

## Book Reviews

practice, and between popular beliefs and those embodied in official state policies. Deepak Kumar's account of the attempts of two Indian doctors to combine Western and indigenous systems after 1860 demonstrates how this was more readily achieved with practices than with knowledge. However, Ayurvedic theory was revived as resistance to Western medicine developed from the 1890s, due to new public health measures, such as vaccination and isolation, and with the development of Indian nationalism. Ilana Löwy's account of the yellow fever control endeavours of Rockefeller Foundation agencies in Brazil exposes the mixed intentions of International Health Board officials, and how popular resistance was aimed more towards the coercive character of their programmes than to Western medicine as such. By contrast, the study of Rockefeller hookworm control programmes in Mexico, by Anne-Emanuelle Birn and Armando Solórzano, reveals that popular reactions could be to quite specific measures, for example, to fears of the effects of particular medicines. They also show that local medical practitioners were unhappy about the competition from Rockefeller-funded doctors, while local state officials welcomed the opportunity the programmes provided to develop the functions of the local state. Molly Sutphen's innovative comparative study of the plague in Hong Kong and Cape Town, uses reports of rumours to reconstruct popular attitudes to public health measures. She explains how these varied at different stages of the crisis, were culturally specific, and reveal a quite sophisticated political understanding of different interventions. Helen Power's fascinating study of malariology in Thailand since 1945 concerns the politics of knowledge. As Western medicine was not imported into Thailand along with foreign domination, there was less resistance to its ideas and practices, and these were slowly accommodated on terms dictated by indigenous healers and rulers. It is paradoxical that two important innovations developed by Western-trained and Western-oriented Thai medical practitioners have been ignored and resisted by Western malariologists, even though they addressed critical and

troubling problems. First, in the 1960s, Tranakchit Harinasuta's identification of chloroquine resistance in malarial parasites was ignored and then denied priority, while in the 1980s, Western doctors were reluctant to accept the idea that a drug, derived from a Chinese herbal remedy, was an effective alternative to chloroquine and its derivatives. While it is well known that Western medicine has had its own hierarchies, with centres and peripheries, Power shows that scientists practising Western medicine in non-Western countries have been at a particular disadvantage and all the more so when they contest medical orthodoxies.

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**Änne Bäumer,** *Bibliography of the history of biology. Bibliographie zur Geschichte der Biologie*, Frankfurt am Main and New York, Peter Lang, 1997, pp. xi, 307, £40.00 (3-631-32261-5, USA 0-8204-3513-9).

Änne Bäumer is currently in the middle of an ambitious five-volume publishing project which surveys the whole of European biology from Antiquity to the twentieth century. When I last saw the series, she had hit the eighteenth century and I was very impressed by her grasp of the issues, scope and stamina: that kind of project is not for the faint-hearted. The volume here under review is issued simultaneously with the series, serving as the detailed bibliography on which her other tomes rest, and also represents an independent and valuable analysis of secondary material relating to the history of biology. It clearly deserves a place in every scientific reference collection.

The structure reflects the arrangement of Bäumer's previously published text volumes: it is very orderly and divided into four sections. The first covers general history, the second special problems, the third individual disciplines, and the fourth biographical studies. The time span is from Antiquity to the twentieth century, the geographical spread

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strictly European. This classification has certainly given her difficulties in writing her narrative histories but it lends itself readily enough to a bibliography. Perhaps the structure leaves too little to chance. It is odd to find Buffon and Walter Charleton bracketed in the same time span ('Biologists in the seventeenth and eighteenth centuries') and counter-intuitive to search for Blumenbach and Lamarck among nineteenth-century biologists, although in a strict sense this is indeed the case. Yet her categories for special problems are illuminating, covering themes such as 'The development of life', which includes all the preformation and epigenesis literature as well as spontaneous generation and conception/fertilization. Under the general heading of 'Ideas', she provides a useful survey of diverse concepts such as the chain of being, Newtonianism in biology, physicotheology, Lamarckism and recapitulation, ending up with cybernetics (only four titles—not as many as might be expected). The individual disciplines are also interpreted generously to include areas like morphology, microbiology, ecology, anthropology and molecular biology. Contrary to other bibliographers of the life sciences, Bäumer is unusual in dividing her material according to leading ideas or practices rather than to conventional natural history categories dictated by actual animals or plants (ichthyology, ornithology, etc.). It is good to see parasitology included, although this gets more citations than plant physiology which is often a poor relation in the historical line-up. Plant morphology seems not to include phyllotaxy (the spiral arrangement of leaves) but I could have got lost in the sub-sections.

Where Bäumer excels is in her meticulous attention to German biology and history of biology. Her choice of influential figures casts a refreshingly different light on the contours of European science and because she expressly focuses on biologists, rather than on naturalists or medical men, she finds a certain leeway in pushing more widely than most bibliographies. She includes many sources which I have not come across before. The book is obviously intended to cross the language barrier with title

and headings in double translation. Sections on genetics, heredity, cell theory, electron microscopy, neurophysiology, and biochemistry all show the value of such an approach. Historians of medicine will surely find it extremely useful.

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**Nicholas J Wade,** *A natural history of vision*, Cambridge, Mass., MIT Press, 1998, pp. xvi, 466, illus., £34.95 (0-262-23194-8).

In *A natural history of vision* Nicholas Wade charts "the course of descriptions of visual phenomena for the period up to 1840". The book focuses on experiential vision as opposed to optics or ophthalmology, though Wade recognizes their close relationship with accounts of vision. (The distinction between light and vision only seriously emerged with the description of the optical properties of the eye by Kepler in the early seventeenth century.) A mid-nineteenth-century cut off is adopted, marking roughly the point of transition from observational approaches to more systematic experimentation, supported by the development of new methods, and machines such as Charles Wheatstone's stereoscope.

The book is arranged thematically, with chapters devoted to different aspects of visual experience and interpretation. As well as the more standard topics such as light and optics, colour and spatial perceptions, some of the more intriguing perceptual phenomena such as illusions, after-images and pattern disturbances are also considered. Each section is introduced with a summary of the topic, its problems, and the key contributors to the debates. This is followed by a series of extracts from the historical texts arranged chronologically. The text is generously illustrated with diagrams and pictures from the cited works.

The thematic approach draws together numerous strands of thought on sight, and Wade presents clear and succinct summaries. The range of "observers" quoted reflects the