

Book Reviews

RICHARD D. FRENCH, *Antivivisection and medical science in Victorian society*, Princeton, N.J., Princeton University Press, 1975, 8vo, pp. [xiii], 452, illus., £10.50, (£4.95 paperback).

One of the most fascinating aspects of nineteenth-century experimental medicine is the role of so-called vivisection in securing advances and, at the same time, earning vehement criticism. Dr. French deals with the latter in his scholarly and comprehensive study, and he traces the anti-vivisection movement in the last three decades of the nineteenth century. Objectors to animal experiments had, of course, been active before 1870 and they are still with us, but in the period under discussion there were times when it seemed that a large part of experimental medicine was to be prohibited, at the very time that outstanding achievements were being made. Perhaps it is understandable that linked with the anti-vivisection crusade was an associated objection to contemporary medicine. It was surely becoming too scientific, and although remarkable advances were being achieved the patient himself did not seem to be benefiting greatly from the new scientific medicine, nor was his community, and not enough regard was being given to preventive measures against disease.

There are, therefore, close parallels between the latter part of the last century and today, which the author emphasizes. Similar criticisms are now being voiced concerning the highly scientific nature of present-day medical science, and the return of the anti-vivisectionists may reflect a loss of faith in science, active today as it was a century ago.

Dr. French's book is based on extensive research into a variety of materials, including manuscripts previously unused, and his documentation is impeccable, his prose eminently readable. In addition to his main theme, he also deals with several related areas, such as Victorian political and administrative history, voluntary associations, man's attitude towards animals, Victorian feminism, and scientific communities. It will, therefore, be of value to a wide spectrum of scholars, including historians of nineteenth-century medical science, and of the social history of medicine. To all of them it can be confidently recommended, not only as an important contribution to nineteenth-century studies, but also as an excellent example of first-class scholarship and medical historiography.

OWEN GINGERICH (editor), *The nature of scientific discovery*, Washington, D.C., Smithsonian Institution Press, 1975, 8vo, pp.616, illus., \$15.00.

This book contains the proceedings of a symposium held in 1973 to commemorate the 500th anniversary of the birth of Nicolaus Copernicus, which represented the major tribute of the United States in the worldwide observance of the Copernican quinquecentennial. All of the meeting's activities are recorded: the festival with opening address and general papers; the symposium of ten papers; the three collegia dealing with 'Science and society in the sixteenth century', 'The interplay of literature, art, and science' and 'Science, philosophy, and religion in historical perspective' in seventeen papers and discussions, mainly analysing and criticizing the symposium addresses. There are several excellent contributions to these wide-ranging topics which deal with general matters more than specifically with Copernicus. Amongst these are: A. R. Hall's 'The nature of scientific discovery in the sixteenth century';

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Temkin's 'Science and society in the age of Copernicus'; Toulmin's 'The end of the Copernican era'; Heisenberg's 'Tradition in science'; M. B. Hall's 'The spirit of innovation in the sixteenth century'.

The Copernicus week was spent discussing these matters dealing with scientific discovery in the past, and with the future of science also. The group represented arts and letters as well as science, and together they considered the fundamental issue of creativity in science and its social and cultural basis, and the conditions vital for the flourishing of science; Temkin's article on this theme is, in particular, worthy of close examination.

There is therefore a great deal of interesting and valuable material in this elegantly produced and well-edited book. It should be carefully consulted by the historian of medicine, for many issues common with science and medicine are dealt with, and a knowledge of the factual and philosophical aspects of scientific advancement is vitally important to him.

MICHAEL SANDERSON (editor), *The universities in the nineteenth century*, London and Boston, Routledge & Kegan Paul, 1975, 8vo, pp. xiv, 262, £5.25.

The author, who is Senior Lecturer in Economic and Social History at the University of East Anglia, presents an anthology of ninety-three extracts from a wide variety of original documents such as contemporary memoirs and letters, Parliamentary papers, polemic tracts, novels, and a few previously unpublished manuscripts. They relate only to British university education in the nineteenth century and are divided into six sections: the old system under attack, 1809–45; the first phase of reform, 1845–70; the great debate, 1852–82; concerning the fundamental purposes of higher education; fresh departures, 1870–85, involving important reforms at Oxford and Cambridge and the formation of new civic university colleges in England and Wales; quiet revolutions, 1885–1900, including the Anglicization of Scottish universities, the formation of the first students' union, in Edinburgh (1884), the provision of state funds for university colleges, and the introduction of new specialisms like economics, commercial education, and agriculture; vocationalism and efficiency to be provided by university talent, 1900–14. This commendable division of the great masses of material facing the student of nineteenth-century British education is one of the book's major assets. Added to this are the excellent introductions to the sections and briefer ones to the individual extracts, each of which clarify and instruct by means of an attractive prose style and adequate documentation.

Medical education is mentioned on a few occasions, but the main value of this book to the historian of medicine is the background it provides of higher education in general. It illustrates so well how medical developments in history can only be appreciated adequately when they are analysed in the context of more general events. This may seem obvious, but it is surprising how many authors omit or treat only superficially this essential aspect of medical historiography. Dr. Sanderson's book, therefore, should be studied carefully by all those investigating Victorian medicine, especially its social aspects.