Frankland, Sims Woodhead, and Edward Klein. Not surprisingly, the attempt to reduce the Victorian ideological maze to order results in omissions: the moral dimension, considered elsewhere by Christopher Hamlin, is lacking; as also is reference to the wider scientific context. Neither Justus von Liebig nor Robert Koch, both influential figures in this context, receives a mention. Part Two, which deals with the main diseases transmitted by the Thames is, says the blurb, "highly original", but, inevitably, much here is predictable; and Luckin's conclusions often simply reinforce points already made by Margaret Pelling in *Cholera, fever and English medicine*. The chapter on diarrhoea does not reduce confusion about the identity of the disease (was it a disease rather than a symptom?), its causation, and path of transmission, which is very far from being exclusively water-related. The third section of the book is the most novel, containing an account of the Thames Conservancy, which Luckin reveals as a wonderfully exclusive and self-sufficient body, and an analysis of why national legislation failed to control river pollution in the nineteenth century.

Despite this book's weaknesses, it should provide a valuable stimulus to debate. Bill Luckin has not been well served by his publisher, however. The index is so perfunctory as to be virtually useless; the print is grey; the lines are too long and too close together; the jacket design is hideous.

Anne Hardy
Nuffield College, Oxford

W. F. BYNUM, C. LAWRENCE and V. NUTTON, (editors), *The emergence of modern cardiology (Medical History*, Suplement no. 5), London, Wellcome Institute for the History of Medicine, 1985, 8vo, pp. x, 178, illus., £12.00 (UK)/£16.00 (overseas).

The volume under review deals with the genesis of the cardiologic discipline during the late nineteenth and early twentieth centuries. It examines also, as a subordinate and illustrative theme, a few aspects of present cardiological practice and research. The discussions of physics and physiology are based on work done in almost every country of western Europe and North America, whereas the sociological problems are almost entirely those of Great Britain. Whoever reads each article carefully will find himself well rewarded.

The opening article, the longest in the collection, was written by Christopher Lawrence and considers the "new cardiology" in Britain, 1880–1930. It describes the way in which late-nineteenth-century research in experimental physiology effected a reconstruction of the clinical conceptions of the heart that were held in British medicine during the first three decades of the twentieth century, the new concept being that of the living organ, which was not merely a mechanic's pump but a live muscle. Disease of the heart was not only an alteration in structure but a variable change in function. This led to the recognition of new syndromes, especially in the realm of arrhythmia. The new outlook encountered resistance, and was responsible for important institutional changes. Lawrence's article is an example of excellent historical analysis in the modern style. The developments, arranged in intelligible sequence, repeatedly demonstrate the relation between technical innovations and their social and institutional background.

An essay on "soldier's heart" by J. D. Howell describes the way in which evolving concepts of disease may influence the formation of medical specialities. Soldier's heart, a condition that is now difficult to define satisfactorily, was of high importance to the British Army in World War I. Howell explains the changes from early mechanical concepts of this disease to its redefinition as effort syndrome; this change, from anatomical to dynamic, was consonant with the trends examined by Lawrence.

In discussing the electrocardiograph as a clinical instrument, John Burnett concentrates on the conditions which made the invention possible, emphasis being directed not toward the physician but toward the instrument-maker. He shows that most of the components of the apparatus were recent, and he describes in turn the development of each. He observes that the electrocardiograph is in the category of instruments that were first devised for use in the physical sciences and were applied later to biology. Burnett describes a close and productive relation between industry and science.

A paper by D. M. Krikler points out that when graphic techniques such as sphygmography were first introduced, they were not applied at once to cardiac irregularities. Of crucial importance was the invention of a practical form of electrocardiogram. A major role was played by men at University College Hospital, e.g. Lewis, Cushny, and Starling.

Arthur Hollman's history of bundle branch block appropriately recalls Harvey's naked-eye observations of the dying heart in experimental animals. Attention is called also to the suggestion of von Leyden (1868) that contraction might occur in one ventricle alone, and to early ECGs of experimental bundle branch block (1909, 1910). Necessary emphasis is placed on Thomas Lewis's incorrect localization and on clarifications by subsequent investigators.

Burch's paper on vector cardiography, presented in Leiden in 1977, is the work of an acknowledged master. It recalls the basic work of Horatio Williams, Mann's monocardiogram, and the ultimate application of the cathode-ray oscilloscope. Proper emphasis is accorded to the difficulties, especially the lack of a universally accepted frame of reference and the even more vexatious problem of the real value of the vectorcardiogram. Burch describes an area of research that has been strongly attractive to theoreticians and remains in advance of practical usefulness. He says little about possible relation between VCG and recent advances in physics and mathematics. This deficiency is compensated in part by a series of twenty-one footnotes on pp. 128–129.

An essay by Wray, Eisner, and Allen considers the foxglove and wisely includes the pre-Withering era. Withering's research is examined, but we are not told how his turkeys were used in experiments. Withering's principal contribution is seen to be his formulation of guidelines for the use of the drug. Much important information is given about later developments, especially the theory of inhibition of the sodium-potassium pump.

An essay by Finlayson, 'Ischaemic heart disease, aortic aneurysms, and atheroscleorsis in the city of London, 1868–1982', can hardly receive adequate analysis in a brief review. A judicious and valuable consideration of autopsy statistics leads Finlayson to the surmise that "apart from the increasing age of the population . . . an additional factor has triggered off the epidemic of coronary heart disease, and possibly yet another factor has caused the more recent and more modest increase in abdominal aortic aneurysms." His suspicions point toward tobacco and hydrogenated margarines. Chronic medical historians will be interested to compare Finlayson's research with Lancisi's.

Saul Jarcho
New York

KATHARINE PARK, *Doctors and medicine in early renaissance Florence*, Princeton University Press, 1985, 8vo, pp. xii, 298, £33·40.

Katharine Park has written an excellent book that contributes equally to medical history and to Italian renaissance studies. Florence was a good choice. For, if it was not the richest city in Italy, it did have highly-developed forms of civic organisation which structured the political, social and economic lives of its citizens. The city has left us a huge collection of records and they allow us to recreate its histories in the fourteenth and fifteenth centuries, its collectivities such as guilds and confraternities, and its individuals and their relationships, much more fully than is possible for most other cities. This rich treasure has attracted a stream of able historians such as Gene Brucker, David Herlihy, and Christiane Klapisch. Park has joined their ranks, and her elucidation of the profession of medicine in the city will add one more piece to the research programme on renaissance Florence.

Her findings are novel and important for the history of medicine. In Florence, the medical marketplace was not made up solely of individual buyers—corporate demand was just as significant. The city and institutions such as hospitals, religious orders, and confraternities gave regular employment to doctors, and a salary from, say, the prison service or seasonal employment in the army could provide as much income as private practice. Florence, in other words, had a well-developed infrastructure of health care. This perhaps is not so surprising, for we have been prepared by Cipolla's work on plague and public health to view Italian cities as having much more sophisticated and comprehensive health systems than the rest of Europe. The