

Book Reviews

tion (a good record of contemporary ideas) and most obvious in his controversial psycho-therapeutic approach to a victim of nostalgia or reactive depression. Schiller's major dissertation on the "animal and the spiritual nature of Man" is both the culmination of a century of psychosomatic medicine and a revelation of his originality. His examination of the "Nachlass" or relaxation mechanism after a build-up of nervous tension ending in swooning or sleep indicates that he might have gone on to further significant work in neuropsychiatry. But that was not to be, and, in the last section, the authors argue instead of the importance of his medical and psychological theories and observations on his early dramas, his stories and theoretical works, particularly *The aesthetic education*. It is controversially claimed that Kant should not be regarded as the central formative influence on these theoretical works (as has been conventionally assumed for a century and a half) but Schiller's interpretation of Kant and disagreement with his strict dualism (especially the categorical imperative) should instead be viewed in the light of his earlier psycho-somatic persuasions. And it cannot be denied that at the heart of Schiller's notion of aesthetic education lies the psychological effect of the aesthetic experience on the psycho-somatic totality of the individual personality. The previous over-emphasis of Kant can be seen in this context as a direct result of critics having ignored or taken too lightly Schiller's prior exposure to a quite different, medical and psychological, tradition.

This impressively documented and closely argued book is a milestone in Schiller scholarship. It throws down a challenge to others to collaborate in like manner and so open up new perspectives on authors previously thought to have been exhausted as sources of fundamental new research. The relationship between medicine and literature in German-speaking countries could prove a rich vein indeed—one need only think of Kleist, on the one hand (whose stories Reeves has also recently translated), or Jung, on the other, who, as this study points out, admitted a considerable debt to Schiller. But the final verdict on this scholarly book rests with the German publishers and it is my guess that it will soon be translated.

BRIAN BRACEGIRDLE, *A history of microtechnique: the evolution of the microtome and the development of tissue preparation*, London, Heinemann Educational Books, 1978, 8vo, pp. xv, 359, illus., £22.50.

The history of the microscope itself has been given much attention in the past, although its optical parts have been only occasionally dealt with. The development of methods for preparing specimens for viewing with the instrument have hardly ever been considered, and the history of the microtome has been grossly neglected. This book redresses the imbalance, and for the first time allows a balanced view of the history of microscopy—stand, optics, and preparations—to be achieved.

Detailed consideration of histological processes from the seventeenth century to the beginning of the twentieth century is provided. In addition, every microtome described until 1870 has been discussed and evaluated, as has a selection of the more important models from 1870 to about 1910. The author worked with the most important instruments so as to see them as they would have appeared to contemporary users. He also inspected more than 40,000 preparations as a check on the literature. This is the strength of the book—it is based not only on a detailed survey of the

Book Reviews

literature, but also on a detailed survey of the objects on which the literature was based, by a practised histologist familiar with the longer-lasting techniques.

The result is an attractively-produced book containing a wealth of illustrations from a wide range of sources, including pictures of old preparations made through the microscope as well as microtomes in use. Over a thousand literature references are included, making the book a gold-mine for all interested in microscopical history. A full survey of microtechnique before 1830 is given, and the development of the slide from the slider is followed. The technique of mounting in canada balsam was introduced then, providing an enormous potential for the preservation of specimens and their inspection in a cleared state offering enormously enhanced detail.

Works on microtechnique published between 1830 and 1910 are next considered, followed by a long chapter on substances used in the same period. In this chapter the development of infiltration methods is dealt with in detail, including hitherto unreported papers giving much more light on this important process. The author deals not only with the first use of a particular stain or fixing agent, but also with the usage which was to establish the agent's popularity: this treatment extends to the use of particular mixtures and procedures.

Instruments used between 1830 and 1910 are also treated fully. In addition to the microtome itself (for which a thorough, evaluated, survey is provided) slides, covers, and a host of small apparatus are dealt with, giving information on much that has hitherto been quite ignored.

A chapter on commercial mounters from 1800 to 1910 includes much that will interest the collector as well as those having museum collections of preparations in their charge. Specimen preparations are well illustrated so that details of labels can be checked. The development of histology during the nineteenth century is outlined, and there are two detailed indexes.

If a criticism might be made of the book it would be that the final chapter on the inter-relationships of microscopy, microtomy, histology, and medicine is too short: it whets the appetite for more. To have dealt thoroughly with this aspect would have made the book very long, and the whole point of the volume is that it provides the basis from which others will be able to work for a long time to come.

STANLEY JOEL REISER, *Medicine and the reign of technology*, Cambridge University Press, 1978, 8vo, pp. xi, 317, illus., £8.50.

Reviewed by Christopher Lawrence, M.B., Ch.B., M.Sc., Medical Historian to the Wellcome Museum at the Science Museum, London SW7 2DD.

The history of technology as it relates to medicine languishes in an appallingly neglected state. This fact is all the more surprising considering the frequently expressed desire of medical historians to demonstrate the relevance of their discipline. It can hardly be said that the "technological malaise" has circumvented medicine. The profound ethical questions surrounding birth, life, death, and public and private rights, that plague a pluralist society clearly implicate medical technology either as the force that spotlights such issues or the monster that devours them.

In *Medicine and the reign of technology* Stanley Reiser has begun to look at the