

Arnold sees ideological and professional continuities between the East India Company and post-1858. Nevertheless, he emphasizes the steady move away from “exploratory and observational science” to a “confident alliance” between science and the state. He discusses the way the Indian Civil Service, the Medical Service, the departments of science, forestry and agriculture and the Indian scientific community negotiated with imperial science. He notes that from the 1890s through the First World War there was an increase in the interaction between the Indian scientific community and Western science. He traces the complexities involving the “revival” of indigenous, especially “Hindu” science in a context when Western science and medicine seemed to be firmly entrenched in India.

Arnold’s work highlights this in the Indian context and contests euro-centric positions which see science as a monopoly of the West. Moreover, by locating these issues as complexities rooted in South Asian historical/cultural specificities, he poses an interrogative paradigm that sees science/technology/medicine as inextricably linked to human society, culture and history. This method accommodates an “Indian” tradition and draws upon various internal diversities as well as external influences. His sound approach leaves no space for the method of “indigenism” that has gathered some intellectual momentum in India over the last decade or so.

This study cannot be ignored by anyone interested in the history of colonial India. Moreover, the detailed bibliographical notes should be very useful to the specialist reader. Although a bit uneven, especially when it comes to the Adivasis (i.e. indigenous people), one can in fact hope that this book generates the desired interest and inspires future researchers to study them, and their world of science, technology and medicine.

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**Robert Boyd,** *The coming of the spirit of pestilence: introduced infectious diseases and population decline among Northwest Coast Indians, 1774–1874*, Seattle, University of Washington Press; Vancouver, UBC Press, 1999, pp. xv, 403, illus., \$50.00 (hardback 0-295-97837-6).

The devastating impact of Old World diseases on Amerindian peoples was recorded by Europeans for several hundred years following Christopher Columbus’s first landing on the American continent, and continued to fascinate a variety of observers in the twentieth century. In recent times perhaps the most distinguished historical contribution to this literature has been A W Crosby’s *The Columbian exchange: biological and cultural consequences of 1492* (1972). For many, it has become axiomatic that the introduction of West European infections among the “virgin soil” populations of the Americas had terrible demographic consequences which eased the way for subsequent European domination of those continents. Yet the reality of what happened, the precise demographic mechanisms by which this disaster occurred, has been unclear. As Crosby noted in 1992, there is a large body of evidence in support of the theory, but much of it was collected in the pre-scientific and pre-statistical centuries, and almost always by soldiers, missionaries, trappers and traders rather than by physicians and demographers. It is, by definition, no better than impressionistic. Taking instead the similar, but much better documented, experience of Hawaii after 1778, Crosby linked repeated epidemic crises with “anomie”—enervating cultural disorientation—and plunging birth-rates: “the secret blights of abortion, infanticide and infanticidally negligent child care, venereal infections, sterility and despair”.<sup>1</sup>

<sup>1</sup> A W Crosby, ‘Hawaiian depopulation as a model for the Amerindian experience?’, in Terence Ranger and Paul Slack (eds), *Epidemics and ideas: essays on the historical perception of pestilence*, Cambridge University Press, 1992, pp. 175–201.

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Crosby's elegant, plausible and depressing interpretation of post-1778 Hawaiian depopulation was elaborated specifically as a model for what happened to the Amerindian peoples in the centuries following European discovery. Robert Boyd, intent on exploring the same fundamental question, appears curiously ignorant of Crosby's work on Hawaii, although much of his own research touches tantalizingly on Crosby's argument. Boyd's study focuses on the native Americans of the Pacific Northwest, in present-day Oregon, Washington and British Columbia west of the mountain ranges, and on south-east Alaska in the century (1774–1874) following the first European landings in that area. His avowed object, too, is to study the impact of the new diseases on population size, structure, interactions and viability, and in his view the ethnographic data from the Northwest Coast in this period is good enough to provide "a laboratory" in which to test the theory of disease-induced population decline. (As Crosby notes, by the 1770s scientific and statistical habits of thought had become sufficiently engrained in European minds for observations to be far more reliable than in the sixteenth-century.) It is, however, the diseases themselves which predominantly interest Boyd. To a large extent, *The coming of the spirit of pestilence* consists of the mapping of the appearance of several diseases—smallpox, syphilis, tuberculosis, malaria, measles—from the ethnographic record. It makes poignant, if somewhat repetitive reading, as Boyd recounts with generous quotations local tragedy after local tragedy. The overall experience is encapsulated in the oral tradition of the Haida people concerning the spirit of pestilence: "Pestilence came. His canoe was like the white man's vessel. Sparks flew out of it. They went through the house. For that reason the supernatural beings were afraid. The things that came out of it are what cause sickness . . .".

Boyd argues that disease "was indeed the major cause of depopulation in the Northwest". The culprit was primarily smallpox, which appeared at regularly spaced intervals, and, on part of the southern coast, malaria. The latter caused "heavy mortality, which persisted particularly in later years among the young, accompanied by a decline in fertility" (pp. xiii–xiv). Although the three concluding chapters deal with population history, Boyd appears less secure here than in his disease chapters, often losing the clarity of his argument. Thus he concludes that local disease histories strongly influenced local populations' capacity for regeneration, but notes that, while the Haida survived successfully through cultural adaptation by abandoning their marriage rules and grouping into large villages, the Chinook suffered continuing decline through reluctance to abandon their marriage rules and traditionally fragmented settlements. Above all, Boyd is non-committal about the demographic impact of venereal disease on the Northwest Coast Indians, perhaps for want of reliable data, and he makes no attempt to explore the "secret blights" which Crosby associated with plunging fertility rates.

Boyd's reluctance to track any real or potential relationship between venereal disease, fertility, cultural behaviour and demographic experience is a disappointment, and his insistence on the primacy of, effectively, epidemic impact on demographic patterns rests on somewhat shaky interpretative and analytical frameworks. An anthropologist, he skates smoothly over problematic historical dimensions and details: gonorrhoea, he writes, was amenable to medication. It would be interesting to know what medication, in 1856. It is a great pity that Boyd failed to engage directly with Crosby's Hawaiian model. We might then have had a focused argument and a better rounded story based in this fascinating material, and

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not an account which inevitably feels like a half-measure.

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**Laurence Monnais-Rousselot,** *Médecine et colonisation: l'aventure indochinoise, 1860–1939*, Paris, CNRS Editions, 1999, pp. 248 (2-271-05657-8).

The history of colonial medicine is a rapidly but unevenly growing field: the British colonies are covered more extensively than Dutch, Italian, German or French ones. Monnais-Rousselot's study, focused on the French colonial experience in Indochina, and on its insertion in the framework of the French view of the "civilizing mission" of colonization, is therefore a welcome addition to a growing corpus of studies in this area. Her book, a published version of her doctoral thesis, is grounded in a careful reading of available archive sources, including the Vietnamese ones, and it provides many fascinating details of the French health services in Indochina. The interest of Monnais-Rousselot's work is enhanced by her focus on interactions between locally elaborated knowledge and practices and Western medicine, and on the gradual development of the corpus of Westernized Khmer and Vietnamese doctors, nurses and technicians.

Unfortunately, the rich material collected by Monnais-Rousselot does not serve well her proclaimed goal of providing the first comprehensive overview of the development of French medical services in Indochina. Part of the problem may be the organization of her book. Monnais-Rousselot states in her introduction that she made important cuts in her thesis before its publication. Nevertheless, one has the impression that her study follows the structure of a doctoral thesis, that is, a

work which aims to persuade a small group of experts, and not to inform a less specialized public. Specific segments of her book provide illuminating details and open intriguing avenues for further research, but readers who are not thoroughly familiar with the history of the French colonization of Indochina may find it difficult to grasp the articulations between individuals, events, institutions and policies. Moreover, in the absence of a comparative perspective (with politics of other colonial powers, and with medical services in other French colonies) it is difficult to perceive the specificity of the Indochina experience.

The book does not follow a strict chronological order, but discusses selected topics: the role of the "transfer" model, the development of local medical practices, the advocates of medical science, and the role of laboratory sciences. The presentation of these issues relies on the readers' previous acquaintance with the main actors and main institutional developments. There is no chronological history of institutions such as the Pasteur Institute of Saigon or the Hanoi Medical School, and no well-organized debate on the role of Pharo (a school of tropical medicine in Marseilles) or of AMI (the Indochina Medical Corps). Key topics, such as the training of local doctors and technicians, the use of mobile sanitary units, the implementation of sanitary policies, the history of hospitals, the role of research laboratories, the organization of health campaigns, and the resistance to Western medicine are discussed in several chapters, and there is no coherent synthesis of the available information on each subject.

Monnais-Rousselot's book could have become the standard reference work on French medicine in Indochina and a key resource for historians of colonial medicine interested in a comparative approach. As it stands, it is useful mainly for experts on South-Eastern Asia and for those who seek precise information on selected topics. One hopes that the author will publish another study on the same subject, one which will