transplantation in particular. She acknowledges that part of the reason why the heart was so problematic was its historically spiritual and mythological status—indeed, its links to the emotional and psychological world of patients remains important today. Yet the first transplants were also controversial because they raised questions about privilege and knowledge, and reflected the possibility that doctors were becoming too egomaniacal in their desire to control nature—especially since the life expectancy of transplanted patients was so short as to be negligible. In the 1960s, then, transplantation was becoming a distinct clinical specialism at the same time as public hostility to the process was increasing.

Nathoo explains this apparent contradiction with reference to the fact that the first heart transplants—with all their godlike aspirations and their failings—were public events. Her context is one of transformed media communication in the UK—through the popularization of television from the 1950s, which coincided with the volatile world of reportage in the 1960s and greater demand by patients of their individual and collective "rights" (p. 33). "Public interest" became a contested notion and—given both the high cost (ethical and otherwise) of transplantation and the likelihood of failure—it was not at all certain that transplantations were in the public interest. Medical "advance" was greeted with ambivalence and even "dread" (p. 61). In this context, it would be interesting to see some analysis of the rhetoric and function of organ transplantation as a subject for horror movies—an interest that peaked in the 1960s with a shift from the realm of science fiction into psychological thriller.

Far from being assimilated into ordinary clinical practice, then, by the end of the 1960s (as was the promise at the beginning of the decade), heart transplantation stalled in the UK for a decade. It began again only in 1979 at Papworth hospital. It is a shame that Nathoo had not the space for an explanation of this resurgence—nor the transition from that point to the present day. As she acknowledges, the shift in fortunes of the heart transplant as a cultural, as well as a medical, event cannot be explained purely in terms of improved retro-virals. On a broader level, we might ask how far the politicization and disputation that Nathoo identifies as a 1960s phenomenon represents a "new" phenomenon, rather than part of a much longer process by which a broad and undefined "public" debated and negotiated the rights and responsibilities of medical practitioners. What was perhaps distinct about the 1960s seems less the existence of debates about the limitations of medical influence, than the speed and proliferation of means by which these debates took place. At the end of the twentieth century, the Internet arguably served a similar function to the print and television in heightening the speed and quantity of information being produced about the medical profession and in inviting patients as consumers or participants in determining what was and was not "ethical". Thus the international debates in 2005 that followed the first "face transplant"—when the French surgeon Bernard Devauchelle, grafted part of a woman's face that had been mauled by her dog—tested out the public palatability of medical knowledge in much the same way as Barnaard's defining act had done. Indeed, face transplants (and even more brain transplants) seem to invoke the kind of dread in the media that heart transplants once did. I wonder what this tells us about the shifting status of the heart and the head as organs linked to our emotions, our personalities and our selves?

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Atsuko Naono *State of vaccination: the fight against smallpox in colonial Burma*, New Perspectives in South Asian History Series, Hyderabad, Orient Blackswan, 2009, pp. xiii, 235, Rs 695.00 (hardback 978-81-250-3546-6).

The attempts to control and eradicate smallpox in a variety of non-western contexts has received much attention of late. Atsuko Naono's study of the fight against smallpox in

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colonial Burma is thus a very welcome and fascinating addition to this corpus of work. The medical history of colonial Burma is a virtual unknown and for that alone this volume should be read. Moreover, in this detailed study of the various initiatives by which the colonial power sought to encourage and impose smallpox vaccination it offers yet further evidence of the need for a highly nuanced and contextualized understanding of the interaction between the imperial and the local. As Naono argues, its distinctness from its neighbour "presents a useful countervailing example of medicine under the Raj, one that highlights incongruities between the colonial medicine practised on the subcontinent and on its periphery" (p. 1).

Burma was acquired by the British through gradual conquest, beginning with the coastal strip in 1824–6, followed by Rangoon and lower Burma in 1852, and Mandalay in 1885–6 when it formally became a province of British India. This resulted in a lack of administrative uniformity, particularly between upper and lower Burma, which Naono argues was one of the four major practical obstacles to the spread of vaccination, the other three being the poorly developed transport infrastructure, limited funding and a shortage of medical staff. These factors, especially, greatly accentuated a major difficulty, albeit not unique to Burma, that of cultivating, transporting and preserving sufficient and effective vaccine lymph, and to this subject Naono devotes the first three compelling chapters. The Burmese authorities' solution was firstly to have a local distribution centre in Rangoon but as this did not solve the problem of getting lymph to upper Burma, a vaccine depot was established at Meitkula in central Burma in 1902. Meitkula subsequently extended its remit to become a research laboratory to find the most effective ways to cultivate and preserve lymph. The author details the various attempts to do this and states that these endeavours lead her to conclude that "colonial medicine represents another category of knowledge"; western science, she argues, "is modified and re-exported, sometimes even rejected, on the basis of data collection, observation, experience, and local experimentation" to yield a "colonial form of 'local knowledge'"(p. 87).

The second half of the book shifts perspective to the more familiar terrain of persuading/compelling the local population to accept vaccination. Here she discusses the failure of propaganda efforts; the relationship between indigenous inoculation and vaccination; the ineffectiveness of the Vaccination Department (established in 1868); and the limited ability of legislation to effect compliance. Divisions between the various responsible agents, Burmese and British, poor communication with the local population and blindness to indigenous culture all contributed to the fact that the vaccination programme only started on the road to success in the 1920s. Throughout the study, however, Naono emphasizes the salience of the agency of the Burmese, and the concomitant failure of the authorities to enlist the co-operation of the indigenous population as being the significant factors which inhibited the vaccination programme.

For those unfamiliar with Burmese colonial history, it might have been helpful to have had a brief initial summary of the political, economic and social context, but this is a minor quibble. Overall, this is a vital addition to smallpox studies, area studies, and to the exploration of the relationship between the local and the global in the construction of medical knowledge.

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James L A Webb Jr, *Humanity's burden: a global history of malaria*, Studies in Environment and History, Cambridge and New York, Cambridge University Press, 2009, pp. xii, 236, £14.99 (paperback 978-9-521-67012-8)

By the middle of the nineteenth century, the link between swamps (miasmas) and fevers

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