S. Bhattacharya, M. Harrison and M. Worboys 2005, *Fractured States: Smallpox, Public Health and Vaccination Policy in British India 1800–1947*, New Perspectives in South Asian History, vol. 11, Hyderabad: Orient Longman. Pp. xi, 264. Rs 630 (hbk). ISBN 81 250 2866 8

At a first glance, the title *Fractured States* seems a little odd for a book dealing with vaccination against smallpox in colonial India. However, it is not because this book is as much an argument about the nature of the colonial state as it is a book from the realm of medical history. The successes and failures in the implementation of measures against smallpox is a good yardstick of the general capacity of the colonial state to act in unison towards the realisation of specific policies. Reading through the pages of *Fractured States*, it becomes clear that the colonial state right up to 1947 faced serious constraints in providing protection against smallpox to its Indian subjects. The argument is not so much the classic ‘limited raj’ arguments of Robert Frykenberg or Anand Yang, according to which the colonial administration, in order to function outside the district headquarters, was dependent on the—in some instances highly manipulative—collaboration of local elites. Rather, it is an argument about fractures and tensions between different departments of the administration, right down to the local subdivision of the district. The colonial state is defined as ‘an aggregate of administrative levels’ (p. 11) and the authors point out how nineteenth-century ‘governments of India and the presidencies soon realised that it was one thing to formulate new sanitary and vaccination policies, but quite another to ensure their implementation at the district and subdivisional levels’ (p. 24). Accepting this notion of a fractured administration, it becomes less obvious to blame the colonial state as such for shortcomings in public health policies, and the authors clearly aim to provide a more differentiated view of the British administration than has prevailed in recent decades: ‘No one is trying to say that colonialism was a good thing... Our argument, we believe, is more nuanced’ (p. 7).

This said, *Fractured States* is of course also a book on medical history and an important one at that. It is a bold attempt to provide a ‘rounded’ history of official smallpox control measures in colonial India. In order to do this, the authors argue for giving much weight to political, economic and technological factors, while the importance of cultural and religious dimensions of smallpox control is played down. Again, the authors see themselves in opposition to trends in recent literature on smallpox in India, which—they argue—have tended to overemphasise culturally- and religiously-informed resistance to vaccination. The reason behind this suspicion towards arguments emphasising cultural ‘otherness’ as an obstacle to vaccination is the laudable intention to overcome the binary opposition between the ‘scientific’ Briton and the ‘culturally determined’ Indian (p. 9). Formulated in a different way, the authors strive to avoid painting the Indian population as a homogeneous mass superstitiously resisting vaccination ‘for obscure religious reasons’ (p. 235). In this way, *Fractured States* contains an important anti-orientalist argument. This argument is not, however, directed against the prejudices held by colonial administrators of former days. It is directed against the more recent orientalism, which always threatens to creep into accounts of medical history in Asian countries.

Fractured States deals with the entire colonial period, but only the first of three major chapters is devoted to the nineteenth century. One reason for dealing less with the nineteenth century is that this period is relatively well researched. Consequently the authors must position their argument in relation to existing arguments and they eagerly polemicise against established views. David Arnold’s important book from 1993, *Colonizing the Body*, is particularly—and sometimes unfairly—under attack for ignoring complexities and over-generalising on the basis of limited findings (pp. 5, 27, 67).

To underline the argument about the fractured nature of the colonial administration, the chapter opens by pointing to the development of a variety of different regional vaccinating systems during the nineteenth century. This is followed by a rather technical section on experiments with the production and storage of vaccine, which draws our attention to the persisting

problems in devising a vaccine suitable to the Indian context. We should not forget that in late nineteenth-century India, vaccination was often painful, ineffective and caused harmful side-effects. In consequence, the indigenous practice of variolation is seen as a serious alternative to vaccination throughout the nineteenth century, but—in accordance with the general argument of the book—the tenacity of variolation is not attributed to it being part of an alternative, indigenous and culturally determined health regime. Variolation endured because it was less painful and more effective than vaccination: 'A strong argument can be made that the weaknesses of vaccination—and the comparative strength of variolation—in the first eighty years of the eighteenth century were attributable to public understanding of the relative reliability of the two operations' (p. 59).

Similarly, indigenous resistance is explained with little emphasis on the cultural perception of disease in India. Any discussion of resistance to vaccination, it is argued, should avoid cultural generalisations and attempt to identify the specific causes for the opposition. While resistance is seen as 'premised on a variety of cultural, financial and political factors' (p. 63), it is also suggested that financial considerations were of primary importance. Indians resisted vaccination, when and if they had to pay for it (p. 69)! While the cultural 'otherness' of Indian perceptions of disease probably has received too much attention in recent historiography and the attempt not to portray the Indian population as an irrational mass certainly deserves much sympathy, it can nevertheless be argued that cultural and religious aspects are passed over too lightly. It seems odd, for instance, that the smallpox goddess *Sitala* is hardly mentioned in the text. (I only found indirect references to her in two quotations on pp. 64 and 66.) It ought to be possible to analyse culturally different understandings of disease without resorting to orientalist stereotypes. David Arnold's notion of the 'raw secularity' of vaccination—as opposed to the religious nature of variolation—is probably too simplistic, but Harish Naraindas's understanding of the difference between the 'therapeutics' of variolation and the 'prophylactics' of vaccination is worth a more extensive discussion than provided here. Although the authors of *Fractured States* quite reasonably argue that only rich Hindus could afford the therapeutic regimen of variolation (p. 53), the practice might still be indicative of more widespread conceptualisations of health and disease.¹ Thus, by highlighting administrative divergence and technical innovation instead of cultural tension, the treatment of the nineteenth century becomes more an important alternative to existing interpretations than the 'rounded' history it claims to be.

In the next two chapters, the account moves into the twentieth century and here the historiographic context is altogether different. Very little has been written on this period, and there are no established positions with which to argue. Instead, *Fractured States* is breaking new ground and bringing much new information to light from an impressively wide range of official reports and manuscript sources. While *Fractured States* has new things to say about the nineteenth century, it becomes a truly pioneering work on the first half of the twentieth century.

The first of the two chapters on the twentieth century is devoted to administrative issues. It provides an account of the developments within the public health administration in the era of political devolution. The result was a system 'of almost bewildering complexity' (p. 91), but political devolution did not—as is often assumed—uniformly lead to a setback for vaccination. Faithful to their intention of painting a nuanced picture of the colonial administration, the authors argue that the realities on the ground were complex and that the progress of vaccination 'varied considerably from one locality to another' (p. 143). They also remain faithful to the notion of the colonial state as deeply fractured. In fact, they go so far as to point to tensions within and between various departments of the colonial administration as being more damaging to the progress of vaccination than civilian resistance (p. 145).

¹ See Harish Naraindas 1998, 'Care, Welfare and Treason: The Advent of Vaccination in the 19th Century', *Contributions to Indian Sociology*, (n.s.), 32.1: 67–94.

The second chapter on the twentieth century demonstrates that, although researchers and authorities were still struggling to find the right formula for an efficient vaccine, progress was made. Revaccination was introduced and the establishment of regional vaccine institutes was generally a success. By the 1930s, vaccination techniques had improved substantially and vaccination finally emerged as the undisputed strategy against smallpox. Yet there was still resistance to the operation. As in the treatment of the nineteenth century, emphasis is on the practical, and not the cultural, dimensions of resistance. Given Gandhi's well-known hostility towards western medicine—for which vaccination technology is often seen as paradigmatic—it is perhaps surprising that the authors have found relatively few instances of opposition to vaccination connected to nationalist agitation. It appears that around 1930, vaccination against smallpox in India slowly began to look a little like the success with which we normally associate it. This is cautiously formulated by the authors as the possibility 'to argue that the smallpox vaccination campaigns of the 1930s and 1940s helped to familiarise many thousands of Indians with a prophylactic which would be introduced still more extensively from the 1950s (p. 225).

Fractured States is an important book for several reasons. It contains a wealth of information on smallpox control derived from all over India and the authors generally manage to balance between regional specificities and the all-India perspective. It contains consistent and provocative arguments about the fractured nature of the colonial state and the reasons for indigenous opposition. The single most important result is perhaps to convincingly demonstrate that it was not until very late in the colonial period that vaccination could be said to be a sure prophylactic against smallpox. Indians were not, therefore, irrational when they—for whatever reason—hesitated to embrace the operation, which we commonly see as the most successful in the history of modern medicine. Whereas David Arnold in *Colonizing the Body* used colonial medicine to criticise the colonial state, Sanjoy Bhattacharya and his co-authors in *Fractured States* use the history of smallpox control to advocate indigenous rationality.

Niels Brimnes
Aarhus University