Aphrodite of Knidos, which identified the reproductive organs as her "region of insanity" (Fig. 2.76, p. 108).

Over-generalizations and the odd inconsistency are inevitable in a book that ranges so far, and many minor criticisms might be made of some of the authors' arguments, which they often lack space to fully substantiate (e.g., the assertion that the Enlightenment placed new emphasis on individual responsibility for health, but was also defined by its "faith in institutions to cure society", p. 20; or that "interest in ... heredity as a factor in mental illness was prompted in part by a growing disenchantment with asylum medicine", p. 121). Sometimes the choice of images might also be questioned, whether on grounds of representativeness, relevance or repetition, as with the three illustrations from the *American Shakespeare* (Figs 2.2–3 and 2.41–43, pp. 39–40 and 78–9) and three photographs of nurses exercising at Pennsylvania Hospital. (See also, Figs 2.14, 2.16 and 2.63, pp. 51, 53 and 97). There is an overwhelming predominance in the first two sections of references to source material from Massachusetts and Pennsylvania. More major failings are to be found in the frequently uncomfortable merging of art historical and historical approaches. The authors fall too often, perhaps, away from their central subject—cultural shifts in conceptions of madness—into rather tenuous discussions of social history and art history, as in their accounts of neo-classical and romantic painting and slavery (e.g., pp. 19, 97 and 100–3). It is also remarkable that there is no discussion of contemporary theories of perception, such as the sensationalist approach to human psychology, that were so important in shaping how mental processes and the mentally ill themselves were seen. While the jacket blurb claims that views of the mentally ill and their families themselves are addressed, in fact the book's focus is overwhelmingly on medical, artistic and educated perspectives.

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Herbert A Neumann, Yvonne Klinger, *Knochenmark und Stammzelle, Der Kampf um die Grundlagen der Hämatologie*, Ex Libris Roche, vol. 1, Berlin, Blackwell Wissenschafts-Verlag, 1994, pp. viii, 171, illus., DM 98.00 (3–89421–192–0).

The history of scientific haematology originates in the increase in experimental and causal research in the second half of the nineteenth century. Inspired, among other things, by microscopic observations of the hepatic embryonal haematopoiesis of the anatomist Rudolf Albert von Kölliker (1817–1905), which were published in 1847, scientific discussion was first of all focused on the localization of haematopoiesis. With the increasing improvement of histological staining techniques, numerous studies of different haematological cell lines in the spleen, liver and bone marrow could be made, but their exact classification was insufficient at that time. In 1867, it was Kölliker again who described cells containing nuclei in the bone marrow without, however, identifying them as immature erythrocytes. In 1868, shortly before his Italian colleague Giulio Bizzozero (1846–1901), the pathologist Ernst Neumann (1834–1918) from Königsberg finally published the first description of the haematopoietic function of the human bone marrow.

After publication, the pioneering work of Neumann was corroborated by Claude Bernard in a lecture to the Paris Academy of Sciences in 1869 and by a citation in the fourth edition of the *Cellularpathologie* by Rudolf Virchow in 1871. The scientific controversy about the localization of haematopoiesis and the function of bone marrow would very soon lead to a new argument, to a methodical and polemical "dispute of everybody against everybody" (Arthur Pappenheim), over the question of the unitary or dualistic nature of the hematopoietic precursor cells in the bone marrow, a controversy which lasted for years and in which Ernst Neumann again mediated.

It is remarkable that Ernst Neumann's work about the localization of haematopoiesis and the function of bone marrow was not mentioned in

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the relevant literature on medical history at that time; his name did not even appear. In their detailed description of how the fundamentals of modern haematology developed, Herbert Neumann (who is not related to Ernst Neumann) and Yvonne Klinger deal primarily with this remarkable omission. Moreover, their book sensitively reflects the historical development of the successive gain in knowledge of haematology through experimentation and the outstanding capabilities of new, aspiring generations of scientists intelligently to use and develop these new findings from the second half of the nineteenth century to the 1980s.

Herbert A Neumann, Professor of Internal Medicine and Haematology at the Elisabeth Hospital in Bochum, and Yvonne Klinger, who is a medical historian, have written a fascinating book about the fundamentals of modern haematology. Only by closely connecting special and experimental knowledge with past events was it possible to write this unique book. It is in most points intelligible and, with the exception of Chapter 12 entitled 'Zellkulturverfahren', in which, understandably, the authors cannot conceal their fascination with science, it does not require any specialized knowledge. Even though the text is well-founded and intensely absorbing, the publishers, regrettably, thought it necessary to draw attention to the book by binding it in inappropriate and loud covers which do not fit its overall character.

A very instructive book which Goethe's maxim fully applies: "We actually only learn from books which we cannot judge. The author of a book which we might be able to judge would have to learn from us." Thus, a reviewer's task is certainly very limited.

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Jacques Gasser, *Aux origines du cerveau moderne: localisations, langage et mémoire dans l'oeuvre de Charcot*, Penser la Médecine, Paris, Fayard, 1995, pp. 335, FFr 140.00.

Jacques Gasser's book is a valuable contribution to the history of nineteenth-century neurology. This shorter rendering of the author's 1990 doctoral thesis is the best analysis to date of Jean-Martin Charcot's works on such important subjects as brain localization, aphasia and memory. Each section follows a classical structure where the author first reviews the general history of ideas on the three main subjects before turning to a detailed study of Charcot's own writings.

The largest section looks at Charcot's contribution to the localization of motor function. It was as a competent pathologist that Charcot contributed cases from the early 1850s to support or contradict claims by other researchers on the localization of different brain centres. In the mid 1870s he turned his attention wholeheartedly to the then very popular field of motor localization in the wake of the historic experiments of Gustav Fritsch, Eduard Hitzig and David Ferrier. Gasser traces in detail Charcot's evolving ideas on the subject, and in particular his important role in the incorporation into clinical medicine of the new physiological data. Gasser rightly stresses that Charcot insisted that he did not blindly accept such data and that it was only after detailed anatomo-pathological studies in man had confirmed the findings that he endorsed the physiological conclusions.

The chapters on aphasia and memory, though they are good reviews of French research on these subjects, reveal blatantly the lack of originality of Charcot's contributions to these fields. Charcot's teaching on aphasia relied extensively on Paul Broca's cases of the early 1860s and the writings of diagram makers such as Adolf Kussmaul and Carl Wernicke. However, Gasser makes the important point that though Charcot was much inspired by associationism, he never talked of conduction aphasias. The last section on memory in fact consists mostly of a good review of the writings of Théodule Ribot, whose teaching played a central role in Charcot's rather limited contribution to the field.

Though this book stands as proof of Charcot's erudition and superb teaching skills, one can only be struck by his lack of