methodological shortcoming we now possess a compendium which provides useful insights into various anthropological concepts in the period between 1750 and 1850. Every scholar involved in the history of the life sciences to the beginning of the so-called scientific era will gratefully profit from the innumerable new historical insights in this book.

Michael Hagner, Medical University of Lübeck

JULES KOSKY, Mutual friends: Charles Dickens and Great Ormond Street Children's Hospital, London, Weidenfeld & Nicolson, 1989, 8vo, pp. x, 245, illus., £14.95.

In 1909 "the editor of a standard edition of Dicken's collected works made the overwhelming claim that The Hospital for Sick Children was 'founded on a small scale over fifty years ago by Charles Dickens and a few others'." The narrative of this book firmly refutes the claim. It emerges that Dickens's part in founding the institution in Great Ormond Street was indirect. His journal, *Household Words*, published a sentimental article 'Drooping Buds' (co-written with Henry Morley) six weeks after the hospital opened on 16 February 1852. In February 1858 Dickens was the main speaker at a "Festival" to raise funds; a few months later he gave a benefit reading of *A Christmas Carol* for the hospital. Dickens described the Children's Hospital poignantly in *Our Mutual Friend* as the haven where Betty Higden's grandson Johnny finds refuge. This is all.

Kosky's book primarily concerns the real founder of the Hospital, Charles West (1816–98). The task is not easy. There is no previous biography of West and there is a shortage of primary material about the origins of the Hospital (of which Kosky is Honorary Archivist). West was born the son of a small businessman and Baptist lay preacher. His childhood—unlike Dickens's—seems to have been serene. At St Bartholomew's West won prizes but since his father was a Baptist minister, he could not go on to Oxford. He studied instead for two years in Bonn and Paris, where he worked at the L'Hôpital des Enfants Malades. On his return, he began his long fight to set up something equivalent in England.

West was convinced that a children's hospital was necessary both to treat children and—more importantly—as a research centre for children's diseases. He encountered two kinds of obstruction. On the Continent, children's hospitals were supported by the authorities. In Britain, the finance had to be raised from private donors. More surprisingly, perhaps, there was powerful medical resistance to the idea of a children-only institution. Florence Nightingale objected on the grounds that children made excessive demands on nursing staff. West waged a long battle to persuade the governors of the Royal Infirmary for Children in Waterloo Road to change from a dispensary to an in-patient hospital. When, after six years, they still refused he formed his own establishment with the aid of a well-connected colleague, Henry Bence Jones.

Kosky integrates Dickens into the picture as a valuable propagandist. His fiction (particularly the emblematic Little Nell) sensitized the British public to the suffering child. There are numerous occasions when, as Kosky puts it, the veil between Dickens and West trembled. And certainly they had philanthropic friends in common. But there is no evidence of any direct relationship or that Dickens was ever more than a casual well-wisher. It is the chronically unsung Charles West who emerges as Kosky's hero. (The publisher announces that royalties of *Mutual Friends* will go to Great Ormond Street Children's Hospital.)

John Sutherland, California Institute of Technology

JOSEPH S. FRUTON, Contrasts in scientific style: research groups in the chemical and biochemical sciences, Memoirs of the American Philosophical Society 191, Philadelphia, American Philosophical Society, 1990, pp. xii, 473, \$40.00 (0-87169-191-4).

Biochemistry is surely destined in the near future for a higher profile within history of medicine. In an era of its ever-increasing importance to clinical medicine, Joseph Fruton, following on from his monumental synthesis *Molecules and life*, has written another book that everyone in the field will want to read.

## **Book Reviews**

Interest in the nature and functioning of research groups is, of course, not new. Gerald Geison's account of Michael Foster's Cambridge Physiology School remains the most accomplished elaboration, to date, of J. B. Morrell's earlier attempt to construct a model to explain the success or failure of individual "schools". Like Morrell, Fruton begins here with Liebig's group at Giessen, before going on to analyse other prominent German chemical and biochemical research groups in the period 1830–1914. Particular attention is focused on the groups of Felix Hoppe-Seyler, Willy Kühne, and Franz Hofmeister in biochemistry, and on Adolf von Baeyer and Emil Fischer in chemistry. Biographical details of each leader's "scientific progeny" fill seven appendices. Together with a bibliography and index they make up some two hundred pages, or about 40 per cent of the book's length. Chapter six, on modern research groups, also includes a section on the impact of physical chemistry on biochemistry after 1900.

All in all, there is a wealth of information here. It is a very different book to Robert Kohler's *From medical chemistry to biochemistry: the making of a biomedical discipline* (1982), and it emerges from a very different historiographical perspective. Medical historians will need to consult both.

Neil Morgan, Bristol

L. J. RATHER, A commentary on the medical writings of Rudolf Virchow: based on Schwalbe's 'Virchow-Bibliographie', 1843–1901, Norman Bibliography Series 3, San Francisco, Norman, 1990, pp. xi, 236, illus., \$125.00 (0–930405–19–6).

Rudolf Virchow has been well served by historians. Erwin Ackerknecht's biography of the great pathologist is still fresh after almost forty years. For almost that long, the late Leland J. Rather devoted his formidable linguistic and scientific skills to explicating, translating, and elucidating the nuances of Virchow's medical and epidemiological contributions. Rather spent his professional life as a pathologist but, like Walter Pagel, history seems to have been his abiding love.

The posthumous publication of this commentary on Virchow's medical writings is a fitting culmination of these decades of scholarship. Rather was a master at using modern knowledge to aid in historical understanding. He never, however, fell into the trap of modernizing or blind hero worship. The present volume is based on a bibliography of Virchow's writings which was published by his pupil, Julius Schwalbe, as part of the celebrations of Virchow's eightieth birthday in 1901. Rather has corrected a few of Schwalbe's slips and added a few items which were either published subsequently or have since come to light. He has provided both German titles and English translations, and for about a third of Virchow's books and articles Rather offers commentaries which range from a couple of lines to more than two pages. These commentaries summarize what Virchow attempted in the relevant piece of writing, link themes to earlier or subsequent contributions and point the reader to relevant secondary scholarship. Generous use of quotations from Virchow's writings provide a kind of developmental chronology of his thinking. They remind us repeatedly that Virchow was not simply one of the founding fathers of cellular pathology but one of the outstanding liberal thinkers of the nineteenth century.

W. F. Bynum, Wellcome Institute

CAROL L. MOBERG and ZANVIL A. COHN (eds), Launching the antibiotic era: personal accounts of the discovery and use of the first antibiotics, New York, The Rockefeller University Press, 1990, pp. xii, 97, illus., (0-87470-047-7).

René Dubos (1901–1982) was born and educated in France, where he graduated in Agricultural Science. He went to visit America and on the boat met Selman Waksman, who later discovered streptomycin. Waksman gave Dubos a job at Rutgers University, where he

468