VACCINATION PROPAGANDA: THE POLITICS OF COMMUNICATING COLONIAL MEDICINE IN NINETEENTH CENTURY BURMA

By

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Burma suffered from the ravages of smallpox at least since the fourteenth century, long before colonial doctors commenced vaccination operations. It was not until the nineteenth century, however, when Burma fell in consecutive pieces under British administration, that the magnitude of the threat posed by this disease to the indigenous population became apparent. Burma suffered from frequent outbreaks of smallpox which, for example, caused 8,717 deaths in 1898 and 10,754 deaths in 1899 (and a further 8,540 deaths in 1906).

Preventing smallpox was also necessary for protecting British military men serving in Burma. It was no wonder that the British administration considered vaccination against smallpox their utmost priority in the province of Burma as elsewhere in British India.

Initially, the colonial administration in British India underestimated the necessity of cultivating indigenous agency in its fight against smallpox. According to David Arnold, it optimistically expected that the Indians themselves would undertake vaccination operations and that the government would then be able to take credit for introducing vaccination at a minimum of expense. When it realized the massive obstacles to popular acceptance of vaccination, colonial medical authorities appealed to “natives of rank,” such as Brahmins, urban and rural elites, and community leaders for their support and promotion of vaccination. They had limited success in the cities and towns such as Varanasi where Indian intellectuals, government servants, and the media gave support to vaccination. However, when this “top-down” strategy turned out to be insufficient in bringing about the rapid extension of vaccination, the colonial administration turned to legislation. Sanjoy Bhattacharya, Mark Harrison, and Michael Worboys draw attention to how the issue of means of delivery divided opinion within the administration. One division emerged between those who argued for the encouragement of Indian volunteers who could undertake vaccination and those who preferred “gentle and patient persuasion.” This diversity of opinion on how to resolve the problem of indigenous reluctance to adopt vaccination led to the emergence within each of the Indian presidencies of “multiple vaccinating systems.”

While colonial (and colonial-era) vaccination efforts have recently received substantial attention in the literature, and brought attention to numerous strategies pursued by the colonial administration, such as those discussed above, little attention has been paid to the methodology of persuasion, such as the use of propaganda and print media to convince the subjects of British India to accept vaccination. The necessity for persuasion is implied in Andrew Cunningham and Bridie Andrews’ definition of scientific medicine:

To operate properly, scientific medicine has to take with it, or replicate abroad, its instruments and its institutions, together with its inner social hierarchies of expertise. Scientific medicine can be practised only by true believers, since it is necessary to take its thought world with one.

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1 The present article is largely derived from a chapter in the author’s dissertation, Atsuko Naono, “The State of Vaccination: British Doctors, Indigenous Cooperation, and the Fight Against Smallpox in Colonial Burma,” PhD dissertation (Ann Arbor: University of Michigan, 2005). I would like to thank my dissertation advisors: Dr. Victor Lieberman, Dr. Joel Howell, Dr. Rudolf Mrazek, and Dr. Hitomi Tonomura for their valuable instruction. I would also like to thank my friends and colleagues who helped my research in Yangon, Tokyo, Singapore, and London.


8 For example, Arnold mentions only one case in which a Brahmin wrote a vernacular treatise of vaccination in Varanasi but does not discuss its content, intended audience, or effect. Arnold, p. 149. Bhattacharya, Harrison, and Worboys discuss a vaccination manual written in 1903, but in English not in the vernacular. Nor do they examine its impact. Bhattacharya, Harrison, & Worboys, Fractured States, p. 150-1.

9 Cunningham & Andrews (eds.), Western Medicine as Contested Knowledge, p. 11.
The prophylactic medicine of vaccination, which many British medical men believed to be ‘scientific medicine,’ thus had to be well understood, believed, and operated. The question of how British medical authorities in Burma (and elsewhere in British India) convinced the indigenous population of the supreme efficacy of vaccination and induced them to submit themselves to it is thus of critical importance to understanding the successes and failings of the colonial vaccination effort. In attempting to convince the indigenous population to submit to vaccination, British civil surgeons serving in Burma frequently faced multiple predicaments rooted in local conditions. The caste system which was viewed as the main obstacle to vaccination in India was absent in Burma. Instead, numerous government reports cite the supposed charm-loving and superstitious tendencies of ‘backward’ Burmese society as the chief culprit in the rejection of ‘modern’ science. However, other reports also suggest that there was no single culprit for indigenous reluctance and that some among the British medical authorities themselves were non-believers in the efficacy of the operation. Scientific medicine, such as vaccination, did not speak directly to the indigenous population. The civil surgeons saw local Burmese officials, community elders, and Christian missionaries as potential mediums who could play critical roles in communicating Western knowledge regarding vaccination in Burma. The present article examines how these civil surgeons attempted to mobilize these intermediaries and why they failed.

In addition to the many difficulties in communicating vaccination to the indigenous population there was also the problem of communicating the necessity of vaccination propaganda between the civil surgeon in the field and the general Indian medical administration. Many civil surgeons in Burma considered publishing vaccination treatises in the vernacular necessary. They felt the need for such a measure because of local experience: Burmese at their stations, they found, did not have a clear understanding of vaccination, especially of the differences between it and variolation. Print propaganda could be potentially the best means of disseminating ideas of vaccination as it was commonly held that the Burmese were the most literate of the peoples of British India due to the prevalence of Buddhist monastic education. Nevertheless, this idea, proposed by some civil surgeons, was dismissed callously by their superiors in the colonial medical establishment. The failure to develop within the medical establishment a consensus on the advantages of print propaganda for vaccination was one of the major obstacles to the extension of vaccination in the province of Burma.

Hearts and Minds

The colonial vaccination reports frequently describe the Burmese as unwilling subjects. They include many stories of failed attempts by beleaguered medical officers to induce vaccination among the Burmese. On such officer was Wells, an assistant apothecary and Superintendent of Vaccination at Maulmain. After having spent many hours explaining to the parents of children about the benefits and necessity of vaccination, Wells found that his effort was in vain:

(I) have been fairly disgusted on being told to ‘come another time, as the child’s or children’s father is away in the jungles,’ or the ‘mother is unwell,’ or the ‘grandfather objects.’ …Others again must have the consent of the headman or Kyedangyee, who is either away or will not ‘advise.’ Those who ask as to ‘call again’ contrive somehow to keep out of the way on our second visit, or the children are sent away to some relative in another street or quarter of the town.

One explanation preferred by one of these British medical men was that the Burmese were somehow resistant to change and innovation. According to Albert Fytche, the Chief Commissioner of British Burmah, who wrote the general report on vaccination based on numerous local medical officer reports in the 1860s, the Burmese “have little or no faith in vaccination and a certain amount of dislike to it as a dangerous innovation.” Keith Norman MacDonald, the civil surgeon for Prome, was pessimistic about winning the Burmese over to vaccination. As he confided in his report to the chief commissioner, “I fear it will take many years to impress the importance of vaccination upon the Burmese, because they are so much biased against all foreign innovations...” The situation was the same in Upper Burma as well. The Burmese were accustomed to their variolation (inoculation using matter from human smallpox pustules), and “the Burman is very conservative in his ways and prefers his own old, though misconceive, usage to what he regards as foreign inventions.” By contrast, those Burmese who received an English educa-

10 Arnold, Colonizing the Body, pp. 141-142.
tion were believed to be more open to the practice of vaccination and, it was hoped, vaccination might follow English education as it spread among the Burmese:

   It is hoped that, with the spread of education, the masses of the population will be better able to appreciate the advantages of vaccination and the work of the vaccinator, which is extremely difficult in the present state of things, will be easier and less irksome...15

Such a process would have only yielded results in the long-term and would do little to prevent smallpox in the short-term. British medical officers thus had to seek other means to convince Burmese to accept vaccination in the short term.

The limited success of early experiences, such as the Anderson experiment at Mergui in 1837, which were attended by some deaths from the procedure, may also have discouraged Burmese from vaccinating their children.16 Due to the high rate of failure of vaccination because of ineffective lymph, the Burmese were not convinced of the procedure’s efficacy. Any doubt about the safety of vaccination contributed to further delays in popular acceptance of the practice of vaccination. As Commissioner of Pegu R. D. Ardagh noted in 1868, it was the “want of confidence both in the system and also in the operations” that lost popular trust.17 Even as lymph became more effective, any evidence of failure, whether real or imagined, could have a significant negative effect on the state of the progress of vaccination in the minds of the Burmese.

British medical authorities frequently picked out indigenous officials as the culprit for the failure of vaccination operations. Indigenous officials and local British administrative authorities were expected to support the medical officers in promoting vaccination because of its inherent worth. British medical authorities, for example, were extremely confident about the ‘goodness’ that vaccination would bring to the Burmese population and believed that its undeniable good conferred on the British the moral right, and the moral obligation, to extend it to the Burmese. In their minds, vaccination “admittedly confers almost perfect security against death from small-pox, and is beyond comparison the greatest practical good which medical science can offer.”18 In order to achieve this goal, they expected authorities at any level of the colonial administration to mobilize for the cause of vaccination.

   Government officers of all grades are expected to use their influence with the people in promoting vaccination ... The personal influence of district officials can do a great deal to assist the department in diffusing a knowledge of the benefits of vaccination, and in this matter the judicious use of official pressure is, it is submitted, not only legitimate, but imperative.19

The cooperation of local officials was considered essential for vaccination efforts because they were the main intermediaries who could bridge the gap between the medical officers and the indigenous population, by using their moral influence on the people to encourage acceptance of vaccination. Especially in those districts where variation was more popular than vaccination, “any determined effort” of the local administrative officers to promote vaccination was expected to have a significant effect on the success of spreading vaccination.20 The numbers of local officials who provided significant help was probably small, considering that those who did help received special mention in the vaccination reports, such as the myo-ouk of Kama in Thayetmyo who “helped popularise vaccination,”21 and this, in fact, rarely occurred. More frequently, it was claimed that these officials were rarely enthusiastic. When the civil surgeon in Prome posted a public notice about the efficacy of vaccination and the fact that a vaccination service was in operation in the local dispensary, the thu-gyis (headmen) were reported to have shown the “greatest indifference in the matter.”22 Civil Surgeon (Sandoway) C. E. Pyster accompanied the deputy commissioner because he expected this officer to exercise sufficient local influence to induce more Burmese children to submit to vaccination. However, the appalled Pyster noted that this officer returned with no

   how Edward Jenner, by his patience and extraordinary genius as a Philosopher, brought into notice a prominent fact, which has driven off one of the most desolating, disfiguring, and disgusting plagues of mankind, and saved the lives of millions, and thereby multiplied the manhood of nations. Most frivolous and foolish objections were raised against the practice of vaccination at a time, when the success of the operation was almost sure, and consequently the danger of small-pox in destroying life and causing deformity may be said to be very little.” Report on Vaccination, for 1868, appendix, p. v.

16 Maulmain Chronicle 18, p.127-8
17 Report on Vaccination, for 1868, appendix, p.xii.
18 Notes on the Statistics of Vaccination in Burma for the Year 1899-1900, p. 13. Also, Denonath Doss, Civil Surgeon of Arakan, wrote, “In vain did I point out to them the advantages of successful vaccination as a prophylactic against the contagion of small-pox, and 19 Notes on the Statistics of Vaccination in Burma for the Year 1899-1900, p. 13.
22 MacDonald, “Report on Vaccination in the Town and Vicinity of Prome for the year ending 31st March 1868,” p. 36.
children. Local officials were not only indifferent to the vaccination efforts but they were also reported to have caused more harm than good. The civil surgeon in Meiktila district, for example, complained of a serious disturbance made by some Burman officials. This civil surgeon found a major contradiction regarding the acceptance of vaccination. Wherever there was a Burman myo-ouk (a head of town), the civil surgeon claimed that he was invariably two-faced. To the medical staff, he offered his aid in promoting vaccination, but, implying though not explaining covert manipulation, he was also somehow responsible for sabotaging it, because those villagers under his influence would be greatly resistant to vaccination. On the other hand, in those outlying villages not under a Burman myo-ouk, the civil surgeon and his vaccinators found themselves welcomed and vaccination was carried out smoothly. In Pakokku, it was also reported that “the obstructive attitude of the myo-ouk of Myaing to an Indian Vaccinator...” resulted in a decrease in the number of people who submitted to vaccination so long as an Indian held the post. Further, British medical authorities also claimed that those local officials who continued to present an obstacle to the British vaccination effort by using their influence against it, were the loudest in demanding vaccination and “clamour[ed] for a vaccinator” when smallpox actually did break out in their districts.

The dilemma emerging between the colonial pride in the benevolent offer of providing free vaccination and its unappreciated reality frustrated many civil surgeons and led them to look down upon the indigenous population. As the 1868 report remarked, “To what can be attributed this neglect, but to their shear ignorance, prejudice, and utter carelessness.” These feelings were strong among enthusiastic civil surgeons, such as MacDonald, who extensively put vaccination into practice. MacDonald and his vaccinators found themselves welcomed and showing an interest in this new medical practice. One Burmese myo-wun (governor), after witnessing the successful vaccination of another person’s child, asked for his own children to be vaccinated. He further requested more knowledge of “cow-pox” and vaccination from Carey. After the governor was satisfied with the explanation, he then had vaccinated the nine main members of his household, including men, women, and children, despite the opposition of his wife, who was later satisfied with the results.

Missionaries, Languages, and Minorities

Frustrated with non-cooperative Burmese local authorities, the government had to rely on another group who could exercise some influence among the indigenous population in local areas, especially those in the more remote districts. Christian missionaries were the best candidates as agents for this task since they had established themselves as teachers and had formed bonds with the indigenous population in some, particularly minority, areas. Although British rule over parts of Burma would commence from the First Anglo-Burmese War (1824-1826), it was not until after the second Anglo-Burmese war (1852) that the British began to launch organized medical work among the indigenous population. Thus, for several decades, the influence of Western medicine had to pass through medical missionaries such as Felix Carey, Dr. Adoniram Judson and his wife Anna, Dr. Jonathan Price, Dr. J. Dawson, Dr. Mason, and others.

The usage of the medical missionary as a means of gaining popularity among the indigenous population and to encourage them to convert did not begin to materialize until the mid-nineteenth century in British India. As medical missionary activities gradually expanded over the next half century, they took advantage of the improving technology of modern medical science. In Burma, although the Missionary Convention of 1853 consented to include medical work as a means of evangelism, medical activities of Christian missionaries there had already been initiated in the beginning of the nineteenth century by such early pioneers as Carey who first introduced vaccination into Burma in 1811. Carey arrived in Rangoon at the end of 1807 after staying in Bengal translating the New Testament into various languages such as Sanskrit, Oriya, Hindi, Marathi, and Punjabi. Surprisingly, the initial introduction of vaccination into Burma was reported to have been very successful. His original subjects for vaccination were the European residents in Rangoon, but it did not take long until the indigenous population began to show an interest in this new medical practice. One Burmese myo-wun (governor), after witnessing the successful vaccination of another person’s child, asked for his own children to be vaccinated. He further requested more knowledge of “cow-pox” and vaccination from Carey. After the governor was satisfied with the explanation, he then had vaccinated the nine main members of his household, including men, women, and children, despite the opposition of his wife, who was later satisfied with the results.

23 Report on Vaccination, for 1868, appendix, p. ix.
27 Report on Vaccination, for 1868, appendix, p. v.
28 Ibid., p. xxi.
32 Ibid., p. 16.
attention. Carey was thus summoned to treat a sick prince, but the would-be patient died prior to Carey’s departure from Rangoon, and the trip was cancelled.

The Burmese court maintained its interest in Western medical practices. In 1813, King Bodawpaya (r. 1781-1819) again summoned Carey to have him undertake the vaccination of his grandson, the crown prince and future king, Ba-gyi-daw (r. 1819-1837). Although Carey did not possess vaccine, the Burman court paid him great respect, bringing him “in a ‘golden boat’ in the character of ‘Rajah Sippey’ or Royal Doctor, and offering him ‘a gold medal and a title’ and ‘Burmese dress’.” To maintain his amicable relationship with the Burmese court, Carey obtained vaccine from Calcutta in 1814 after the initial failure of the vaccine from Bengal. However, Carey’s diary was silent about whether or not he carried out the vaccination of the crown prince with this vaccine. The Indian medical board paid special attention to Carey’s success in introducing vaccination into Burma and the royal court. As Dr. Russell, the Superintendent General of Vaccination under the Bengal Presidency, noted: “he [has] carried with him [to the Burmese court] supplies of Virus in all forms, and I hope soon to be able to submit to the Board the successful result of his ... exertions, to give eclat to the practice in a Country where the Influence of Rank and Station ... be so great.” Besides Carey, there were other Western missionaries whose medical skills led to their employment in medical treatments at the court of Ava.

Despite the Indian government’s excitement upon the successful introduction of vaccination, the Burmese court was never completely converted to vaccination. The Burmese chronicle refers to three princesses who were inoculated in the court in 1883 after smallpox had already become a threat: among four royal princesses, three of them except the second royal princess were inoculated. They developed smallpox and did not recover well from its attack. The royal physician and the Italian doctor summoned the distinguished Indaw hsaya and Dats hsaya from the inner and outer quarters of cities and townships of the golden royal capital to the royal audience hall, and they discussed their remedy and gave treatment.

Prior to the 1850s, Western missionaries were able to introduce vaccination for brief periods and in isolated locales in Burma, however, they did not have the resources to maintain the practice with greater regularity or across broader sweeps of territory. This was especially true of Upper Burma, where missionaries did not generally have the support of the royal court or its permission to reach out to the general Buddhist population. There is also no evidence that the Burmese court ever tried to use its authority to support missionary vaccination efforts among the general population.

The introduction of vaccination to the population at large, and on a more permanent basis, would depend on the emergence of vaccination as a concern of government, which only emerged in Burma in areas under British rule. With government support came government supplies of lymph for missionary vaccinators, who had a stronger presence in the hill areas among Christianized minorities than did the small colonial administration. This aid was also forthcoming because the colonial government realized that it needed the assistance of missionaries for their own vaccination efforts. This realization was based on the observation by many civil surgeons that the spread of smallpox depended on the movement of people, and this meant fighting smallpox throughout Burma, not just in areas under the immediate supervision of the civil surgeons.

When government vaccinators attempted to extend vaccination to areas populated by minority groups, they found missionary aid critical. In the initial years of government vaccination in Burma, vaccinators accompanied missionaries into Karen villages in the hope, apparently realized, that missionaries could use their influence to convince the population to submit to vaccination. For example, in 1868, the Reverend Vinton agreed to take a vaccinator with him to the Karen and Shan Districts where many villagers had already been converted to Christianity. It was reported that 3,575 people were successfully vaccinated on this tour despite some opposition by “certain petty Government Burmese Officials.” As the author of the “Report on the Practice of Vaccination in the Town and Suburbs of Rangoon for the Year 1867-68,” commented: “But had it not been for the Christian religion, which prevails in these Districts, the result would have been far otherwise.” In this particular case, Vinton planned to visit Pegu, taking two vaccinators with him to continue operations. However, due to an illness, this did not happen: upon learning of Vinton’s poor health, Sub-assistant Surgeon (Rangoon), Dr. N. M. Bhuttacherjee lamented: “we thereby lost the opportunity of extending Vaccination Report 1867-68 (Rangoon: Rangoon Times Press, 1868): p. 14.  
37 Vaccination Report 1867-68, p.16.
nation to the District of Pegu. There perhaps, this operation was never introduced except through missionary labor.” This was probably an overstatement. However, Vinton’s reputation did seem to have a huge influence in enticing indigenous population to vaccination. In 1868, the vaccination report for Rangoon recorded that the majority of the 5,672 people vaccinated were Shans and Karens. Reportedly, they turned themselves over to vaccination because “one of the vaccinators... accompanied [the] American Missionary, the Reverend Mr. Vinton, on a journey to the Eastern frontier...”

Despite the great popularity of Christian missionaries among a few, admittedly substantial, minority groups, the Shans and Karens, the missionaries themselves acknowledged that they had yet to extend their influence among the Burman majority. It was reported that Christianity would enlighten the “ignorant” Burmese, helping to avail themselves of the beneficence of the West with the effective preventive measure of vaccination. Dr. Mason attempted to carry out this task through his project to publish his medical text in the Burmese language.

Mason and his Medical Book

Dr. Mason was the first missionary to attempt to publish a description of vaccination in Burmese. In doing so, he contributed to a slow stream of early efforts to bring Western medical knowledge, including the ‘gift’ of vaccination, to the Burmese, preceded by Henry Burney and by an unnamed Burmese Catholic priest in the 1830s. Dr. Mason had been appointed by the Baptist Missionary Board to join Mr. Boardman at Tavoy in January 1831 and he continued to work there until 1852 when he was assigned to the Toungoo and Karen Hill areas, “newly opened” during the Second Anglo-Burmese War. There he put himself to work translating and publishing Western medical works into Sgau and Bghai Karen and also became known as a very strong advocate of conducting education in vernacular languages. The initial products of this work were Sgau and Bghai Karen editions of his Materia Medica, after which Mason decided to compose in Burmese another Materia Medica three times the size of the Sgau and Bghai Karen editions.

Mason and the colonial government found it useful to cooperate in this endeavour and, in December 1866, Mason requested of government one thousand rupees to subsidize two thousand copies of the Burmese text, which Mason had by then finished under the title of Hsein-hnin-a-gyiyaing-sa, so that it would be affordable at eight annas per copy. The British government agreed to provide the funds on the recommendation of Horace Spearman, the officiating secretary to Captain D. Hildebrand, the officiating secretary to the Chief Commissioner of British Burma. As Spearman argued “the work is likely to be of great value to the Burmese people, with whom, medicine, as an art is mixed up with astrology and the practice of charms.” In exchange for funding, it required Mason to allow the government to purchase half (one thousand) of the copies for its distribution. The government side of this project was never taken up. The Education Department did purchase five hundred copies of Mason’s medical text, but they were not put to use: “these books are now lying idle in the Director’s Office, a circumstance which, considering the usefulness of the books, is much regretted.”

Disappointed at the lack of government enthusiasm, Mason distributed at least some of the copies to Buddhist monks, who he assumed, presumably because of his own intimate knowledge of the close relationship of religious men and their communities, would have the greatest influence among the general, Buddhist, population. It is not clear whether or not Mason’s intention was to use the monks and their influence to get the population to accept Western medicine as a backdoor for Christian proselytization. However, Mason certainly believed that it would encourage Burmese to begin to accept change in their way of living in general. As Mason explained:

Most of the Burmese priests practice medicine to a greater or less extent; and I always find a copy of this book an acceptable present to them, and were the book distributed in the khyouns, it could not but contribute materially to promote the interests of monastic education, which the Government is now endeavouring to improve in accordance with the plans of the late

Chief Commissioner. It replaces astrology and charms with tried remedies and scientific antidotes.46

Mason did gain support from some monks, and, after a while, some of the Burmese hpon-gyis began to come to Mason for some of the medicines they read about in Mason’s medical book.47

The most important aspect of Mason’s Materia Medica, however, is that it provides one of the first descriptions in Burmese of Western vaccination. The original Burmese text of the vaccination entry in Mason’s 1868 book reads in English as follows:

Vaccination. To inject cowpox. Vaccination. In English, it is called vaccination. The person who received an injection of cowpox develop only minor fever. Pain also [last] ten days. Within twelve days, [the pain] vanishes. The body does not ache either. There will be no [development of] pox matter also. People who received a definite injection with pus and develop fever, later do not develop pox or pain. [They are] freed [from Smallpox]. Some people received an [incomplete] insertion of cowpox pus, and after that, while thinking that they have immunity, they develop Smallpox again. Although there were some who developed [Smallpox] again, they amounted to very few [cases] among many people. Those who caught Smallpox naturally and those who received pus [types] from other people might develop Smallpox again. Although one develops Smallpox again after completing [an injection] of cowpox matters, the pain is mild. The fever is also minimal. There are not so many pocks. It is also not so bad. It will also not be long. No one will die. According to the English medical doctors’ observations, out of six people who catch Smallpox naturally, one will likely die [a one in six mortality rate]. As for those who get an injection of Smallpox matter taken from another person, one in two hundred will likely die. As for those who get an injection of cowpox matter, only one in 100,000 will likely die. Before the injection of cowpox matter from the cow was found, in Western countries, among all adults and children who [were] treated, one out of ten died of Smallpox. Now, there were fewer people who die from Smallpox. Thinking about[one] place, in Toungoo town where a small number of people lives, Smallpox visited them every year. However, for ten years, Hastwe, a Kayin village near Toungoo, no case of Smallpox has occurred. If someone asks why, it is because many of the villagers have already had vaccination. Thus, they are free from natural Smallpox. However, when doctors conduct vaccination operations, whenever there are small children who have not had Smallpox, let them be vaccinated.48

Mason’s description was incorporated and expanded in later work by a Burmese author, hsaya Tout. This work, the handbook of English medicine, Ingalei-hseikyan, published in 1881, was perhaps the most important secular work for indigenous Burmese on Western medicine in the late nineteenth century.49 Although some sentences are modified, in some cases to correct problems in Mason’s grammar (in some cases, subject and object markers are reversed with the subject and object respectively), and some new sentences added, the impact of Mason’s contribution can be found in the numerous sentences drawn verbatim, or nearly so, from Mason’s text, and the overall structure of the description remains the same. As hsaya Tout’s original Burmese entry reads in English:

The method of injecting cowpox, vaccination, [is conducted] in order to save many people from very scary smallpox. The people of Myanmar [Burma] knew a little about the method of the doctors of Western medicine for more than fifty years. This method is to take pus matter from a cow’s wound first, and then cut the person’s skin with small knife and insert (pus) into it. The English people call this method Vaccination. In this method, it leaves only a little scar on the arm. [The person who receives vaccination] develops only a minor fever. Wound will also vanish within ten to twelve days. The body does not ache either. One does not have to suffer. People who receive a definite injection with pus and develop fever, later do not develop pox or pain. Some people who develop symptoms received an [incomplete] insertion of cowpox pus, and after that, while thinking that they have immunity, they develop smallpox again. Although there were some who developed [smallpox] again, they amounted to a very few [cases] among many people. Those who caught smallpox naturally and those who received pus [types] from other people might develop smallpox again. Although one sometimes develops

46 Reverend Mason, letter to the Director of Public Instruction, dated Toungoo, 18th May 1871, in Report on Public Instruction in British Burma, for the Year 1872-1873, p. 71.
49 Ingalei-hseikyan (Rangoon: Bengalee Job Printing Press, 1881). This work is also included in the list of important early Burmese works on Western medicine by So Myint and Tout Aung in Amya-tha-yè-hnin-Myannma-hseï- binya-shin-nyì, p. 217.
smallpox again after completing [an injection] of cowpox matter, the pain is mild. The fever is also minimal. There are no pocks. According to the English medical doctors’ observations, out of six people who catch smallpox naturally, one will likely die [a one in six mortality rate]. As for those who get an injection of smallpox matter taken from another person, one in two hundred will likely die. As for those who get an injection of cowpox matter, no one will die out of 100,000. Before the injection of cowpox matter from the cow was found, in Western countries, among all adults and children who [were] treated, one out of ten died of Smallpox. Now, there are few people who die from smallpox. Those who have scars are also rare. Among the people in Burma, there were many people who died from this frightening smallpox malady every year. In [our] country, three will likely die out of every five people who develop smallpox. That is the way it is. Do the same thing as the Western country. Try to use the method of vaccination.\textsuperscript{30}

Aside from cooperation on the initial publication of Mason’s work, along with its description of vaccination, and the practical exchange of lymph and physical company in visiting villages, the government and missionary projects regarding the propagandizing of vaccination diverged at the end of 1868. While Mason’s work continued to influence Burmese writers into the twentieth century, civil surgeons would struggle to produce their own treatise, apparently unaware of, or unwilling to acknowledge, the preceding, and more influential, work by Mason, as will be discussed in the following section.

Medicine, Language, and Treatises

While missionaries in Burma experienced early success in making use of numerous local languages and concentrated their efforts in religion (and medicine) mainly on non-Burman minorities, their British government counterparts could be said to have done the opposite. Lacking an extensive staff, the British administration in colonial Burma concentrated their attention on the lowlands, dominated by the main Burman ethnic group, and learned Burmese, the lingua franca of the Burmese lowlands, if they learned a local language at all.

There was a wide chasm between the recognition by the Government of India that learning the indigenous colloquial language was important for medical officials and getting the latter to actually learn such a language. Just prior to the beginning of British government vaccination efforts in Burma, before the absorption by the government of the British East India Company lands in Burma in 1858, the problem of communication between company medical authorities and the indigenous population had already emerged. Language was recognized as one of the key issues for medical work in Burma. Naturally, this should have meant a strong effort on the part of the government to encourage its medical officers to learn Burmese. However, the East India Company left to the British Government a legacy of institutional rules and practices that needed time to be sorted out. On 18 March 1854, for example, the East India Company Governor General had given orders that medical officers should be required to pass an examination in the colloquial language of the indigenous population in order to be qualified to be in charge of a jail hospital (the main station for medical officers in India and Burma in the mid-nineteenth century). Otherwise, the Company would terminate an appointment of any medical officer who failed in the colloquial examination.\textsuperscript{51} However, the medical officers serving in Burma slyly circumvented the language requirement, by forwarding their ability in Hindi as meeting the requirement, since, in India, of which British Burma was now a part, Hindi was the major colloquial language. In his letter to the Governor, Commissioner of Pegu, Arthur P. Phayre who was in charge of the qualifying examination in Hindi, attempted to allay Calcutta’s fears that medical officers in Burma had not observed the 1854 order by confirming that all the medical officers at the jail hospital in Pegu had passed the colloquial Hindustani examination. This apparent circumvention of the order drew severe criticism from British officials in India in 1858. As R. B. Chapman, officiating Under Secretary to the Government of India, complained in response to a letter from Arthur Phayre,

It is mentioned that all the other Medical Officers in charge of jails have passed the colloquial examination in Hindustani, whereby the letter of the Hon’ble Court’s orders is observed, though not the spirit, as a knowledge of Hindustani will not enable Medical men to converse with their Burmese patients.\textsuperscript{52}

In order to prevent further attempts to get around the rules, the Governor General specifically required that

\textsuperscript{51} Letter to the Secretary to the Government of India, Foreign Department, dated Rangoon, 28th June 1858. National Archives of Myanmar, 1/1 (A) Accession no. 399, 1858, File 73, “Examination of Medical Officers in Colloquial Burmese,” 16pp., Box 1858(3).

\textsuperscript{52} Letter From R. B. Chapman, Esquire, officiating Under Secretary to the Government of India, to Major Arthur Phayre, Commissioner of Pegu, dated 6th August 1858. National Archives of Myanmar, 1/1 (A) Accession no.399, 1858, File 73, “Examination of Medical Officers in Colloquial Burmese,” 16pp., Box 1858(3).

\textsuperscript{30} Ingalei-hseï-kyan, pp. 138-39. The translation is my own.
all medical officers had to pass the colloquial examination specifically in Burmese in order to qualify for an appointment at a jail hospital in Pegu. Phayre’s response indicates the superficial and temporary character imagined by early British administrators for government medical efforts in Burma, something that would hamper real reform in the vaccination effort in Burma until the 1880s. As Phayre complained to the Indian Government:

I have the honor to report for the information of his Honor in Council, that with the exception of the Jails at Rangoon and Bassein, all the Jails in the Province are under the charge of Medical Officers who hold that situations only temporarily, in as long as the Regiments of Establishment of Troops to which they may belong happens to be quartered at the stations, and I apprehend that some difficulty would be experienced if such officers were required to pass in Burmese.

The Indian government was convinced that, nonetheless, medical officers in Burma should be able to converse in the Burmese language with their patients, in order to understand the Burmese and, perhaps more importantly, to make themselves understood to the Burmese. The government thus ordered Phayre, despite his reservations, to draw up the rules for the colloquial Burmese examination after the latter explained that “[n]o specific rules have ever been laid down for the examination of officers in the Burmese colloquial only…” Indeed, the problem of the language competence of British medical officers in Burma came to the attention of the Indian Government after Phayre had tried to recommend that Dr. John Davis, the medical officer at Bassein, be considered as having passed the language examination even though he had taken no exam. Instead, Phayre offered as proof of the doctor’s competence in Burmese the testimony of the Deputy Commissioner of Bassein who confirmed that Davis was both able to understand his patients and to make himself understood to his patients, through Burmese, although Phayre gives no proof of the Deputy Commissioner’s ability in colloquial Burmese and thus his ability to confirm the language competence of Davis. Phayre’s plan for the language examination was to have committees formed, consisting of two officers who had passed the examination in Burmese, who would ask the questions and translate the examinees responses, and a medical officer, who would aid in constructing fifteen or sixteen sentences which were likely to come up in the normal intercourse of a doctor with his patient. The questions would be read slowly and the examiners would make certain that a successful candidate could respond with “readiness, correctness of idiom and tolerable accuracy of grammar.”

By the 1880s, there were also increasing attempts to send correct information about vaccination to the indigenous population of Burma. First, civil surgeons were making independent efforts to raise Burmese awareness about vaccination. A civil surgeon at Rangoon, for example, in 1864 made invitations to those who were interested to come to the dispensary at Rangoon to be vaccinated or, rather, to “receive what the genius of Jenner provided for them.” As he claimed, “for not being vaccinated...at least in Rangoon, no one can have any excuse.” In late 1867, an advertisement for vaccination was published in both English and Burmese in the local newspaper. In Prome, public notices were posted in Burmese in an effort to notify the general population of the availability of the vaccination service and its efficacy. However, this did not improve the vaccination rate. Despite this notice, “not a single case was brought nor the slightest attention paid to the notice.”

Simple advertisements or notices of vaccination proved to have no effect in convincing the indigenous population to accept vaccination. Dr. A. C. Nisbet was the most vocal advocate for publishing and circulating treatises explaining vaccination in vernacular. Nisbet’s suggestion was based on years of personal experience he had accumulated as a civil officer in several local districts in British Burma. Nisbet had officiated as civil surgeon at Akyab, replacing Assistant Surgeon Dr. Cowie, as well as simultane-

54 Letter to [Cecil Beaden] the Secretary to the Government of India, Officiating in the Foreign Department, Fort William. Dated Rangoon 31st August 1858. National Archives of Myanmar, 1/1 (A) Accession no.399, 1858, File 73, “Examination of Medical Officers in Colloquial Burmese in Pegu” 16pp., Box 1858(3).
55 Letter to the Secretary to the Government of India, Foreign Department, dated Rangoon, 28th June 1858. National Archives of Myanmar, 1/1 (A) Accession no.399, 1858, File 73, “Examination of Medical Officers in Colloquial Burmese in Pegu,” 16pp., Box 1858(3).
56 Letter to the Secretary to the Government of India, Foreign Department, dated Rangoon, 28th June 1858.
57 Attachment to Phayre Letter to Cecil Beadon, Secretary to the Government of India, Officer to Foreign Department, Fort William. Dated Rangoon 25 August 1858. National Archives of Myanmar, 1/1 (A) Accession no.399, 1858, File 73, “Examination of Medical Officers in Colloquial Burmese in Pegu” 16pp., Box 1858(3).
ously covering for the medical leave of Sub-assistant Surgeon Kellie Coorman Huthe from December 1862 to May 1863. On 29 May 1863, Nisbet received a permanent appointment as civil surgeon at Bassein replacing the sickly Davis who died while requesting medical leave. The station at Bassein, in which Nisbet was in charge of the local dispensary as well as serving as the superintendent of the town jail, gave Nisbet a substantial degree of involvement in vaccination and other health matters.

While practising vaccination at Akyab and Bassein, Nisbet continued to face difficulties in attracting people to submit to vaccination. He keenly realised this predicament in 1867 when there was a plentiful supply of excellent lymph available, sent from the Superintendent General of Vaccination at Calcutta in every mail, which went unused, and thus wasted as it could not be stored indefinitely, because there were few “suitable subjects” who would submit to vaccination. In 1865, Nisbet put his mind to work at solving this problem and he came up with the idea of writing a brief treatise on vaccination and variolation in the Burmese language for circulation among the indigenous population. Although Nisbet apparently sketched out such a treatise, it was neither printed nor published and went uncirculated among the Burmese, although references to it in official reports and correspondence indicate that Nisbet had either discussed his ideas with his peers and superiors, had circulated a draft of the treatise among them, or both. From 1865, Nisbet was persistent in advocating the necessity of the circulation of such a treatise in Burmese. In his letter to Charles Plank, Inspector General of Prisons, Nisbet expressed his frustration: “I have repeatedly but unsuccessfully advocated the plan referred to in the remarks of the Governor General in Council to which my attention is directed.”

Nisbet’s plans for improving the vaccination effort in Burma through the circulation of treatises was complicated by his rigorous approach to all aspects of government vaccination under his supervision. In fact, Nisbet had become so persistent that he appears to have been considered a nuisance by some of his superiors in government. He criticized the government for not making vaccination compulsory in Burma as well as for not prosecuting inoculators who were pernicious for vaccination. Perhaps due to Nisbet’s criticism of the government, Chief Commissioner Albert Fytche intimated an unfavourable impression of Nisbet.

Dr. Nisbet seems to have a morbid fear of incorrect returns, a fear laudable in itself, but most pernicious when carried to such an extent as seems to have been done in this case, bringing vaccination almost to a stop in one of the most important towns and districts of the province.

Government annoyance with Nisbet, which is evident in this and other correspondence regarding him, may have influenced the medical authorities’ decision on Nisbet’s ‘treatise’ plan. However, among his peers, other civil surgeons at local stations in British Burma, Nisbet could count on a good deal of support. Like Nisbet, they faced the same, seemingly insurmountable obstacles, and were probably able to understand, even if they did not copy, Nisbet’s ‘crusade.’ Many medical officers, for example, also began to request some sort form of advertisement to be circulated on the efficacy of vaccination in the vernacular. The civil surgeon for Prome, MacDonald, for example, supported Nisbet’s plan, “I am of opinion that circulating treatises in the vernacular would be more likely than any other to bring about so desirable a result.” Civil Surgeon Dr. John W.T. Whitaker (Tavoy) was more precise in his request even though the plan had not


63 Letter from A. C. Nisbet, Superintendent, Bassein Jail, to the Charles Plank, Inspector General of Prisons dated Bassein, 20 December 1867, National Archives of Myanmar, 1/1(A) Accession 1083, 1867-68, 5(2) “Treatise on Vaccination in the Vernacular” 72 pp. (1868/1), f. 64.


66 Nisbet’s outspoken ‘exactitude’ led to problems with non-government authorities as well. He complained, for example, of the cold shoulder given him by “the editor of a local and influential medical journal.” He said, these medical authorities “completely ignored the fact in an acrimonious criticism of my vaccination report for 1866-67 and that with reference to an Epidemic constitution naturally existing and more over superintended by the most unheard of abuse of the practice of inoculation vide Indian Medical Gazette of the 1st August 1867, page 204 which the Editor declined to publish my reply.” Letter from A. C. Nisbet, Superintendent, Bassein Jail, to the Charles Plank, Inspector General of Prisons dated Bassein, 20 December 1867, f. 64-65.

been finalized yet. He requested “a few hand-sheets in Burmese” to be forwarded to his station in Tavoy. Likewise, Civil Surgeon Dr. W. Miller (Thayet-myo) requested that “one thousand copies in Burmese...be forwarded to [him] for distribution.”

There was growing consensus among the civil surgeons in Burma that the different points raised by Nisbet concerning the contents of the treatise were important enough to be made. These points, included by Nisbet in his statement on the treatise, were (1) “the peculiar advantages of vaccination according to the best medical authorities”; (2) “the precautions necessary for its complete success”; (3) “the result which had rewar ded the operation wherever fairly employed”; and (4) “What might be reasonably expected of it in this country if it were allowed fair play.” Other civil surgeons in Burma began to contribute to the growing discourse on Nisbet’s ‘little’ treatise. For example, many civil surgeons felt that, in addition to these points made by Nisbet, it was also necessary to inculcate the notion of ‘the prophylactic,’ or preventative medicine, among the indigenous population. These notions were generally absent from the understanding of medicine in Burmese culture. Unless a clear, external, and imminent danger, such as the outbreak of an epidemic, began to threaten their lives, Burmese were generally adverse to vaccination. Parker, for example, reported in 1867 that the outbreak of measles, chickenpox and minor smallpox caused a slight panic among the people in Toungoo. Waves of Burmese people rushed to get their children vaccinated. However, once the panic died down, no children were brought to the dispensaries. There could be no mistake about the disinterest, for “placards were put up in various parts of the Town giving the day and hour for attendance,” rather, no one chose to take part in the operation now that the crisis was over. Parker explained, “I did not think that Burmese had any special aversion to vaccination.” Rather, he considered that the Burmese were more “lethargic.” This feeling was shared with other civil surgeons and they considered it to be essential to educate the indigenous population on the prophylactic advantage of vaccination. Dr. Deno Nath Doss, Sub-Assistant Surgeon and Superintendent of Vaccination, for example, advised that:

Treatises on the advantages of vaccination as a prophylactic against the contagion of small pox in the vernacular should be circulated freely among all classes of people that are able to read.

Some civil surgeons also observed that there was a need to mend popular confusion of vaccination with variolation. They argued that this confusion was due to a failure of colonial medical authorities to satisfactorily differentiate between this operation and that of variolation. Pyster, for example, reported that the Burmese erroneously believed that vaccination and variolation were the same thing. To emphasize the difference, some civil surgeons suggested that the advantage of vaccination over variolation should be mentioned. The civil surgeon at Myan-oung, for example, commented:

I also think that this all-important subject should be more prominently made to engage the attention of the people by means of printed tracts (one side English and the other Burmese) containing a few particular of advantages of Vaccination over inoculation.

Nisbet urged the launch of this advertisement campaign as soon as possible so that the Burmese would abandon their prejudices against vaccination and submit to vaccination before smallpox broke out and caused many preventable deaths. While Nisbet and other civil surgeons continued to push the government to accept their plan, some government authorities did not consider it essential. They believed that the best advertisement for vaccination was the actual performance of successful vaccination itself and insisted that the impact of the demonstration of effective vaccination would far surpass in effectiveness any other form of propaganda. Dr. J. McNeale Donnelly, Superintendent of Vaccination in British Burma, for example, commenting on Mr. Paul’s support for publishing the treatise, cautioned:

...I should think that the wonderful success that has attended his labours must have

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69 Letter from Dr. W. Miller, Civil Surgeon, Thayet-myo, to Commissioner of Pegu, dated Rangoon, 21 February 1868, National Archives of Myanmar, 1/1 (A) Accession 1083, 1867-1868, 5(2) “Treatise on Vaccination in the Vernacular,” 72pp. (1868/1), f. 48.
75 “Report on Vaccination in the District of Myan-oung, During the Year 1868,” in Report on Vaccination, for 1868, appendix, p.xii.
taught the people of Myan-ong a deeper lesson than, any we can hope to inculcate by means of persuasive essays.77

Further examining the true obstacles to vaccination, Donnelly admitted that “there might be a good reason” for unsuccessful vaccines to exert their influence to encourage other people not to submit to vaccination, but this number would remain relatively small. In truth, ineffective vaccination, Donnelly believed, would appear to legitimately nullify the British promise to the indigenous population of lifetime immunity to the scourge of smallpox, but at least ninety-five percent of those in which vaccination failed would still believe that they had gained immunity. This faith in the success of the operation, Donnelly implied, was due to the magnitude of the sacrifice made by the average Burmese for this immunity “which was promised him as the reward of his moral courage in departing from the usage of his country, and setting at defiance the contingent ridicule of his friends, as well as the prompting of his own appetite.”78 Donnelly thus argued that propaganda was unnecessary for Burmese would remain blissfully ignorant of the faults of vaccination and most would eventually submit to it if the civil surgeons were not “over anxious” to obtain immediate acceptance.79

Despite the government’s effort to reject Nisbet’s plan, Colonel D. Brown, (Commissioner of the Tenasserim Division), finally but reluctantly began to discuss sanctioning it. However, it is clear that government officials were trying to minimise the influence of this treatise. As Brown explained:

I consider that it will not be necessary to go to the expense of printing the treatise in more languages than one, and that should be Burmese, which is more generally in use than any other language, while the advantages of vaccination are dearly stated, the danger of inoculation should be dwelt on in the treatise. The circulation of a short treatise in Burmese would I believe slate the curiosity of the people it would draw their attention to vaccination and would probably increase the number of applicants for the operation.80

The government, although moving slowly and always conscious of avoiding undue expense, eventually began to support the treatise plan, but there were strings attached. Rather than allow civil surgeons to dictate government policy regarding vaccination, government authorities attempted to keep the project small and to assume control over its details. In March, 1868, the Deputy Commissioner of Tavoy and the Commissioner at Maulmain, for example, attempted to manipulate the content of the treatise regarding the point that vaccination was more advantageous than variolation. Their intention seems again to be to indirectly minimize the influence of the treatise. They suggested that there was no need to emphasize that point, since variolation was practised only when smallpox broke out and the Burmese always feared its tendency to spread smallpox.81 Government authorities also exerted control over the form in which this treatise would be written, translated, and published. Rather than publish Nisbet’s 1865 treatise in its present form, Charles Plank, the Inspector General of Prisons, suggested in an April 1868 letter to the Chief Commissioner of British Burmah, to that this treatise should be short and concise and should be composed by “the best Burmese scholar in the Province.” Admittedly, Nisbet might have some involvement, if the government thought it necessary, by providing a brief statement on the subject that would be used as a reference for the information and guidance of this Burmese scholar.82 However, Nisbet’s original treatise would not be used, or perhaps even seen, and the new treatise would be written independently and published directly in Burmese, presumably circumventing possible interference by the civil surgeons.

Nisbet, and presumably his fellow civil surgeons, remained defiant of government intervention and pursued his own independent plan. Less than a year after the government began to attempt to remodel his original plan, Nisbet published his own ‘short’ treatise on vaccination, translated into vernacular Burmese and Sgau Karen, in February 1869. Since Nisbet could not depend on government support and possibly fearing the heavy hand of the government if he did not act too quickly to be halted, Nisbet took the treatise to the public through the Catholic press and the public newspapers. Nisbet received the help of an old friend, Father S. DeCruz, of the Roman Catholic Mission, whose control of the Catholic printing press aided immensely. DeCruz

77 Report on Vaccination, for 1868, p. 16.
78 Ibid., p. 9.
79 Ibid.
80 Letter from Colonel D. Brown, Commissioner of Tenasserim Division, British Burmah, to the Horace Spearman, Esquire, Officating Assistant Secretary to the Chief Commissioner, dated 4 February 1868, National Archives of Myanmar, 1/1 (A) Accession 1083, 1867-1868, 5(2) “Treatises on Vaccination in the Vernacular” 72pp. (1868/1), ff. 7-8.
81 Letter from Deputy Commissioner of Tavoy to the Commissioner at Maulmain, dated 4 March 1868, National Archives of Myanmar, 1/1 (A) Accession 1083, 1867-68, 5(2) “Treatise on Vaccination in the Vernacular,” 72pp. (1868/1), ff. 55-56.
82 Letter from Charles Plank, Inspector General of Prison, British Burmah, to Horace Spearman, Esquire, Assistant Secretary to the Chief Commissioner, dated Rangoon, 2nd April 1868, National Archives of Myanmar, 1/1 (A) Accession 1083, 1867-68, 5(2) “Treatise on Vaccination in the Vernacular,” 72pp. (1868/1), ff. 27.
also helped circulate this treatise among the people under his influence. Likewise, The Burman Herald, The Burman Messenger, and the Sgau Karen paper (circa 1869) published the treatise gratis.\textsuperscript{80} It is not clear if the treatise published by Nisbet in February 1869 was modified from his original 1865 treatise, but it discussed the same themes. The ‘new’ treatise devoted half of its pages to explaining the difference between vaccination and variolation, focusing on the advantages of vaccination over variolation. This content obviously did not follow the suggestion made earlier by government officials.

Circumventing government had its limitations. Nisbet complained that “none [of the newspapers] were distributed in the neighbourhood at public expense.”\textsuperscript{84} As a result, this treatise was circulated among a very limited circle among the indigenous population and did not reach the population whom Nisbet and other civil surgeons desperately hoped to convince to accept vaccination.\textsuperscript{85} Nisbet concluded that the entire effort was a failure and “merely serves to mark the interest taken in the subject by the responsible officer in charge.”\textsuperscript{86} In Nisbet’s view, the government officials did expect that this treatise would not resolve any of the adverse circumstances while variolation was still in practice. Nisbet’s enthusiastic effort in the circulation of a treatise in the vernacular was ignored or not appreciated by the government. The only comment published on Nisbet’s treatise was a negative assessment by A. J. Cowie, the Sanitary Commissioner of British Burmah. Cowie wrote that he did not support the publication and circulation of this treatise because “I knew he could not afford the people the protection against Small Pox, he advised them to adopt in lieu of inoculation.”\textsuperscript{87} It is even difficult to say how much influence Nisbet’s treatise had on other civil surgeons who had originally supported his plan. Government reports over a decade later, for example, refer to the civil medical officers at Prome having “prepared and circulated” a short account of vaccination including its history and advantages.\textsuperscript{88} We lack information as to whether or not this treatise was based on Nisbet’s or, indeed, if the officer had merely forwarded Nisbet’s original treatise itself. However, in either case, Nisbet’s hopes were not realized in the short term, for which the lack of government support and the independent course of action pursued by Nisbet were at fault.

Conclusion

Previous literature has suggested that Burma never became a British priority in the context of their empire. In examining the British government’s frequently half-hearted and sometimes even contradictory attempts to convince the indigenous population to accept vaccination, Burma does begin to appear in some ways as a neglected corner of British India. However, Burma may not really have been an exception as other literature has found similar problems in British India in general.\textsuperscript{89} British decision-making also appears to have been disorganized and inconsistent, the fluctuation frequently dependent on the conditions that multiple agencies fostered. In order to convince the always evasive indigenous population to undergo vaccination, British medical officers turned to local Burmese officials for support, but these officials frequently presented yet another obstacle. Christian missionaries seemed to be a promising candidate for the task of convincing the Burmese of vaccination’s blessings, but their influence was limited to the court elite in Upper Burma until 1885 and to ethnic minorities in Lower Burma into the twentieth century. In order to influence the Burmese who constituted a majority of Burma’s population, some enthusiastic medical officers proposed to launch their own propaganda by publishing and circulating treatises on vaccination in the vernacular. However, the lack of British government support nearly nullified this plan and, indeed, substantially limited its effect. Since the effort to ‘translate’ vaccination to be understood by the indigenous population was only half-hearted and very inconsistent, rather than encourage indigenous acceptance of vaccination, it merely made them confused about its promised efficacy. Rather than pursue indigenous cooperation, colonial medical authorities increasingly opted to resort to legislation to enforce the extension of vaccination. Again, colonial efforts at vaccination appeared to the indigenous population more as a control mechanism than as a genuine attempt to help them for the sake of their own health, as argued elsewhere.\textsuperscript{90}

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