ground of his life (over 250 names of his contemporaries appear in the text), Gibbs also provides a valuable document of the eighteenth century scene and, at the same time, produces an excellent companion volume to R. E. Schofields' *The Lunar Society of Birmingham* (1963).

That science never for long took first place in Priestley's life is correctly stressed. Full justice is done, for instance, to his important role as an educationist and as an outspoken Dissenter who aroused the anger of the Establishment. It was, of course, Priestley's religious and political activities that led to his emigration to America during 1794. It was a strange trick of fate that while he was at sea the other leading figure of eighteenth-century chemistry, Lavoisier, was guillotined (8 May).

Much of the book is naturally concerned with Priestley's celebrated work on gases although his importance to the history of electricity is adequately detailed. Many of Priestley's experiments on air and on individual gases are described using his own nomenclature but, despite the numerous complex terms, clarity is always maintained. One of the most important features of the book is that it reveals why Priestley, in spite of his continuous allegiance to the phlogiston theory, was such a tremendous influence on chemistry by stimulating others to experiment, and, in the cases of Henry and Dalton for instance, to develop theoretical ideas.

Many of Priestley's activities are of direct interest to the medical and pharmaceutical historian. For example, his part in the introduction of electrical machines into medicine; his apparatus for the production of soda water (initially considered to be a cure for scurvy); his views on the possible medicinal value of oxygen and his influence on the therapeutic use of gases (notably Beddoes' celebrated Pneumatic Institution at Bristol); his activities behind the introduction of wedgwood mortars; and his associations with Benjamin Rush.

Unfortunately many detailed aspects of Priestley's work have not been elaborated or mentioned, but this is obviously because the book had to stay within the size and scope of the series for which it was written. For the same reason Gibbs has not been able to give complete documentation or to explore many of the questions he raises in the reader's mind, such as the influence of Priestley's scientific activities on his religious outlook. Unhappily, Dr. Gibbs' premature death, earlier this year, means that he can never undertake the definitive biography, the absence of which he regretted. Nevertheless, the present strongly recommended work remains a permanent reminder of Dr. Gibbs' many contributions to scholarship in the history of science.

J. K. CRELLIN

Medical Advance, Public Health and Social Evolution, by CHARLES WILCOCKS, Oxford, Pergamon Press, 1965, pp. vi, 271, illus., 21*s*.

'This book is not a history of Medicine; it is an attempt to relate medical progress to the intellectual climate of the various broad periods of history, and to the social changes which took place in those periods and which influenced—and were influenced by—medical progress'. This is the author's *apologia pro labor sua*. As this is the plan of this little volume many details of medical and surgical techniques which would have been appropriate for mention in a history find no place. As however the growth of ideas and the events which have impinged upon medical progress have occurred

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in the setting of history the author has divided his book into chapters with a historical basis. Thus the first chapter is on Greek and Roman life and medicine and deals with insight into the personalities, so far as they are acertainable, and the ways of thought of the 'pace-setters' of early medicine. He quotes the Homeric poems to show the common medical beliefs of the time which are expressed with vigour and clarity. Disease was inflicted by the gods: the *Iliad* for example describes in great detail a pestilence sent by Apollo to ravage the camps of the Achaeans. 'He came down from the peaks of Olympus and shot his arrows first at mules and dogs, then at humans . . . the plague went on for nine days'. He then describes the high mortality, and ends 'It's cause was known: none but Apollo could have sent it'.

Both Indian and Persian medicine are then described and are also found to be a combination of religious, magical and empirical rites and procedures. He quotes Sigerist as saying 'All archaic civilizations have a great deal in common and archaic medicine is very much the same everywhere'. This remains largely true also of European medicine in the Middle Ages where surgeons were needed by warring states and accidents in civil life, whilst for medical purposes there were herbalist physicians and priest physicians who practised magical and religious medicine as well as that learnt from the Graeco-Arabian manuscripts which were extant. The Renaissance and the resuscitation of science is well and interestingly dealt with, as are the sixteenth, seventeenth and eighteenth centuries in England (these all in one chapter), whilst Chapter 7 brings us on to the development of hygiene, infection, mid-wifery and surgery. The second half of the book elaborates the main themes of discoveries in chapters on bacteriology and the bacteriological control of food and water, and the transmission of disease by arthropods, worms, protozoa and others, as befits the author's distinguished career in the tropics. Then come chapters (perhaps less than adequate) on drugs, antibiotics, hormones, and anaesthetics; nutrition. Occupational medicine, the degenerative diseases, cancer, radiology and medical genetics are then all passed rapidly and skilfully under review. Next comes the evolution of psychological medicine and an account of the change in the attitude of the law of recent years which has resulted from the modern approach to mental illness. Lastly there is a chapter on the evolution of statistical methods and experiments on man and animals. At the end of this the author draws final conclusions in which he briefly considers the new Welfare State, industrial compensation, family allowances and other innovations. His final words are: 'the medical profession can claim to have performed a social service with a proud record. Its object has always been to preserve life and to diminish pain and distress, and in this perhaps it may have influenced for the better the administrative systems under which we live'.

There is a selective list of references and an index. A delightful and well arranged little volume.

W. S. C. COPEMAN

Anthology of Orthopaedics, by MERCER RANG, Edinburgh and London, E. & S. Livingstone, 1966, pp. xi, 243, illus., 42*s*.

Mr. Rang has included a wide variety of both the classical papers of orthopaedics and some more obscure writings. These are skilfully arranged in chapters that deal with the separate aspects of orthopaedics and are accompanied by the author's

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