

## Book Reviews

Through his teaching and his publications, he played a major role in the acceptance of the ECG as a clinical tool. Lewis was supported by the Medical Research Committee for work during the First World War on the disease entity initially known as “soldier’s heart” and reconstructed during the war as the “effort syndrome”. Following the war Lewis studied in detail the response of the skin to cold and to injury, as well as the nature of the pain that surrounds an area of cutaneous injury. Along the way, he provided critical research training opportunities to many younger physicians who were to become the next generation of leaders in the UK and U.S. But perhaps Lewis’s most important contribution was to encourage the creation of an idea of clinical science and experimental clinical research in Britain.

There has previously been no book-length biography of Lewis, and all of those who study clinical medicine and medical research in twentieth-century Britain should be grateful to Arthur Hollman, a distinguished cardiologist and a former student of Sir Thomas Lewis, for writing the book under review. In this labour of love Hollman provides us with a detailed and thorough look at Lewis’s work, based not only on a careful review of most of Lewis’s published books and papers but also on extensive use of unpublished material, including some in the author’s personal collection that he plans to donate to the Royal College of Physicians of London. But the book’s scope goes far beyond Lewis’s scientific studies. Hollman details how Lewis connected as a human being to those around him: as a husband, father, mentor, editor, colleague, commentator on issues of scientific policy, and inveterate bird watcher (a sport that drove some of his ostensibly scientific travels and one that he enjoyed alongside some of the finest scientists of the day).

True to his stated intentions, the author throughout focuses on Lewis “without, as a rule, describing what other investigators were doing at the same time” (p. ix). This limitation on his gaze may explain his failure to have recourse to what other authors have had to say about Thomas Lewis and cardiology during the

period. By failing to engage with the significant secondary historical literature, this volume becomes most useful as a detailed recounting of Lewis’s life rather than as an analytic work of history.

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**Edwin Clarke and C D O’Malley, *The human brain and spinal cord: a historical study illustrated by writings from antiquity to the twentieth century***, Norman Neurosciences Series, No. 2, 2nd ed., rev. and enl., San Francisco, Norman Publishing, 1996, pp. xviii, 951, illus., (0-930405-25-0).

**Edwin Clarke and Kenneth Dewhurst, *An illustrated history of brain function: imaging the brain from antiquity to the present***, Norman Neurosciences Series No. 3, 2nd ed., rev. and enl., San Francisco, Norman Publishing, 1996, pp. xiii, 188, illus., \$135.00 (0-930405-65-X).

The idea of writing these books came to Edwin Clarke (1919–1996) in May 1961 during breakfast in a Chicago hotel with Charles D O’Malley (1907–1970). They were published in 1968 and 1972 respectively. The two works supplement each other: *The human brain and spinal cord* is an anthology of selected passages of classical texts on the anatomy and physiology of the brain and *An illustrated history of brain function* is its iconographic counterpart. Why was it necessary to reprint them now? Clarke supplied the answer in his preface to the second edition of *The human brain and spinal cord*: the book “has never been superseded or even rivalled” and “it was accorded an overwhelmingly favourable reception in twenty-three reviews”. Surprisingly, it was never reviewed in *Medical History*.

In the first chapter, *The human brain and spinal cord* gives a general overview of cerebral matters in antiquity and the medieval period; other chapters deal with a specific nervous structure or function. There are short excerpts from texts of various authors (the most frequently quoted being Galen) preceded

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by introductions and encyclopaedia-style biographical sketches. The texts are not commented on. There is normally a tiny (one page maximum) conclusion, but the chapters on the anatomy of the spinal cord and the reflex have none. Neuroanatomical techniques are given in the Appendix. Nikolai Pirogov is not mentioned in the subsection on dissection techniques. Neuroimaging (X-rays, CT and MRI scanning etc.) and neurophysiological techniques (which should have constituted another Appendix) are totally omitted.

The title of *An illustrated history of brain function* is misleading. The authors covered the history of cerebral localization only and what was meant by “brain function” remains unclear. There are 161 annotated drawings and images, dating from the middle ages to the twentieth century, of the brains of dogs, monkeys and men.

The second edition has a new chapter on ‘Modern concepts of cortical localization’ by the neurologist Michael J Aminoff. On the title page this is described more accurately as “a new chapter surveying advances in imaging technology”. It resembles a review article for a scientific periodical and is not always easy to understand. Some of the colour plates are fascinating, in particular those showing the “top view of a combined MEG and three-dimensional surface rendered MRI of an adult whose right arm was amputated below the elbow when he was eleven years old”, “slices from fluorodeoxyglucose PET study depicting glucose metabolism in individual normal subjects as they performed specific tasks”, and a “series of twenty-four heads showing how the scalp location with the highest total covariance with other areas changes during a simple four-second task”. Unfortunately, nothing is said about the routine computerized axial tomography (CT) of the brain, which had a revolutionary impact on clinical neurology.

The differences between the first and second editions of both books amount to little: the new prefaces by Edwin Clarke, additional bibliographies and the above mentioned chapter on modern methods of neuroimaging. The biggest difference is the price: \$14 for the 1972

edition of *An illustrated history* as opposed to \$135 for the 1996 edition. Almost all the criticisms of previous reviewers remain unaddressed. The adjective “historical” in the title of the first book is hardly justified. The subject is not put into the broader social or even medical context. There is no critique of similar works. Jules Soury’s classic sourcebook *Le Système nerveux central: structure et fonctions. Histoire critique des théories et des doctrines* (Paris, Carré and Naud, 1899) is mentioned only in the additional bibliography and Garrison’s *History of neurology* revised by Lawrence McHenry (Chicago, Charles C Thomas, 1969) not at all. On the other hand, there is a reference to a propaganda book by B D Petrov, *The role of Russian scientists in medicine* (Moscow, 1954). The index lacks entries for “mind”, “mind-brain problem” or “neurology”. The names of Egas Moniz, who introduced cerebral arteriography and was awarded the Nobel Prize for prefrontal leucotomy, and Vladimir Bekhterev, the neuroscientist and clinical neurologist, are also missing. A table showing the evolution of such key words as “soul”, “neuron” and “reflex” (who coined them and when, and how their meaning and location changed over the centuries) would have been most useful. Only a few pages are dedicated to clinical studies which had a profound effect on our understanding of the human brain and spinal cord, and which, in turn, influenced contemporary approaches to the diagnosis and treatment of nervous and mental disorders and often resulted in “great and desperate cures”. Instead, the focus is on experimental studies. Oriental (Arabic, Indian, Chinese, etc.) traditions of research into the nervous system are also under-represented. The resulting collection of excerpts and pictures is arbitrary and haphazard.

Despite these minor criticisms, both new editions were worth publishing as they are classic historical source books for medical historians and neuroscientists.

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