

# reviews

## Survey of medical history

Sydney Selwyn

*Explorers of the Body.* By Steven Lehrer. Pp. 463. (Doubleday: New York, 1979.) \$12.95.

POPULAR accounts of medical history are surprisingly scarce. Before the appearance of Dr Lehrer's book, the only notable example of this rare genre was *Microbe Hunters*, which was first published over 50 years ago. The author, Paul de Kruif, was a lapsed bacteriologist whose highly coloured descriptions of heroic battles against infection fired the imagination of a wide audience. Indeed, many impressionable adolescents were inspired by his book to enter medicine and related professions.

Sadly, de Kruif's sequels on nutrition, psychiatry and other medical themes were progressively — perhaps predictably — less successful; and although he can be regarded as the main originator of the racy, home-spun style of medical journalism, which remains so popular in North America, it is puzzling that so few writers have attempted to emulate him with full length work in one of the most fascinating branches of human history. Since the 1920s an intermittent series of unexciting biographies has only occasionally been relieved by something as imaginative as *Rats, Lice and History*, written by another bacteriologist, Hans Zinsser. So barren and featureless has been the landscape, that this whimsical little book of 1935 still remains outstanding.

The publication of a reasonably comprehensive survey of medical history for the general reader is therefore to be cordially welcomed. Written attractively and with authority by a practising physician, this new book builds up a mosaic of the lives and work of innumerable contributors to the development of medical science. Four central chapters out of ten are devoted to infection and its control, the remainder being idiosyncratically arranged, starting with physiology, moving to genetics and then anaesthesia. Surgery is embedded among the infections, and the book ends with X-rays and diabetes mellitus.

The opening chapter on the evolution of knowledge about the functioning of the body forms a very satisfying prelude to this vast epic. From the stumbling observations made in Ancient Greece and Rome on the action of the heart and on respiration, progress is clearly traced through the late Renaissance to the work of William Harvey and a succession of other pioneers. Many of them were not primarily interested in medicine, for example, Boyle, Hooke,

Priestley and Black in Britain, and Lavoisier and Laplace in pre-revolutionary France. As an incidental feature, the often uncomfortable (and occasionally fatal) effects of politics on the lives of medical explorers are curiously evident in this introductory section.

Similarly, in the two subsequent chapters fresh insight is provided into such well rehearsed stories as the work of Mendel, the elucidation of the structure of DNA, the acrimonious and complex background to the introduction of anaesthetic gases, and the rise and fall of mesmerism. Although inevitably told with less verve than in de Kruif's pages, Dr Lehrer's accounts of microbe hunting and taming make compelling reading. Particularly vivid are his descriptions of vaccines, antimicrobial drugs and, indeed most other medical advances.

A special feature of the book is its very revealing portraiture of major and minor participants alike. While most are necessarily depicted with the economy of a miniaturist, so extensive yet compact a gallery is unprecedented. Even the cognoscenti will probably realise for the first time just how disagreeable the average medical pioneer is. For every saintly figure such as William Withering or Paul Ehrlich, the author delineates dozens of irascible, bombastic, unscrupulous, or at the least, devious individuals such as Paracelsus, Hooke, Priestley, Erasmus Darwin, Semmelweis, Mendel, Pasteur, Koch, Cushing, Behring, Ross, and a handful of more recent Nobel laureates.

Sometimes, however, debunking seems to be indulged in for its own sake. For example, Harvey is said to have "lacked the ability of a skilled experimenter"

because he considerably underestimated the body's total blood volume (which even now is difficult to measure). Edward Jenner is also criticised on the rather tenuous grounds that he did not publish details about the death of one of his patients, who seems to have succumbed to an unrelated "infection". A further criticism is that Jenner regarded cowpox and a comparable infection of horses as being closely related both to one another and to human smallpox — which indeed is in accord with modern virological views. But after the uncritical recent apotheosis of Harvey during the celebrations of his 400th anniversary, and the sustained adulation of Jenner during the past 150 years, fair re-evaluation of their work is very welcome. The text contains relatively few typographical or factual errors, and solecisms such as the statement that the French Academy of Sciences was, in the eighteenth century, "the final authority in European medicine" are mercifully rare.

The reader may well be disappointed to find virtually no mention of pathology, pharmacology and several medical specialties, including psychiatry — the "Explorers of the Body" being zealously prevented from entering the domain of the mind. An account of some of these important subjects could well have replaced the largely non-medical section on genetics. Nevertheless, the author has accomplished a *tour de force*, and his publishers also deserve praise for producing this admirable book at so reasonable a price. □

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## What world food crisis?

*Nutrition and the World Food Crisis.* By Mary Alice Caliendo Pp.368. (Collier-Macmillan: London, 1979.) £5.95.

ONE function of the applied scientist is to warn his fellow man of possible impending doom, but there is a very real danger of loss of credibility if "Wolf!" is cried too often. There has been a spate of books forecasting food shortage and mass starvation over the past fifty years (two hundred if one counts Malthus), but although the situation is bad it has not noticeably become worse: food production per head of population has

remained almost constant. Indeed, there has been a growing realisation that there is more than enough food about and that the real problem is that the poor cannot afford to buy their daily bread.

Food requirements are about 2,000 kilocalories per day per man, woman and child, and global agriculture produces something in excess of 4,500 kilocalories per head per day of crops suitable for human consumption. Much of this food is used inefficiently for the feeding of livestock to provide animal products for the rich, but even so there is about 2,500