

## Book Reviews

MICHAEL J. AMINOFF, *Brown-Séquard: a visionary of science*, New York, Raven Press, 1993, pp. xii, 211, illus., \$85.00 (0-88167-956-9).

If there is a direct relation between the fame or notoriety of an individual and the number of biographies of him, then the case of Charles Édouard Brown-Séquard (1817–1894) is a paradox. He was one of the most outstanding medical scientists of the second half of the nineteenth century, a founder of neurology and of endocrinology, and a founder physician of the neurological National Hospital in Queen Square, London. His name is known universally in medicine, for it is applied eponymously to the syndrome of neurological sequelae of hemisection of the spinal cord. He published some 577 books and articles on a variety of topics and his achievements were acknowledged by twelve awards and medals and election to thirty-seven learned societies, including those in France, America, and Britain judged the most prestigious. His private life was equally memorable. He was born in Mauritius of an American father and a French mother, but of British nationality, and graduated in medicine at Paris in 1846. Thereafter, Brown-Séquard travelled restlessly between Paris, London, the United States, and Mauritius until 1878, when he was elected to the chair of medicine at the Collège de France, following the great physiologist Claude Bernard (1813–1878). It is said that he crossed the Atlantic some sixty times, and he made residences in France six times, America four times, Mauritius twice, and in Britain once. He had three wives and three children. This record of professional and domestic accomplishments was achieved in a life characterized by “dramatic reversals of fortune in colorful and varied settings” (p. vii), and must surely be unique for a medical man. And yet during the hundred years since his death no detailed account of Brown-Séquard’s extraordinary career has appeared. Thus the paradox.

Dr Aminoff, professor of neurology in America, but of British origins, has now rectified this curious neglect. The first half of his book deals with the man, his life and work in general, the second with his major contributions to physiology and clinical medicine. Brown-Séquard was utterly devoted to the experimental method, and his enthusiasm for it resulted in financial and professional difficulties, opposition from the anti-vivisectionists, and deleterious consequences for himself from self-experimentation, in addition to scientific advancement. However, much of his research was based on intuition, impulse, and a fertile imagination, rather than on the more usual detailed, cautious and critical analysis. He possessed singular insight, but at times he fell into error, when his judgement went beyond his experimental evidence. Nevertheless, he made many significant discoveries and anticipated a number of developments, although it was inevitable that at times he also reached erroneous conclusions. In old age, therefore, he suffered considerable obloquy, which in part explains his biographical disregard. But in the neurosciences he was the first to define correctly the spinal cord sensory pathways, to describe spinal shock, and to identify the vaso-motor nerves. In endocrinology he revealed that the adrenal glands are vital to life, and his use of animal extracts was the beginning of modern hormone replacement therapy. Moreover, his concept of chemical integrative mechanisms has been proved to be correct.

Dr Aminoff has produced an excellent biography in which he reveals his knowledge of the background history of neurology and medical history in general, and introduces modern interpretations where appropriate. His material is immaculately referenced and drawn from many primary as well as secondary sources. There is a full bibliography of Brown-Séquard’s works, and the book is illustrated and gracefully written, the only possible objections being the plethora of exclamation marks and the brief index. Brown-Séquard was indeed a visionary of science, and it is pleasing that a full and accurate biography of a distinguished and eccentric medical scientist has at last been written. The paradox remains, but the void has been filled successfully by a book that deserves wide attention.

Edwin Clarke, Donington-on-Bain, Lincs.

JORDAN GOODMAN, *Tobacco in history: the cultures of dependence*, London and New York, Routledge, 1993, pp. xi, 280, £40.00 (0-415-04963).

“The culture of tobacco” might mean many things, from the social effects of cultivation to the context of consumption, from the skill with which snuffboxes were produced to the art, music, and literature in which tobacco consumption featured. Jordan Goodman’s history of tobacco proceeds

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from the sacred uses of tobacco in South America, through its introduction for medical and recreational use into Europe and other parts of the world, to the history of the tobacco trade and its opponents. Where previous histories of tobacco have been either specialized or anecdotal, Goodman endeavours to be both general and precise.

Tobacco's history has been studied from many perspectives, ranging from ethnopharmacology to business history. Goodman has encompassed as many aspects of tobacco as would fit between the covers of a single book, but he is inevitably limited by deficiencies in the secondary literature. His brave attempt to write a cultural history of tobacco's social meaning in Europe is the weakest part of the book, so little scholarly work having been done on the subject. Many of the early modern authors and social practices that he mentions lack context as a result. Seventeenth-century medical attacks on tobacco were motivated principally by moral theology. Dutch painters did not simply depict tobacco consumption; they employed it emblematically to convey moral messages that would please their patrons.

Tobacco was one of the classic international commodities which formed the basis of the Atlantic economy and Goodman is able to synthesize a great deal of work on the social and economic significance of growing the crop and selling it overseas, especially by Timothy Breen, Pete Daniel and Jacob Price. Its cultivation was central to the development of the Caribbean and North American colonies; its importation and processing played a significant role in the rise of Amsterdam and London as major trading centres. More recently, the consolidation of cultivation, manufacture, and marketing has created a group of multinational companies able to sway the decisions of governments throughout the world. Goodman provides a lucid account of these developments, insisting that tobacco's present is incomprehensible without an understanding of its past.

He is also interested in cross-cultural comparison, but the constraints of space limit this to discussions of native use in the Americas and the international spread of the tobacco trade. There is little sense in this book that every country has its own history of tobacco, shaped by moral attitudes, government involvement, and local patterns of production and consumption. There is brief coverage of France and Holland but Macedonia and Latakia are not mentioned. Goodman also ignores ethnographic studies on the cultural meanings of kava, betel, and tobacco among Pacific islanders, which might have stimulated fresh ideas on the reception of tobacco in Europe.

This book will be essential reading for social, medical, and economic historians. It is to be hoped that it will encourage fresh research into the significance of this extraordinary commodity. Any reader will learn much about tobacco, but there remains much to be done if the wide variation in the meaning of tobacco is to be explained.

David Harley, Oxford

HORACE W. DAVENPORT, *A history of gastric secretion and digestion: experimental studies to 1975*, New York and Oxford, Oxford University Press for the American Physiological Society, 1992, pp. xvii, 414, illus., £60.00 (0-19-507393-2).

Eighteenth-century physicians used to refer to the stomach as "that noble viscus". Whatever its claims to special status in the hierarchy of the different organs of the body, it has always had the advantage, compared with the brain or other internal structures, of being reasonably easy of access to the researcher desiring to know something of its functions. The introduction of tubes into the stomach to study its potential digestive properties has a long history, and the direct examination of the stomach lining as a result of its exposure by an unhealed gunshot wound, the famous investigation carried out by William Beaumont, dates from the early nineteenth century. Among physiologists, Pavlov was pre-eminent in using the stomach for his studies of sham feeding and of psychic stimulæ, work which led to the award of the Nobel Prize in 1904.

Horace Davenport is a distinguished American physiologist who has devoted a lifetime to the study of the stomach and its functions. For the general reader, his book is too technical to give pleasure, but for experts in gastroenterology it is a work of reference that will grace the shelves of medical libraries for many years to come. As scientific history, it provides admirable references, 1,097 in all, to a period that lasts from 1777 to 1975. There are chapters on the one secretion that