

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.

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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.

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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