

## Book Reviews

be invaluable. By this period, too, mass production was beginning to shape the face of instruments (are there deep historical relations between mass production and asepsis?).

Edmonson takes his story up to 1900 when radical surgery for conservative ends was introduced. By now mass marketing accompanied mass production and the American domestic industry felt the heat of competition, notably from Germany. Edmonson fills out this tale with references to a huge number and variety of instrument makers, detailing their methods and styles and relations with the medical profession, if that is what it can be called before 1900. Apart from a reference to the impossible fact of a London medical degree in the eighteenth century (p. 15) this is an expertly written piece that anyone who needs to command a knowledge of the instrument-making trade (and historians certainly should) must read.

The second half of Edmonson's book contains a massive directory of surgical and dental instrument makers in America between 1785 and 1900. Following this are appendices dealing with instrument manufacture (a most useful section) and other aspects of the trade. This second part of the volume is clearly the fruit of time-consuming archival trawling and Edmonson himself admits it is bound to contain oversights. For those who need such a directory this is a splendid achievement. No doubt this section will be most useful to the specialist collector and curator, although I confess myself often puzzled as to why collectors find it valuable to know that a particular instrument was made by, say, Ottomar Carliczek of Chicago. I do not doubt the use such a piece of information might have in a study of manufacturing and trade in Illinois but this is to promote text over object, which is often not the goal of collecting. The key word, to address Edmonson's irony, is presumably, valuable. Historic instruments have an importance far beyond that of historical evidence (as of course do rare books). Guns and swords have long been items of display and conspicuous consumption. They were collectibles long before the modern era of collecting. As such

their acquisition has generated a literature of origin and provenance. Surgical instruments were tools of a *trade*. There are very few representations of surgeons holding instruments as opposed to the squirearchy with guns or, indeed anatomists with microscopes. Today, however, any old thing is a collector's item. Edmonson's book will become part of the world of historical scholarship but also of the market that obliquely helped to generate it. The high quality illustrations will no doubt foster this circulation. Edmonson recognizes this to be one of the certain fates of his book. The phrase "Not found in Edmonson", he observes with modest intent, may soon creep into dealer's catalogues (p. 172).

**Christopher Lawrence,**

Wellcome Institute for the History of Medicine

**N H Naqvi and M D Blafox, *Blood pressure measurement: an illustrated history*, New York and London, Parthenon Publishing, 1998, pp. xiii, 156, illus., £38.00, \$65.00 (1-85070-013-3).**

This book is based on Dr Donald Blafox's personal collection of sphygmographs and sphygmomanometers dating from the fifty years up to about 1925. The lengthy appendix in which the many instruments are illustrated and described is the most valuable part of this work. Similar information and illustrations are scattered about the literature but I know of nowhere else where so many instruments are illustrated.

The remainder of the book consists of a, not very detailed, account of the history of the palpation and recording of the arterial pulse, and of sphygmomanometry. Naturally, bearing in mind the title of the book, the sphygmograph is dealt with largely as a device for measuring the blood pressure. Frederick Mahomed's useful work in this area is discussed but it is disappointing to find almost no reference to sphygmography in the analysis of dysrhythmias. James Mackenzie's use of his polygraph is certainly mentioned but it is

implied that he used pulse tracings to “interpret the blood pressure” which is certainly not the case. He thought, as late as 1908, that “the trained finger” was better than sphygmography in estimating blood pressure. Apart from this, and the failure to mention Thomas Young as the inventor of the kymograph (although he seems never to have used one) many years before Ludwig, no comment is needed on the factual content of the book.

Above all, as has been said, the book is valuable for its appendix, which could be a useful source of reference for those concerned with the history of medical instrumentation. The bibliography and index are comprehensive and the book is nicely produced.

P R Fleming, London

**John Krige and Dominique Pestre** (eds), *Science in the twentieth century*, Amsterdam, Harwood Academic Publishers, 1997, pp. xxxv, 941, illus., £80.00, \$120.00 (90-5702-172-2).

The importance of science in our modern world cannot be underestimated. Yet, what this science constitutes and how it has affected society are continually debated. John Krige and Dominique Pestre’s new edited volume on science in the twentieth century, illustrates the many different historical interpretations of science and its influence. Covering a wide range of disciplines from the physical and natural sciences to mathematics, social sciences and medicine, the book highlights the complex relationships between people, objects and institutions involved in scientific endeavour and its application to social issues.

The book is divided into a number of sections: the first examines the image of science; the second looks at the interaction between science and society; the third explores the ways in which scientists conduct their research; and the last section investigates how the scientific enterprise has varied by region and nation in terms of government priority and funding.

Each chapter is extremely diverse in subject matter and treatment of what can be counted as science. Scientific management, for instance, is included as a matter of science alongside that of physics and biochemistry. In some cases the reader can feel that the editors and authors have gone too far in their “refusal to adopt a single definition of science” (p. xxv). While this has allowed for a wide variety of subjects within the volume, the approach can leave the reader with the idea that almost any research enterprise or subject in the twentieth century can be defined as a science.

Similarly some authors confuse the motivations of scientists with the steps it was necessary for them to carry out at any particular historical moment to achieve their goal. By conflating the two issues some authors give the impression of a conspiracy on the part of scientists. This is illustrated in some of the chapters exploring scientific medicine. Some authors claim that medical researchers utilized certain methods and models for their work in order to gain funding. While in some cases this might have been true, such an argument risks promoting the view that finance and issues of professional status drove scientists alone. This ignores the motivation of some of the scientists who might have been equally driven by their desire to solve a particular problem like disease. Similarly, such an approach negates the fact that in many cases the methods deployed by scientists were defined by the state of knowledge at the time.

Some of the strongest chapters in the volume are those that concentrate on the ways in which scientists have worked and how they have been affected by changes in scientific knowledge and funding. One of the most interesting chapters in this respect is Kamminga’s exploration of the emergence of biochemistry. The strength of Kamminga’s piece lies not only in her willingness to define the boundaries of biochemistry, but also her demonstration of how its rise was dependent on developments in a range of other disciplines. Additionally, she shows how new scientific outlooks shaped the field, and what consequences this had for research objectives and training as well as for funding.