8] is currently gaining momentum in global health, as animal and environmental scientists join medical professionals in a common venture to bring medicine to all. However, the organization follows earlier similar initiatives in maintaining a solely biomedical approach to healing while dismissing other strategies. Anthropologists working throughout the world have pointed to plural healing strategies existing and coexisting within nations and beyond their borders, and the South African case is no exception. As early as 1924, precursors of medical anthropology, such as W. H. R. Rivers,[9] convincingly illustrated how ways of healing emerge from varying roots and the flourishing subdiscipline has continued to show this to be the case ever since. The wave of studies attending to medical pluralism, catalyzed by Leslie's 1976 study on Asian medical systems (specifically Ayurveda, Unani, and Chinese medicine),[10] has also demonstrated the diversity within biomedicine as well as other healing traditions. The concept of medical pluralism is, of course, not without problems of its own: in particular, it continues to be haunted by an idea of a priori systems or contents of healing traditions or cultures, even while such cultures are found to be fluid and moving.[11] How a notion of IOW might inform this debate is what I would like to tease out here. Ultimately, the idea of cultural entities presupposes a backdrop upon which this multiplicity plays out, usually one called "nature." I argue this backdrop of One Nature is implicit to the One World notion in global health, while an IOW notion has the potential to provide a more nuanced picture. However, this picture should not be one that envisages distinct cultural entities linked by the environmental phenomenon of the Indian Ocean. In this chapter, I aim to both explore the usefulness of the notion of an IOW for understanding healing interactions, and nuance it with proposals drawn from phenomenological approaches in anthropology, thus making it a notion of IOWs.

To do so, I first suggest and define the notion of "worlds of becoming." Second, I explain how I found my way through the worlds of becoming emerging in the preclinical trial that I followed in Cape Town. Third, I refer to two instances in the preclinical trial where the idea of shared "worlds" across the Indian Ocean might apply, namely, the South African scientists' appeal to a clinical model developed by

Indian researchers to test Ayurvedic medicine and the practices enacted by some of the Rastafarian *bossiedoktors* that evoke Brahmin priestly traditions at the root of Ayurveda. In conclusion, I discuss how thinking through materialities (plants and water, for instance) might be an interesting avenue to further explore.

Worlds of Becoming

The notion of "worlds of becoming" I want to put forth borrows from Merleau-Ponty's notion of a "world" and anthropologist Tim Ingold's[12] notion of "trails of becoming."[13] Both these notions point toward an understanding of life as a process of opening, as opposed to one of preexisting closure. They invite to understand practices as continuously emerging. They are phenomenological in the sense that they are interested in the ways experiences or "worlds" are made to appear. Finally, they invite us to understand practices through positioning ourselves as sentient beings immersed in the world, which has great implications for the processes of research and writing. It is a positioning that sets itself in direct opposition to positivist science, which tends to imagine the researcher as separate from what (s)he is studying. Most of the scientists involved in the preclinical trial I have been following in Cape Town officially adhere to such a positivist positioning. This becomes problematic, given that their initiative is challenged by its aim to recognize indigenous medicine, which arguably involves more than the isolation of an active molecule. I argue that indigenous medicine rests upon "worlds of becoming" to know and heal with medicine, while the preclinical trial model is designed on the basis of a "One World" idea, thus creating the tensions playing into the preclinical trial of an indigenous medicine.

The One Health Initiative aims to combine biological studies of humans and animals with an understanding of food and the wider environment, through the collaboration of the World Health Organization (WHO), the United Nations' Food and Agriculture Organization, the World Organization for Animal Health, and other organizations. It is on the basis of this unified approach that "oneness" is claimed. Nonetheless, while nonhuman species and food may join humans in this health endeavor, they do so through their externalization from the world or "nature." The experts joining the One Health Initiative all implicitly agree upon a particular notion of the world that is external to humans (and now to food and animals) and can be referred to as "nature." The ideology on which the One Health Initiative is

based fits into a particular ontology that Descola[14] calls a naturalist ontology, namely, Western scientific thought, which he contrasts with analogism, totemism, and animism. Descola describes the naturalist ontology as the most recent (emerging from the seventeenth century) and unique in its ontological divide between nature and culture. Laboratory science, experimental science, and clinical science as we find them today are sturdily anchored in this ontological divide that supposes a background of One Nature, which constitutes the "real" and is set as hierarchically primary to the lived and the felt (culture), a feat that Latour describes as a great political ploy.[15] In this ontology, the "real" or "world" is thought to be separable from the lived and the felt, something we may progressively "know" from an externalized standpoint, an observational distance assured by self-effacement as well as rigorous observation in highly controlled environments, such as laboratories. These conditions are supposed to give access to the way the "world" works. It suggests that it is by extracting ourselves from this "world" that we ought to "know" it.

Environmental studies may be the most illustrative of this positioning, as they presuppose a background of nature, from which we, as humans, are excluded and which we must preserve or conserve. A similar rationale is put into effect concerning medicine, which is thought to be extracted from this environment in order to provide health to humans. In clinical trials, it is the ontological divide between nature and culture that makes it possible to extract plants, minerals, and other objects with medical properties, parts of the "real" world, in order to test their effects on humans in an experiment conducted under a controlled environment, such as a laboratory or hospital. It is also this divide that has led to the exclusion of the lived and the felt, aside from their inclusion in the category known as placebo. These scientific practices thus suppose the "world" to be external to living beings, something that we might "know" from a distance by testing some of its parts, a molecule, for instance, in human bodies. While this conceptualization of nature as applied to medicine and its effects on humans is not necessarily problematic in itself, it becomes a problem when such a process aims to recognize medicine known "in life," as is the case with most indigenous medicine. The clinical model, which is accepted by the One Health Initiative as a whole, is ill-adapted to take these intricacies into consideration. A notion of an IOW might also in part rely upon this backdrop of One Nature. However, alluding as it does to a specific geographical environment that is associated with particular cultural practices, it might serve to bring nuances to the

naturalist ontology. On the other hand, it might also bring new divisive limitations if understood solely within this ontology. A notion of an IOW might perpetuate this approach should it assume this region of the world is predisposed to specific cultural practices. On the other hand, it can serve to allude to a more fluid approach, indicating the particular entanglements between people and place that are made to appear. In the latter case, we should allude to IOWs coherent with another notion of perception, as I propose.

Studying the preclinical trial of an indigenous medicine anthropologically, I have come to adhere to a notion of perception that differs from the one enacted in the experiment or preclinical trial, namely, one in which movement between eye and mind is continuous, as proposed by Merleau-Ponty.[16] This positioning brings another notion of "world" into being, one that is not a background space upon which cultural diversity can profile itself, but rather a world of perception, of tastes, of feelings, and of life that is continuously emerging. Merleau-Ponty's concept of a "world of perception" begins with a notion of "umwelt" (medium), which he borrows from Jacob von Uexküll;[17] this is a qualitative space corresponding to an "environment of behavior," a specificity of the living, a world-environment, not to be confused with a "geographical environment." This notion of world refers to a determined medium in which the organism is invariably engaged. Human life occurs in an infinite number of possible mediums. Merleau-Ponty postulates that if there may be a quantitative relationship between environment and physical objects, there exists, between the medium and their organisms, a qualitative relationship. This is the quality lacking in approaches that transpose mechanics onto the living, missing the dialectic between the living and its medium, and, in turn, lacking a philosophy of life. Mechanist philosophy postulates the immediate action of the perceived on the one perceiving through the theory of reflex, yet it lacks, according to Merleau-Ponty, an authentic understanding of perception, since it omits the fundamental element: "the living body," which is placed in the center of the phenomenology of perception. Tending to the living body takes us from medium to world. Of our body, we have various experiences. We make experiences "from the inside" as a body in and through which we act. We also make experiences "from the outside" in the experience of being seen.

Phenomenology of perception is a response to a still too abstract configuration that does not take into consideration that to have a body is not to act on it, but through it. Having a body is, then, for a living being to join a defined medium. As a potentiality in a medium, the body cannot be reduced to the total autonomy of a pure subject, nor

to the heteronomy of an environment. Merleau-Ponty, and perhaps the phenomenological project as a whole, expresses disagreement not with the object, but with the methods of science; Merleau-Ponty suggests that perception starts from the experience itself, by "placing ourselves within the subject." The world and the sense of self are emergent phenomena in an ongoing process of "becoming"; we are "immersed in the fluxes of the medium."[18] Through involvement in the world—being-in-the-world—the perceiver tacitly experiences as many perspectives as possible upon that object, drawn from all the components of the surrounding environment. This is precisely what I have done, as an anthropologist, in attempting to understand how making "medicine" came to be classified as indigenous, Ayurvedic, scientific, or otherwise, and in which ways this was done.

Wayfinding

Testing *muti* through a double-blind controlled RCT is motivated by a double desire to find a molecule to cure tuberculosis on a world scale and simultaneously to show the world that indigenous medicine "works," with the aim of regain the dignity of a people. This last desire involves recognizing much more than a molecule, implying the deepening of knowledge between people and plants as they engage in healing. While *muti* has come to signify the plants sold by *izinyanga* (herbalists), the term *inyanga* had a much broader meaning in the early nineteenth century. White observers' notes from this period show how *inyanga* meant, more generally, a doctor or specialist, usually single-remedy doctors. As Flint notes, "an *inyanga yezilonda* (*elonda*: sore) was thus a doctor who specialized in healing sores; an *inyanga yonzimba-mubi* (*umzimba-mubi*: bad body)—an abscess-doctor."[19] The more general term *inyanga yokwelapho* (*elapha*: to treat medicinally) was, however, recorded by Dohne as early as 1857 and defined as a master of administrating herbs. Another term for general herbalist was *inyanga yemithi* (*mithi*: plural for medicine), "a healer who treated bodily ailments medicinally or surgically."[20] These last two terms seem to be those that came into usage in Cape Town, with essentially the meaning "while excluding surgical practices." In these early accounts, healer-diviners, today called *izangoma*, were also named *izinyanga*, namely, *izinyanga* who worked at the national level; "*inyanga yokumisa izwe*, or doctor for 'making the land stand firm' who treated the national *inkatha* (symbolic grass coil) which secured the strength of the nation; and *inyanga yezinsizwe* (*zwe*: nation) who strengthened the army and nation through medicine" are just some

examples of the divining specializations given by Flint. While these sources analyzed by Flint are more closely linked to encounters with Zulu people, they may also apply to Xhosa people who, at that time, shared much of their culture and histories.[21]

In the Cape, *isangoma* or *sangoma* is the term used by the Xhosa healers to designate themselves (both diviners working with ancestors and whistling diviners), while the Rastafarian *bossiedoktors* claim the status of *izinyanga*. According to Flint, "The categorization of *inyangas* and *isangomas/isanuses* or the conjoining term 'traditional healers' adopted in the twentieth century is a manifestation of African's colonial experience, which only further intensified encounters with healers from various areas."[22] The two domains have remained separate, the latter remaining more difficult to standardize as well as legalize within biomedical rationalities. White legislators criminalized all types of healers in the 1860s, solely licensing midwives and *izinyanga* in 1891, singling out *isangoma* practices as the most threatening. In the current climate of institutionalization of indigenous medicine in South Africa, as attested by the emergence of the Traditional Healers Act in 2004, both Xhosa *izangoma* and *izinyanga* are returning to the forefront of the politics of healing.

The pharmacopeia that is made use of in *muti* includes plant components such as bark, roots, and leaves and flowers; animal fat, skin, bones, and minerals; and/or chemicals; and even seawater; in *isangoma* practices all these materials are open-ended entities with multiple potentialities. The same medicine can, for instance, both produce and cure the same symptoms.[23] *Muti* may be activated by spirits, may be applied from spatial distance, and does not necessarily have to enter the body.[24] Throughout her powerful descriptions of "being called" to become an *isangoma* (Xhosa healer-diviner), Wreford refers to *ubulawu* herbs.[25] *Ubulawu* is a combination of plants and bark mixed into water, which creates a dream foam that has different roles within the process of becoming an *isangoma*, namely, for cleansing purposes and to enhance communication with the ancestors. *Ubulawu* can be used in different ways. In her case:

> The *ubulawu* acted both as [an] emetic and as a wash to cleanse the external body. Each *thwasa* (initiate having received a calling) learns the herbal mix for her own *ubulawu*, how to grind and grate the roots and barks into her tins, how to beat the liquid into its frothing head, and, in Nosibele's evocative phrase [her mentor], "how to eat it". The exact combination of herbs remains a secret, not to be divulged to anyone.[26]

Thus, a specific mixture of *muti* is prepared specifically for the healer and with relation to her ancestors; the names of the ingredients of the *muti* come to be known only close to graduation as an *isangoma*. For these reasons indicating the deepened engagements between the *isangoma*, *muti*, and ancestors, it seems *muti* is indissociable from the acts, performances, divinations, spells, songs, dances, ancestors, skills, abilities, and knowing, making these materialities potentially beneficial as mediums to weave good relations in the world in healing, as opposed to an object or a commodity containing health.[27]

This is what I was invited to do with Xhosa *isangoma* involved in the preclinical trial, namely, I was invited to feel the world by assisting in drumming sessions. Drumming sessions can be organized for healing and for becoming a healer. They are a form of divination that involves sounds, dance, glossolalia, family, *muti*, and ancestors. Performed drumming sessions are meant to open the way to both healing and becoming a healer. They require developing skills to listen and feel, enabling connections with plants, people, and ancestors. To learn how *izangoma* heal with plants, I was invited to feel with them, deepening connections in places where people live and die. In other words, I was invited to attune my attention, or to know, through deepened engagements in the world. In this way knowing *is* movement.[28] There is neither a separate world of "nature" from which to extract data to analyze or map, nor is there a separate "culture" to filter out of the experiment. We are always in the world and knowing from this positioning can or cannot be acknowledged and refined.

On the ground, my research strategy has been to follow people engaging with an indigenous medicine being tested in a preclinical trial, namely, *A. afra* (Jaqu. Ex. Willd.), a wild bush known as *Umhlonyane* in Xhosa and Zulu, *Lengana* in Tswana, *Zengana* in Southern Sotho, *Wilde-als* in Afrikaans, and *Wild Wormwood* in English. The epithet "afra" means "from Africa." "*Umhlonyane* is considered one of the oldest and best-known of all the indigenous medicines in southern Africa, and has such diverse and multiple uses that it should be considered a significant tonic in its own right."[29] I have been told it can clarify dreams, clear coughs, and calm fevers, along with numerous other uses and combinations with other plants and practices. In the preclinical trial, *A. afra* is being tested for its effects against *Mycobacterium tuberculosis* (MTB), the causative agent of most cases of tuberculosis, a disease that is considered a global burden on the scale of a world pandemic. The Cape Town Declaration of the Working Alliance for TB Drug Development (2000) expresses the need to accelerate the

development of new drugs and the preclinical trial of an indigenous medicine answers to this query, with the additive hope of regaining indigenous dignity through the process. When I began the study, the toxicity of *A. afra* in an aqueous extract had been tested in mice, and a new formula was being tested in mice and human cells infected with MTB.[30] These preparatory steps toward eventual testing in humans are decisive for the realization of clinical phases envisioned by the preclinical trial.

The preclinical trial I followed was led by The International Center on Indigenous Phytotherapy Studies (TICIPS, pronounced tea-sips), a research consortium founded in 2005, and joining researchers from the United States and from South Africa to conduct research on African medicinal plants. TICIPS is entirely financed by the National Center on Complementary and Alternative Medicine branch, a sector of the National Institutes of Health (NIH) in Washington, DC. TICIPS's primary mission is to conduct scientifically ethical and rigorous research on indigenous phytotherapies that are used to combat HIV/AIDS, tuberculosis, and cancer, in a unique partnership between traditional healers, medical doctors, and scientists. *A. afra* qualifies as an "indigenous medicine." This makes healers and "indigenous knowledge" of utmost importance in the trial. Making a medicine through the model of the RCT is generally assumed to be a noncontroversial beneficial contribution to the "health and well-being of mankind." The promotion of indigenous African plants for wider scientific purposes, however, plays directly into the politics of South Africa's "Renaissance," a political strategy that has been both about establishing foreign exchange and about reasserting Africa's dignity in the "world."

Discussion about African dignity in connection with *muti* began when *izinyanga* were licensed in 1891 and were reawakened in Nelson Mandela's inauguration speech as the first black president of South Africa on May 11, 1994. In this speech, he signaled the need for people oppressed during apartheid to regain their dignity. More than once, he appealed to the soils and *muti* as part of this process: "I have no hesitation in saying that each one of us is as intimately attached to the soil of this beautiful country as are the famous jacaranda trees of Pretoria and the mimosa trees of the *bushveld*. Each time one of us touches the soil of this land, we feel a sense of personal renewal."[31] This sense of renewal followed from deliberate suppression of African innovation during the colonial and apartheid periods. For example, in 1940, Mafavuke Ngocobo, a licensed African *inyanga*, was brought to trial and charged with being "untraditional" as he operated "chemist"

shops[32] judged to impinge on the European system, which had been legislating the difference between indigenous and foreign for the past 50 years. The law "enabled innovation among white medical practitioners while denying it to Africans."[33]

What was, in the colonial period, confining *izinyanga* to "indigenous medicine" is today formulated as "African solutions to African problems." From earlier appeals to the "indigenous" to current appeals, there is a shift from an ambiguous space in which healers are both asked to perform and not enabled to do so fully, to an ambiguous space in which African scientists are required to represent both the universality of the scientific method and the particularity of African solutions. The promotion of African plants through an American initiative in this case defies other national post-apartheid South African politics that want African/indigenous solutions, or nationally funded projects with regard to health services. This enhances a resistance to positivist scientific standards while undertaking its very pathway through a preclinical trial, a route undertaken to both find a worldly molecule while at the same time undoing or modifying the process "from the inside" as a way to enhance African indigenous knowledge and dignity. The entanglements of sometimes opposing indigenous, national, and transnational hopes within the RCT make the initiative highly political: it becomes a foreign process of making a potential technology around which the value of *muti* can also be (re)configured.

Following *A. afra*, I moved through meetings, clinics, farms, gardens, markets, festivals, homes, townships, valleys and mountains, offices, laboratories, and botanical gardens, all mostly in and around Cape Town, where the larger part of the study took place, as well as briefly in Durban, and in the United States. Along the way I met with biochemists, pharmacologists, immunologists, plant systematists, farmers, and ethnobotanists, all partaking in TICIPS through their own institutional affiliations. TICIPS's scientists living in South Africa all worked independently with various *izangoma* who they referred to as having influenced their research in one way or another. I initially met traditional healers during a visit to Delft Laboratory of the Indigenous Knowledge System (IKS) Branch of the Medical Research Council of Cape Town where more than 40 healers, including Rastafarian *bossiedoktors* or *inyangas*, were assembled. I pursued research with *izangoma* who agreed to introduce me to their work and knowledge around *A. afra*. I simultaneously pursued further exchanges with Rastafarian *bossiedoktors* and their families, in Delft and Philippi townships in Cape Town, who were the trusted partners of Xhosa *izangoma*, in the

medicinal plant collection. I met with Xhosa *izangoma* in the township Khayelitsha in Cape Town. Additionally, I met with nature conservationists (Cape Nature), business consultants (IKS), and managers (Integrated Environmental Resource Management Department, City of Cape Town). How these actors bring the preclinical trial "to life" in practice is very telling of the politics of knowledge involved, as well as the histories and worlds that are made to appear, some of these practices pointing toward "shared worlds" across the Indian Ocean.

In the histories of international laws made for the approval of biopharmaceuticals, three countries have stood out as resisting them: South Africa, Brazil, and India. They have all overlooked international patent laws albeit in different ways, Brazil making it an issue of biopiracy, India making its own Ayurvedic pharmaceutical industry compete under different sets of rules until very recently, and South Africa bringing *muti* to the forefront in opposition to biomedicine. As such, all three countries might have in common the aim of challenging the otherwise monopolizing RCT model as designed in Europe and the United States and upheld in the One Health Initiative. These undercurrents might, in part, explain how the South African researchers appeal to a model designed by Indian researchers to test Ayurvedic medicine as a path to modify the RCT model proposed by their US counterparts. During my very first meeting with the South African director of TICIPS, he drew on a piece of paper the new model of a clinical trial that would counter some of the bottleneck problems with the current RCT drug "pipeline."[34] He drew the same pipeline for both the RCT and the alternative model he proposed, but in the new model he drew a pipeline with perforations, to show how it should "breathe in" the worlds and contexts throughout the research process; in other words, the controlled laboratory environment should open up to the world and its ongoing processes. The model he drew in 2006 seems to have transformed itself into a new one during the course of the project.

In a meeting that took place in 2010, the director of TICIPS proposed his new model of a clinical trial, the translational validation model,[35] proposed by Patwardhan and Mashelkar[36] to test Ayurvedic medicines. Essentially, it is a reversed pharmacology model, inverting the traditional route from "laboratory to clinic" to become "clinic to laboratory."[37] Some experts also consider this model to be relevant with regard to testing *muti*. The intention is to let more indigenous knowledge, essentially "ways of doing in practice," enter the clinic and filter through what will be narrowed down into laboratory studies. While the clinical trial remains the final judge of the efficacy of the medicine

within this model, reversed pharmacology aims to include more experiential observations within clinical experiences before entering the laboratory. The model can point toward a different approach to making medicine, one that brings slightly more of the world's intricacies into consideration, meaning that the assessment of a drug's usefulness need not be always confined to the discovery of a single molecule.[38] TICIPS's preclinical trial of *A. afra*, in fact, aimed to test a whole plant and its molecular synergies rather than to isolate a molecule, in this way both challenging the RCT model and remaining closer to the ways the plant works in practice. The evolution, in this case, of a trusted model inspired by work with Ayurvedic medicines may also indicate greater commensurability within another broadly defined part of the world than the "West," namely, an "IOW."

Some of the specificities of South Africa's historical context and the racial and legal links between biomedicine and traditional medicine in South Africa came to the surface in the preclinical trial I followed. The histories of recognizing *muti* (or not) are histories of colonization, especially in the latter part of the century. Flint[39] otherwise describes the early period in which "African Medicine" was recognized (1820–1948) as one of the rise of a multitherapeutic society, not made up of "medical systems" bounded and separated from each other, yet rather of various therapeutic practices in continuous negotiation with one another. Biomedicine's struggle for legitimacy in South Africa was, however, explicit. It was highly reliant on legal measures and politics of exclusion of traditional healers to make place for "white" medicines and practitioners.[40] In the ongoing preclinical trial in Cape Town, African dignity in the nation and in the global health world is reclaimed via a politics of indigeneity that creates other dissonances. Indian *izinyanga* have had quite an important influence on African healing practices, particularly as regards the use of herbs. This is particularly notable in Durban, yet has also seeped into the Cape. More than one million Indians emigrated to the Natal region of South Africa at the end of the nineteenth century,[41] numerous Hindu and Indian priests of all castes becoming *izinyanga*, collaborating with both Rastafarian *bossiedoktors* and Xhosa *izangoma*. Yet, as in the case of Rastafarian *bossiedoktors*, they are given the status of "indigenous knowledge" with more difficulty. Indian *izinyanga* and *muti* shop owners are rather assumed as purveyors of goods by predominantly African policy-makers. This is also the case for Rastafarian *bossiedoktors*, perceived as such by Xhosa *izangoma*, even if considered their trustworthy partners to collect the plants. Both Indian and Rastafarian *izinyanga* (and certainly

Malaysian and Chinese herbalists) are seen as foreign and do not completely fit into the connotation of "indigenous knowledge," which is mainly reserved for native tribal Africans,[42] with *izangoma* entering some forms of official professionalization in the postapartheid era.

Indian influences are otherwise particularly apparent in the practices of Rastafarian *izinyanga*, perhaps made possible through yet another route. Brahmin traditions were brought to the Caribbean in the twentieth century via the migration of many thousands of Hindus to Jamaica,[43] the birthplace of the Rastafarian movement in the 1930s. As Niaah notes:

> The city of Kingston and subsequently the country Jamaica intersected world history in a fundamental way when the Rastafari Movement came into being, so much so that it immediately caught the attention of many within the African Diaspora as well as the colonial empire, as it emerged as one of the most articulate alternative philosophical paradigms to modern capitalistic imperialism.[44]

In postapartheid South Africa, the Rastafarian movement has arisen still praising the Ethiopian Emperor *Ras* (title) *Tafari Makonnen* (first name) Haile Selassie I as the returned Messiah of the Bible, *Jah* (God) incarnate as it originated in Jamaica; however, African roots have shifted to indigenous ones. The Rastafarians in South Africa seek to ground their prophecy in terms of "authenticity" as well as wisdom in relation to *muti*, which they regard as bound to African indigenous roots, more specifically those closer to the roots of humanity and to whom Jah, the Creator, gave his knowledge, namely, the KhoiSan bushmen. The Rastafarian *bossiedoktors* I met explained they learned from "the elders," namely, the colored elders (nonwhite and nonblacks in the apartheid classification system) who learned from the KhoiSan, as well as the KhoiSan bushmen themselves currently living in the Kalahari desert. Today an estimated 200 Rastafarians in the Cape[45] have taken on the role of herbalists and work in collaboration with *izangoma*.

Within the national context, Rastafarians in the Cape have emerged as important peacemakers in line with their "way of being" aiming to heal the nation. This aspiration aligns with the African Renaissance and movement to regain African dignity and, in this particular case, it chimes with the hopes for the trials of *A. afra* to restore indigenous dignity through the recognition of *muti*. The role Rastafarians played during apartheid, as well as their classification as colored, marked

them out as bridges to mend segregation; their herbal stalls often served as refuge for whites or blacks who attempted to cross over their designated areas. Ross[46] mentions that new townships usually assign a Rastafarian family as responsible for holding the peace in case of racial disputes. As *izinyanga*, the Rastafarians also appear to play in a middle ground between *izangoma* and market traders, somewhat sharing the latter's engagements with plants, but also accommodating to market demands in medicinal plants. Further, the Rastafarian movement in the Cape is nonviolent and follows a strict raw food diet, recalling Gandhi's nonviolence philosophy, which, in this case, is joined with Marcus Garvey's pioneering Black liberation movement of equality of all people, a movement that Steve Bantu Biko reignited in South Africa in the 1960s, all pointing toward potential affinities between these particular African and Indian healing routes.

Rastafarians' "way of being in the world," transcended by *Jah*, grounds itself in "livity," referring to living the present with *Jah* and his creations, including plants in healing. In this respect, the Rastafarian movement may correspond in part to Indian practices, which are highly influent in the eastern Cape *izinyanga* trade where they often travel. Ayurvedic medicines are said to come ultimately from Brahman (God), the creator, as revealed in the Vedas, while for Rastafarians they come from *Jah* (God), the Creator who gave his knowledge to those closer to the roots of humanity. Other Rastafarian practices can also recall those of the "world renouncer" tradition of holy men found in Hinduism. Rastafarian *sakmanne* (bag-men) and *kaalvoetmanne* (bare-feet men) are two smaller segments within the *bossiedokters*, considered "the most spiritualist members of the Rastafarian community."[47] As Olivier notes: "Although RasTafari lifestyle already involves the abstinence from things of 'Babylon', Bossiedokters—and especially the Sakmanne—are considered to be the strictest followers."[48] They classically walk barefoot to feel the soil with only a burlap sack for dress and live off wild plants. I have been told by many Rastafarians that they have been *sakmanne* at some stage of their life, a stage that consists of a seven-year meditative apprenticeship, which some do for even longer. Rastafarian *sakmanne* are particularly present in the Cape, establishing intimate relationships with wild herbs, bark, and roots upon which they rely for their livelihoods and for those of others. *Sakmanne* live from wild plants, roots, and minerals (see Figure 9.1). As such, they follow a path of humility to reach a higher spiritual self that may remind us of the path undertaken by Brahmin priests.

Figure 9.1 Rastafarian *sakmanne* photographed during our visit of the medicinal plant garden, part of the Indigenous Knowledge Lead (Health) Program of South Africa's Medical Research Council at the Delft laboratory facility in November 2007

Note: The garden is situated at the entrance of the Delft facility, directly beside the parking space, thus conveniently situated for visitors to notice upon their arrival on the premises. A bush of *umhlonyane* can be found in one section of the garden.

While Rastafarians state they have learned from "the elders," they also explain their knowledge of herbs to have been given to them by *Jah*, namely, through visions and meditation, which also shows some similarities with Brahmin traditions. The "Sacred Herb" (*Cannabis sativa*, charass, or *dagga* in Afrikaans, which is the language spoken by the Rastafarians in the Cape) is central in both practices as a way to meditate upon ways of living well in the moment.[49] The chillum is used by Rastafarians to smoke the herb, always shared with a group of brethren (seldom women), some referred to as priests, and a prayer always precedes any smoke inhalation, practices that again may recall Brahmin priest traditions, even if these vary greatly, with numerous Brahmins in northern India following the route to reach a higher spiritual self solitarily. Also shared between Brahmin and Rastafarian *izinyanga* is a reference to the creative aspect of the universal consciousness of God. Rastafarian *izinyanga* prize this state, achieved with or

without the Sacred Herb, as one of knowing plants through deepened consciousness. These common practices between Rastafarian *boss-idoktors* and Brahmin priests contrast drastically with those found in scientific processes enacted through the clinical trial that offer fewer common grounds. Rastafarians further share worlds of practice with indigenous South Africans.

Rasta *inyanga* and Xhosa *isangoma* share ways of healing with herbs as sounds play a particular role in both sets of practices, namely, in order to be well grounded in the rhythms of the ongoing life-making processes.[50] It is this shared way of deepening relations with plants that Xhosa *izangoma* make Rastafarians their trustworthy partners. For the same reason, they often state that they do not "trust" the plant as cultivated for use in the TICIPS preclinical trial I was following, stating that it has lost its "life" (or efficacy) through being manipulated as an externalized object of "nature." *Izinyanga* and *izangoma* thus do not compete; rather they collaborate in plant collection. Most of all they agree on the importance of the way to collect and heal with plants by connecting with them as sentient beings, in this move destabilizing the Western naturalist ontological divide between nature and culture.

While the notion of One World is implicitly anchored in this ontological divide, which sets nature apart from culture, a notion of IOW is delimited to a geographical area, albeit not one defined by political borders or territory. Anthropologists have classically legitimated their expertise with relation to a specific geographical environment or cultural area delimited by such a national territorial location. This practice has, however, changed drastically among anthropologists, perhaps following in the footsteps of the pioneering works of Appadurai (1990), who proposed we understand the world through de-territorialized scapes and cultural flows. These shifts in anthropology correspond to the increase in multi-sited ethnography, with research strategies following practices beyond geographical confinement, as is done in my own study. In all cases, however, anthropology remains focused on the ways these global flows are organized in everyday practices. While from afar I can delineate the preclinical practices of *A. afra* in Cape Town, South Africa, from across the Atlantic Ocean, I can describe the travels of the preclinical model from the NIH in Washington, DC, the United States, to its practices in Cape Town laboratories and clinics. The objective of the RCT to find a cure for a world tuberculosis pandemic can again lead me to Europe and America. Upon closer engagement, however, I can follow the roots in which the preclinical trial sets

itself up as a way to claim the dignity of an African people and how Indian practices are made to appear as convivial within this picture, fitting within *muti* rather than aiming to fit *muti* within Ayurvedic practices, even while borrowing some of its clinical practices inspired in Ayurvedic medicine as it undertakes a scientific route with an objective to keep *muti* alive along the process. These "worlds of becoming" describe the interactions of global health and indigeneity, in particular ways within the process to prepare a RCT to make a plant into a biopharmaceutical in Cape Town.

Of People, Plants, and Water

Muti encompasses live materials, performances, acts, sounds, divinations, songs, dances, ancestors, skills, abilities, and knowing all made to appear in the peripheries of the preclinical processes through worlds of becoming. In its design, the preclinical process aims to extrapolate data from this world, for example, a molecule, to know it from an externalized positioning following a RCT model. In its travels across oceans, the RCT model resurfaces with new meanings, bending its protocols to make it acceptable, namely, in this case, borrowing from an Ayurvedic clinical model as well as testing the whole plant to remain closer to indigenous practices. The Rastafarian movement took shape in Jamaica, and its travels across the same oceans have also led the movement to reemerge in South Africa, with new specificities, also evoking Ayurvedic roots, albeit different ones. These always-emerging worlds of becoming play into the ways of (dis)engaging with plants, making some histories appear, letting others wither away. This is how I have aimed to explore how an Indian reversed pharmacology clinical model is made to appear as a way to make the classic RCT more amenable to *muti* as well as the way I have aimed to discuss how Rastafarian practices might fit strategically within this picture, namely, through IOWs meeting with One World practices in Cape Town. Exploring a notion of an IOW has thus been useful to grasp some of the undertones in practices going on in the preclinical trial of *umhlonyane* in the Cape, some aiming to deepen their relations with plants to know them and how to heal with them, others aiming to disconnect from plants in mediums with the same objectives.

I have invited the reader to think not in terms of mapping but in terms of wayfaring, a distinction Ingold[51] uses to illustrate the limits of maps as we are immersed in making our way through the destinations as inhabitants. The maps we have made up to depict the world are

numerous and can be more or less meaningful in everyday lives. They can delineate the world as separate nations, continents, provinces, oceans, seas, hemispheres, cultures, species, religions, bioresources, bodies, and corresponding worlds. These delineations can further be transcended by "air," as something we all share, or "water," something we are all made of. Rastafarians explain the extension of their movement as done through "air waves," sounds traveling through the radio. Revelations from the Creator, whether *Jah* or Brahma, can also transcend time and place. Borders can also be transcended by ideas of universal biological bodies in notions of "One World," now found to be at the level of the molecule as done in global health, largely because this is politically possible. Appealing to "indigenous medicine" for its part broadly evokes roots, land, place, and ancestry. I have tried to show, however, that this bond with the earth corresponds to ways of engaging and growing with it rather than to the specific ground one is walking on. A key commensurability found within *muti* is a deepened immersion in the world to know it, fine-tuning attention with and through plants "in" the world rather than externalizing themselves from the world. This commonality can indicate more mobility than is otherwise ascribed to "indigenous knowledge," which is often imagined as bound to a single physical space.[52]

Here, I have only briefly touched upon the idea of "water" or the ocean as a way to grasp how practices might move fluidly and with infinite possibilities implicating undercurrents, counter currents, deep silences, and emergences to the surface. The "ocean" metaphor is useful to grasp how certain practices are made to rise to the surface in a certain way under particular circumstances to again disappear under the surface as the movements of life follow their rhythms and tempos. The Indian Ocean is a materiality, with particular consistencies and movements enabling or complicating trade and transportation. The Cape at the tip of Africa near the location where the Atlantic and Indian Oceans meet, with an undertow of freezing water from the Atlantic, provides appropriate imagery to understand tensions felt within the preclinical trial I have been following, tensions that appear cold yet fresh when coming from the West, much warmer and familiar from the East.

The Agulhas "leak" peels off from the Indian Ocean and forms eddies, increasing in strength, its warm salty waters pouring into the Atlantic Ocean, a process that recent studies suggest might have some effect in balancing "global warming."[53] We might take this imagery in a metaphorical sense to show how IOWs could be necessary to Atlantic

Ocean Worlds. The Indian Ocean would be the smallest, youngest, and physically most complex of the world's three major oceans, covering approximately one-fifth of the total ocean area of the world.[54] These characteristics provide yet more trails to explore in terms of proximities, fluidities in time, and complexities enhanced through the sharing of these waters. On a more personal note, a notion of IOWs explains my own research trajectory that recently moved to another on the edges of the Indian Ocean, this time a city situated near the deepest point of the Indian Ocean, namely, the Sunda Deep of the Java Trench off the southern coast of the island of Java in Indonesia. Yogyakarta lies between the Merapi volcano to the north and the Indian Ocean to the south, showing perhaps a more in-depth movement of Ayurvedic medicine into Javanese everyday healing practices, those currently emerging as Jamu,[55] healing practices also colliding with a modern pharmaceutical wave as well as traversing with practices from Unani medicine oozing into the everyday through the current Islamic wave sweeping the island.

Oceans meet land through waves, winds, and air that move through us as well as we move through them. Oceans meet with each other with similar motions with no fixed point. It is only from afar that we can see lines separating the oceans and only from the inside that we can understand how oceans feel, meet, and mix, carrying things and people in and across them. The lived and the felt in its entanglements with materials brings into being traditions that may appear to belong to another place and time; however, in making themselves a home through people's practices in the present, those traditions are simply showing meaningful worlds of becoming. History reads in the past what is meaningful today. The present is thus continuously being done and undone with what appears useful from the past to carry on in life-making processes.

Notes

1. South African History Online, "Conquest of the Eastern Cape 1779–1878," http://www.sahistory.org.za/topic/conquest-eastern-cape-1779-1878 (accessed October 20, 2014).
2. Project titled *South African Roots towards Global Knowledge* financed by the Max Planck *Institute für etnologische forshung* in Halle/Saale, Germany, as part of the Biomedicine in Africa Group. I am most grateful to this institution as well as to The International Center for Indigenous Phytotherapy Studies (TICIPS), the University of the Western Cape, and to the scientists and healers who shared their time and experiences with me. My other publications

relevant to this are Julie Laplante (2015), *Healing Roots: Anthropology in Life and Medicine* (Oxford, New York: Berghahn Books); Julie Laplante (in press), "Medicine Multiple: Ontologies in Preclinical Encounters with Indigenous Medicine," in *Re-visiting Medical Pluralism*, ed. V. Hörbst, R. Gerrets and P. Schippirra (London and New York: Palgrave Macmillan); Julie Laplante (2014), "On Knowing and not Knowing 'Life' in Molecular Biology and Xhosa Healing: Ontologies in the Pre-Clinical Trial of a South African Indigenous Medicine (Muti)," *Anthropology of Consciousness*, 25 (1): 1–31; Julie Laplante (2014), "Médecine autochtone sud-africaine (Muti) et innovation biopharmaceutique: Connaître l'Umhlonyane," *Anthropologica, 56* (1): 153–164; Julie Laplante (2012), "'Art de dire' Rastafari: Dagga et créativité musicale dans les townships sud-africains,'" *Drogues, santé et sociétés*, 11 (1): 90–106; Julie Laplante (2009), "Plantes médicinales, savoirs et société: Vue des rastafari sud africains," *Drogues, santé et sociétés*, 8 (1): 93–121; Julie Laplante (2009), "South African Roots towards Global Knowledge: Music or Molecules?," *Anthropology Southern Africa*, 32 (1–2): 8–17.

3. The actual meeting of the currents moves seasonally between Cape Point and Cape Agulhas, attesting to the fluidity of the Indian Ocean and Atlantic "worlds."
4. K. Flint (2008), *Healing Traditions: African Medicine, Cultural Exchange, and Competition in South Africa, 1820–1948* (South Africa: University of KwaZulu-Natal Press), p. 2.
5. *UmuThi*, which means tree in isiZulu Bantu language, also means medicine. Given the colonial experience and the prominence of the English language in South Africa, a number of Zulu terms have been anglicized over the years and have gained popular usage throughout South Africa (Flint, *Healing Traditions*). The Zulu word for medicine, *umuThi*, is thus rendered as *muthi* or *muti*. Most people I met in Cape Town and in Durban during my research, including Xhosa healers and Rastafarian herbalists, use the term *muti* to refer loosely to all forms of indigenous medicine practiced in South Africa that are not obviously biomedical, but also know that the word itself has deeper connotations.
6. *Izinyanga* is the Zulu plural form of *inyanga*. In the same logic that "z" means plural, the term *izangoma* is the Zulu plural form of *isangoma*. The term *isangoma* is of Zulu origin, its isiXhosa equivalent is *igqirha* or *amagqirha*. The term *isangoma* or *sangoma* is, nevertheless, the title generally used in Cape Town and by the Xhosa healers encountered during my study. The title of *inyanga* is also the term used to refer to herbalists, including Rastafarian herbalists who were claiming to be recognized as rightful *izinyanga* during the time of my research.
7. Afrikaans term for bush doctors, namely, herbalists or *izinyanga*.
8. One World—One Medicine—One Health, or the One Health Initiative, "One Health Initiative will unite human and veterinary medicine," http://www.onehealthinitiative.com/ (accessed August 20, 2014), is a US-initiated umbrella organization, encompassing various sectors with scientific expertise in health. In certain respects, it reenacts the modernist dream of "health for all" led by the WHO, similarly excluding any form of healing that might work through other routes than the current privileged molecular biological route endorsed

by biomedicine. I argue that while the concept of "oneness" as presented here is an attempt to reestablish a universalist, objective stance, in fact, only a single medical culture is attended to. Therefore, the project runs the risk of being regarded as exclusive rather than inclusive.

9. W. H. R. Rivers (1924), *Medicine, Magic, and Religion* (London: Kegan Paul, Trench, Trubner).
10. C. Leslie (1976), *Asian Medical Systems: A Comparative Study* (Berkeley: University of California Press).
11. Laplante, *Healing Roots*.
12. T. Ingold (2011), *Being Alive: Essays on Movement, Knowledge and Description* (London and New York: Routledge), p. 14.
13. A notion itself borrowed from Deleuze and Guattari's notion of "lines of becoming." G. Deleuze and F. Guattari (1980), *Mille Plateaux: Capitalisme et schizophrénie 2* (Paris: Éditions de Minuit).
14. P. Descola (2005), *Par-delà nature et culture* (Paris: Gallimard).
15. B. Latour (2000), "When Things Strike Back: A Possible Contribution of 'Science Studies' to the Social Sciences," *British Journal of Sociology,* 51 (1): 107–123, 118.
16. M. Merleau-Ponty (1964), *L'œil et l'Esprit* (Paris: Gallimard).
17. J. Von Uexküll (1937), "The New Concept of Umwelt: A Link between Science and the Humanities," trans. G. Brunow, *Die Eriehung,* 13 (5): 185–199.
18. T. Ingold (2008), "Earth, Sky, Wind and Weather," in *Wind, Life, Health: Anthropological and Historical Perspectives*, ed. E. Hsu and C. Low (Malden, MA: Blackwell), pp. 17–36, esp. p. 17.
19. Flint, *Healing Traditions*, p. 52.
20. Ibid.
21. The clear-cut distinction made today between the Xhosa and the Zulu has no basis in culture or history, but arises out of the colonial distinction between the Cape and Natal colonies. Both speak very similar languages and share similar customs, but the historical experiences at the northern end of the Nguni culture area differed considerably from those at the southern end. The majority of northerners became part of the Zulu kingdom, while the majority of southerners intermarried with Khoikhoi and never became part of any strongly centralized kingdom. South African History Online, "Zulu," http://www.sahistory.org.za/people-south-africa/zulu (accessed October 20, 2014).
22. Flint, *Healing Traditions*, p. 66.
23. A. T. Bryant (1966 [1909]), *Zulu Medicine and Medicine Men* (Cape Town: C. Struit), pp. 57–58.
24. A. Ashforth (2000), *Madumo: A Man Bewitched* (Chicago, IL: University of Chicago Press).
25. J. Wreford (2008), *Working with Spirit: Experiencing Izangoma Healing in Contemporary South Africa* (London and New York: Berghahn Books), p. 129.
26. Ibid., pp. 110–111.
27. Laplante, *Healing Roots*.

28. T. Ingold (2013), *Making: Anthropology, Archaeology, Art and Architecture (*London and New York: Routledge), p. 1.
29. B.-E. Van Wyk and N. Gericke (2007), *People's Plants: A Guide to Useful Plants of Southern Africa* (Pretoria: Briza), p. 142.
30. J. T. Mukinda (2005), "Acute and Chronic Toxicity of the Flavonoid-Containing Plant, *Artemisia afra* in Rodents," MSc thesis, Department of Pharmacology, University of the Western Cape, Bellville, South Africa; S. Ntutela et al., (2009), "Efficacy of *Artemisia afra* Phytotherapy in Experimental Tuberculosis," *Tuberculosis* (Edinb), 1: S33–40.
31. Nelson Mandela (1994), Pretoria, Inauguration Speech, ed. Ali Dinar, available from University of Pennsylvania, African Studies Center, http://www.africa.upenn.edu/Articles_Gen/Inaugural_Speech_17984.html (accessed March 9, 2015).
32. The Cape's townships are today filled with *muti* shops, many with a rooftop signboard indicating "chemist." One shop in Khaeylitsha township, for instance, writes "Isilo Samandlane Chemist."
33. Flint, *Healing Traditions*, p. 4.
34. The "drug pipeline" envisages a closed pipe with a single possibility of input at the beginning of the research process, usually a single molecule, and a single output at the end of the process, between 10 and 20 years down the line, indicating the results of its efficacy. The closure of the pipe indicates the time allocated to research in controlled laboratory environments, while the openings can be understood as the moments when more of life is still involved, including the preclinical phase. An illustration of the pharmaceutical pipeline can be found on the front page of the Pharm Exec Staff. The Pharm Exec 50 (2009), *Pharmaceutical Executive Magazine*, pp. 69–78.
35. Q. Johnson (2011), "Phytomedicines," from translation of IKS to Innovation for the Bioeconomy, http://d2zmx6mlqh7g3a.cloudfront.net/cdn/farfuture/mtime:1315563321/files/docs/110907phytomedicines.pdf (accessed February 10, 2012).
36. B. Patwardhan and R. A. Mashelkar (2009), "Traditional Medicine-Inspired Approaches to Drug Discovery: Can Ayurveda Show the Way Forward?," *Drug Discovery Today,* 14 (15–16): 804–811.
37. Ibid., 806.
38. B. Patwardhan and A. D. B. Vaidya (2010), "Natural Products Drug Discovery: Accelerating the Clinical Candidate Development using Reverse Pharmacology Approaches," *Indian Journal of Experimental Biology,* 48: 220–227, 224.
39. Flint, *Healing Traditions*.
40. K. Flint (2001), "Competition, Race, and Professionalization: African Healers and White Medical Practitioners in Natal, South Africa in the Early Twentieth Century," *Social History of Medicine*, 14 (2): 199–221; and K. Flint (2006), "Indian-African Encounters: Polyculturalism and African Therapeutics in Natal, South Africa1886–1950s," *Journal of Southern African Studies*, 32 (2): 367–387; K. Shapiro (1987), "Doctors or Medical Aids—The Debate over the Training of Black Medical Personnel for the Rural Black Population in South Africa in the 1920s and 1930s," *Journal of Southern African Studies,* 13 (2): 55–75.

41. Flint, "Indian-African Encounters."
42. The San are usually referred to as the "first inhabitants," namely, hunter-gatherers who would have inhabited sub-Saharan Africa for more than 25,000 years and who eventually mixed with Khoi-Khoi pastoralists, also called the Cape herders, who arrived in the southern part of Africa within the last 2,000 years (100 BC). A great Bantu migration occurred between the second and fifth centuries, bringing Nguni people (Swazi, Xhosa, and Zulu nations), followed by a second migration in the twelfth to thirteenth centuries, bringing the Sotho-Tswana people. It is these people who most easily fall into the "indigenous" category. Gallery Ezakwantu, "Southern African Tribal Migrations," http://www.ezakwantu.com/Tribes%20-%20Southern%20African%20Tribal%20Migrations.htm (accessed October 19, 2014).
43. J. Black (1992), *Arrow of the Blue-Skinned God: Retracing the Ramayana through India* (Boston, MA: Houghton Mifflin), p. 89.
44. J. A. Niaah (2003), "Poverty (Lab) Oratory: Rastafari and Cultural Studies," *Cultural Studies,* 17 (6): 823–842, 824, 825.
45. L. Philander (2010), "An Emergent Ethnomedicine: Rastafari Bush Doctors in the Western Cape, South Africa," PhD thesis, Tucson: University of Arizona.
46. F.C. Ross (2010), *Raw Life, New Hope. Decency, housing and everyday life in a post-apartheid community.* Cape Town, SA: UCT Press.
47. L. E. Olivier (2011), "Rastafari Bushdoctors and the Challenges of Transforming Nature Conservation in the Boland Area," MA thesis, Stellenbosch: University of Stellenbosch, p. 45.
48. Ibid., p. 46.
49. Laplante, *Healing Roots*; "Plantes médicinales"; "South African Roots towards Global Knowledge."
50. Laplante, "'Art de dire' Rastafari."
51. T. Ingold (2000), *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill* (London and New York: Routledge).
52. R. Ellen and H. Harris (2000), "Introduction," in *Indigenous Environmental Knowledge and Its Transformations: Critical Anthropological Perspectives*, ed. R. Ellen, P. Parkes and A. Bicker (Netherlands: Harwood Academic), pp. 1–34.
53. One of the most powerful currents in the world, the Agulhas Current is known as one of the key elements in the planet's "weather machine." A recent study shows that rather than slowing down owing to melting ice, the current has been accelerating since the 1980s (Rouault et al., 2009). Agulhas eddies, also called "current rings," tend to be among the largest in the world, transporting warm, salty water from the Indian Ocean to the South Atlantic. Live Science, "Oceans Blue: Giant Swirl Captured," http://www.livescience.com/18445-eddy-ocean-nasa-satellite-image.html (accessed October 19, 2014). The flow of saltier water toward the north is thus helping to maintain worldwide thermohaline circulation. The phenomenon could partly offset the effects of melting ice, and ultimately help to regulate global warming. Institut pour la recherche pour le développement (IRD), "The Agulhas Current Is Said to Attenuate the Effect of Melting Ice," *Scientific Newssheets*, July 2012, http://en.ird.fr/the-

media-centre/scientific-newssheets/408-the-agulhas-current-is-said-to-attenuate-the-effect-of-melting-ice (accessed October 19, 2014).

54. Philomene A. Verlaan (2014), Encyclopaedia Britannica, "Indian Ocean," http://www.britannica.com/EBchecked/topic/285876/Indian-Ocean (accessed October 19, 2014).
55. Jamu medicine practiced in Indonesia originates from the Mataram Kingdom; traces of its practices were found as early as the eighth century in the Hindu Temple of Prambanan near Yogyakarta. A short essay bringing Muti and Jamu in conversation as well as an ethnographic film on Jamu written and produced by the author can be accessed through the following link: http://read.hipporeads.com/becoming-plant-in-indian-ocean-worlds-lines-flows-winds-and-water/.

Concluding Remarks

Michael N. Pearson

I very much appreciate the invitation to add a few general comments to this interesting collection of chapters on medicine in the Indian Ocean World (IOW). I learnt a lot from attending the conference, "Histories of Medicine in the Indian Ocean World," from which the volume began. My aim now is not to summarize or introduce the various chapters, or to draw out some general themes found in them, for Anna Winterbottom and Facil Tesfaye's introduction does this. I merely raise some much more general themes, namely, general trends in Indian Ocean work, and then what I perceive to be the crucial matter of relations and connections between indigenous medicine in various parts of the IOW and the arrival of Western, "scientific" medicine from the sixteenth century onward. Finally, the role of the state both before and during colonialism is crucial. As I ruminate on these matters, I, of course, from time to time, refer to relevant chapters that precede my own contribution. I have provided fuller accounts of some of these matters in previous publications.[1] Let me start with some very basic matters regarding medical history in general. We need to distinguish between crisis mortality and background deaths. In the first category are such famous epidemics as cholera, smallpox, plague, and now AIDS and Ebola. The first three, at least, can be described as infectious or crowd diseases, which spread best in crowded conditions, a prime example being the great gatherings of Muslims for the annual hajj. However, throughout history the vast majority of deaths or illnesses were caused by less dramatic illnesses, such as tuberculosis, infant diarrhoea, and dysentery, the ubiquitous "fevers" so often described in early modern travelers' accounts. Similarly, while we know quite a lot about the healing efforts of literate men, most health care historically was provided by illiterate and unheralded women using local nostrums

rather than text-derived remedies. Finally, as we compare different systems, it is helpful to bear in mind the four generally accepted stages of the evolution of Western medical practice, that is, *library*, where practice was based on Galen and other authorities, and the healer had little contact with the patient; *bedside*, where observations were carried out; *hospital*, in other words, the huge wards of people that developed in the nineteenth century; and *laboratory*, where doctors reveal the results of tests.

Turning now to the Indian Ocean, for many years its history was seen to be a history of trade and the role of merchants. Most such studies have concentrated on the last five centuries, for which period comparatively copious European records are available. This also applies to the burgeoning area of slavery studies, where the concern has been to show that the much-studied Atlantic trade was not the only one that took Africans away from the continent. Others began to write on more cultural matters, especially religion and the spread and later homogenizing role of Islam. It is notable, after all, that the coastal population of the whole ocean is predominantly shafi'i Muslim. Maritime history, in general, has wrestled with the fundamental problem of whether the history of a body of water can be written independent of what happens in the surrounding landed areas, or, in other words, how far inland the maritime historian must go. A new and very welcome trend is to note that the fashionable field of environmental history has been almost totally terracentric. We aim to fill the "blue hole" in environmental history by studying environmental factors affecting bodies of water. Finally, the history of oceans is often seen as a version of "world history," that is, a history that minimizes the role of states and boundaries and even the demarcation of continents in favor of assessing broad trends over vast distances. A variant on this theme is the application of world-system theory to the ocean. A recent vast study by Philippe Beaujard builds on and corrects past work that extended world-system analysis back to pre-capitalist times.[2] He finds the Indian Ocean to be the center of a vast world-system, which developed from around the beginning of the Common Era and from the sixth century CE included the whole known world, excluding the Americas.

In all of this, the role of disease as an integrator or even merely a significant factor in the history of the Indian Ocean has been curiously neglected. Beaujard's vast study has little to say even about the Black Death and its implications for the Indian Ocean. He is encouragingly very strong on noneconomic matters such as environmental

and religious matters, and the development of writing systems, but says relatively little about disease. If a personal comment can be excused, I have published several articles and book chapters on medical matters, yet in my own survey of the history of the Indian Ocean these received only cursory attention.[3] Yet it is clear that if we look in the right places we can find disease creating links and commonalities across the ocean. David Arnold's seminal article showed the way,[4] and I have drawn heavily on him in much of what follows. Among specific examples one could instance the role of the hajj. This vast annual movement of people from all around the shores of the ocean to collect in Mecca operated very efficiently in spreading a disease found in one place to many others, as the British noted and tried to combat in the nineteenth century, and as the Saudi government has to today. In other words, the hajj obviously has a religious significance, and an economic one, but we must also note its role in epidemiology. Another example is syphilis, revealingly called the "frangi" (foreigner, European, Portuguese, Frank)[5] disease in India. A more virulent strain, as compared with the relatively benign version long found in Eurasia, apparently came back to Europe on the ships of Columbus's second voyage, and spread remarkably rapidly, thus no doubt revealing something about the habits of sailors. It spread all over Europe with remarkable rapidity, and also to Asia, where it may have appeared in Canton as early as 1502. Three years later the Italian Varthema in Calicut claimed that the ruler had "the French disease ['Frangi'] and had it in the throat."[6]

A final example of a potentially important contribution is the travels of Muslim specialists all around the shores of the ocean. The most recent outstanding study is by Engseng Ho on the Hadhramis,[7] but we know of others from much earlier traveling to convert locals, and once this was achieved to solidify and rectify the religious practice of partially converted Muslims. The Portuguese called these travellers "cacizes." These were shafi'i Muslim religious specialists, and traders, of course, who apparently spread not only "orthodox" Islamic notions but also medical knowledge derived, for example, from Ibn Sina and others in Baghdad.

The final point is to note the obvious fact that, in all of these matters, there was change over time. Generally, diseases spread much quicker around the Indian Ocean rim in the nineteenth century owing to improved communications, in which steamships were crucial. This meant that many more people were traveling: indentured laborers, soldiers, and pilgrims. In this period, more so than previously, we can see

the Indian Ocean clearly being united by the spread of diseases, first cholera and late in the century plague, which, on this occasion, originated in China. As a historian of the Indian Ocean, I feel strongly that medical matters can contribute importantly. The present collection is a step forward, and very much to be welcomed.

Many of the preceding chapters deal with the central matter of relations between indigenous medicine and the "new" Western medicine. It is important here to remember that long before the arrival of Europeans in the Indian Ocean there was much mixing and interaction all across Eurasia, with no area being more advanced than any other. In these two volumes, the chapters by Angrini and Respess and Niziolek touch on this earlier period. All across Eurasia it is clear that there was much commonality in the practices recommended by literate healers, which was based on the universal Eurasian reliance on humoral pathology. European medicine was a blend of Latin, Arabic, Greek, and Hebrew knowledge. Underlying European medical practice was the notion of the four humors or bodily fluids, which indeed remained influential in Western medicine until the mid-nineteenth century. Disease was a result of an imbalance or impurity of one of the four cardinal humors, that is, blood, phlegm, red or yellow bile (choler), and black bile (melancholy), these, in turn, being analogous to the four elementary substances of earth, water, air, and fire. In a healthy person, the four humors were in equilibrium. The relative balance of the four was tested by means of urine samples, which were very widely used in diagnosis. Any perceived imbalance was cured by enemas, purging, the use of stimulants, tonics, and drugs compounded from medicinal herbs and plants, and especially by bleeding, which was something of a universal specific and was done not only to cure illness but also as a preventative, being done routinely perhaps every two months or so.

It is important to stress the way medical ideas circulated freely in the premodern world. In the case of India, some Hindu medical texts were influenced by Galen and Hippocrates. These Indian texts in turn affected such great Muslim writers as Ibn Sina (Avicenna), and, of course, his works, in Latin translation, were standard authorities for centuries in medieval and early modern Europe. In the period of the Abbasid *khalifat* in Baghdad (750 CE onward), Muslim scholars traveled to India to study medicine, and also recruited Hindu doctors to return with them to Baghdad, where some of them became very influential physicians at court, and translated Sanskrit works on medicine, pharmacology, and toxicology into Arabic.

This is book-based medicine, but, as I noted earlier, most healing was done locally, usually by women. I have long been influenced by Andrew Wear's apt, though rather turgid, comment: "The nineteenth- and twentieth-century values of the medical profession which in past history of medicine had been applied to earlier periods to condemn empirics, quacks, magical and religious practitioners have been discarded. In the process a much richer medical world has been uncovered."[8] This is a sign of how difficult it is to study grassroots medicine and the role of women, which few of the chapters here deal with, the reason, I am sure, being merely that the data is not available. Only Respess and Niziolek, Walz, and Laplante provide this sort of information.

We get a glimpse of the sort of care available to most people in early modern India in the following valuable passage: "As for the commonalty, when the rains have fallen and it is the season for collecting plants, mothers of families may be seen going in the mornings from the towns and villages to collect the simples which they know to be specifics for domestic diseases."[9]

But to complicate matters immediately, we must not draw a firm line between elite book-based practice and local healing. For example, the traveler and fabulist Niccolao Manucci turned himself into a doctor because the demand was there: "Little by little I began to turn myself into a physician."[10] Or consider the very learned and justly famous Garcia de Orta in Goa. He noted that the long-term use of opium produced impotence, despite its popular use as an aphrodisiac. But he also claimed that the use of opium could help conception. This was because its use delayed ejaculation by the male by "slowing down his imagination." As women are slower in "the act of Venus," this meant that a couple could "both complete the act at one time." He further explains: "The opium also opens the channels by which the genital seed comes from the brain, by reason of its coldness, so that they complete the act simultaneously."[11]

One could extend this list of the interactions between "modern" and "folk" endlessly. The famous bezoar stone was widely described in the popular lore of many cultures and was considered to be formed by encrustations built up around a foreign body in the stomach of ruminant animals. Wild goats from Persia were especially fecund in producing these invaluable stones. They were believed to be an excellent antidote to poison, a purgative, a means of preserving one's youth and virility, a cure for the plague, bladder complaints, and so on. The cure was used for heart problems, and was a good example of a mixture of

Indian and European practice. Taken back to Portugal, these bezoar stones were widely used by the elite for their medicinal and amulet qualities.[12]

Cholera was probably the most feared disease in early modern India, especially on the west coast and in the south. The British in India thought it was caused by eating fish and meat together. They treated it by applying a hot iron to the ball of the patient's foot. If the patient winced, he would soon recover, but if no pain was felt, the patient would soon die. Or, to turn to Manucci again: in Bassein, he tells us, there was a woman of good station who produced a girl after a pregnancy of three years. The girl married at twelve years and also had a pregnancy of three years. As for rabies, a newly married man, on his wedding night, cut his bride to pieces, gnawing her breasts, plucking out her eyes, and biting her face and body. The reason was that he had been bitten by a mad dog three months before. The remedy for rabies was to cauterize the wound at once. Alternatively, if the bitten person went on a sea voyage he would recover immediately.[13]

Finally, given the large number of chapters in this collection that touch on the role of the (colonial) state, what are the broad trends here? The perceived gap between indigenous and Western medicine increased dramatically over the nineteenth century, and this was a consequence of the demonstrable advances made in Western medicine from around 1800. This was perhaps most clearly seen in the fact that a major disease was mastered for the first time in human history only in the 1790s, when Edward Jenner produced his vaccination (much more effective than the widely practiced inoculation) against smallpox. During the nineteenth century, British authorities claimed that their medicine had gone far beyond a reliance on humors, while "native" medicine in India, both Ayurvedic and Unani, had not advanced at all. More recently we have begun to unpack this simple story. Even at the height of imperialism it was not all one way. An example of new insights is a recent book on Unani medicine in the nineteenth century, whose implications go far beyond narrow medical history.[14] The book contributes to the dominant trend in studies of colonialism in India, which show the complexity and variability of the colonial "impact" on Indian society. The central theme is that practitioners of Unani and other types of medicine around the Indian Ocean were not totally constricted by the framework of colonialism, but rather interacted creatively with new Western medical knowledge. Chapters by Stephen, La Rue, and Bhattacharyya in this collection touch on these matters. Finally, on this central matter of interaction as opposed to

Western dominance, we can note the recent rise of "medical tourism," that is, westerners traveling to Asia where cheaper medical procedures are available.

State concern with helping ill people, and secular involvement in financing hospitals seem to have been quite new ideas in both Europe and Asia at the beginning of the early modern period. In earlier times it was the religious authorities who sponsored most health care, sometimes, it is true, prompted by pious rulers. We have accounts of what seem to be very advanced Muslim hospitals in Baghdad, Damascus, and other cities during the Abbasid period (750–c. 1000) and later in the Ottoman Empire. These were financed by endowments, had large staff (including physiologists, oculists, surgeons, and bonesetters), and seem to have provided, at least for the élite, an excellent service.

In the early colonial period the Royal Hospital in Goa certainly was innovative in the quality of the care it provided, yet it also demonstrated the sort of mingling of old and new methods that we have seen already. Tavernier noted how much bleeding was prescribed:

> And it is repeated, according to need, up to thirty or forty times, as long as bad blood comes, as was done to myself on one occasion when at Surat; and as soon as the bad blood is removed, which is like an apostume, the sick person is out of danger. Butter and meat are to him as poison, for if he eats them he puts his life in danger. Formerly some small ragouts were made for the convalescent, but they must nowadays content themselves with beef-tea and a basin of rice. I forgot to make a remark upon the frequent bleedings in reference to Europeans—namely, that in order to recover their colour and get themselves in perfect health, it is prescribed for them to drink for twelve days three glasses of pissat de vache [cow's urine], one in the morning, one at midday, and one in the evening; but, as this drink cannot but be very disagreeable, the convalescent swallows as little of it as possible, however much he may desire to recover his health. This remedy has been learnt from the idolators of the country, and whether the convalescent makes use of it or not, he is not allowed to leave the hospital till the twelve days have expired during which he is supposed to partake of this drink.[15]

For the colonial period several of the preceding chapters provide new information in various areas: Menon, Hurgobin, Jansen, and Chowdhury all examine colonial medicine. For an overview of the issues at stake here, David Arnold's analyses are fundamental,[16]

although his depiction of an all-encompassing colonial state has been questioned. He shows that in the late nineteenth century the emergence of bacteriology and the germ theory of disease, allied with the aggressive spirit and technological resources of late nineteenth-century imperialism, inspired a newfound confidence in interventionist medical and sanitary measures, and this was often forcefully directed against such diseases as sleeping sickness, malaria, cholera, and plague. What we see here is a transition from white man's medicine to public health. Colonial medicine left the white enclave and impacted on some areas of the subject populations, albeit only in a selective way, and governed always by imperial self-interest. On a local scale, the coalescence of the germ theory of disease with contemporary theories of race gave encouragement (and a "scientific" sanction) to measures of physical and racial segregation. In urban areas especially, whites, anxious to preserve their health and uphold their racial aloofness, tried to distance themselves from the indigenes or immigrants who were seen as the harborers and purveyors of infectious diseases.

At times the colonial state was forced to act by external pressure. Plague is an example. The threat made by the Tenth International Sanitary Conference, held at Venice in 1897, of an embargo on trade from the plague-infected ports of India obliged the British to adopt a more cooperative attitude. They acted drastically against plague within India and imposed a series of restrictions on overseas shipping, including vessels carrying pilgrims to Arabia.

The colonial state found willing collaborators. Arnold shows how the Indian middle class went in for medical philanthropy. They donated to charitable hospitals, and according to him this was partly intended to buy peace, status, and privilege from the colonial state. The possible comparison here is with the activities of the Rockefeller Foundation set out in the chapter by Kavadi. The British expected Indian philanthropists to finance most hospitals, and here we have an echo from Goa earlier, where much health care and the financing of the Royal Hospital was done by private Portuguese elites.

In the nineteenth century, the interaction was especially strong in the port cities such as Calcutta, Madras, and Bombay. These were the principal sites for the construction of Western hospitals, medical schools, and dispensaries. Their buildings were often a highly visible feature of the colonial townscape, and as such were an ideological statement about the authority of Western medicine, about scientific rationality in societies branded superstitious or insanitary, and about the benevolent paternalism of colonial rule. And yet these institutions

were more than a mirror to imperial vanity. They could reflect local pride in their city, such as the Parsi patronage of hospitals in Bombay. Along the same lines, more and more non-Europeans became doctors and nurses. Like many other aspects of port city life, medical institutions were a bridge between indigenous society and the West.

The excellent chapters presented here are essential building blocks that can be used to advance substantially our quest to write about the medical history of the Indian Ocean. These two volumes make clear how fruitful this combination will be. Medical matters can contribute importantly to the burgeoning area of studies of the IOW, while an oceanic perspective should help to break down the particularism sometimes evident in medical history.

Notes

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13. Manucci, *Storia*, Vol. 3, pp. 114, 117.
14. Seema Alavi (2008), *Islam and Healing: Loss and Recovery of an Indo-Muslim Medical Tradition, 1600–1900* (Basingstoke: Palgrave Macmillan).
15. Tavernier, *Travels*, Vol. I, pp. 160–161.
16. David Arnold (1988), "Introduction: Disease, Medicine and Empire," in *Imperial Medicine and Indigenous Societies*, ed. D. Arnold (Manchester: Manchester University Press); David Arnold (1993), *Colonizing the Body: State Medicine and Epidemic Disease in Nineteenth-Century India* (Berkeley: University of California Press).

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