

### Book Reviews

This anthology is most welcome and can be enthusiastically recommended to those who wish to know more of Japanese science in order to achieve a more complete, international coverage of the history of science. Moreover and more importantly, the opportunity of observing a different approach to science, whereby problems that also exercise the West are tackled from a different angle, is of great significance to the modern occidental scientist. Hopefully he may discover new and useful viewpoints. The book is also of value to all historians of science in view of the general papers included, which display fresh points of view. In the next series of essays perhaps it will be possible to include some on the history of medicine.

LISA JARDINE, *Francis Bacon. Discovery and the art of discourse*, London, Cambridge University Press, 1974, 8vo, pp. viii, 267, £4.90 (\$15.50).

Most interpretations of Francis Bacon have judged him to be a man of the seventeenth century who revealed in his writings the approaching scientific revolution. However, Dr. Jardine believes him to be a Renaissance man, and in order to understand him properly his thought must be examined against a background of sixteenth-century ideas. Her arguments in favour of this are stimulating and convincing, and her scholarship and accumulated data, together with a pleasing style, have resulted in an important book.

In his youth Bacon was greatly influenced by the dialectical tradition and it is the author's task first to examine it closely and then to use this background to discover, if it exists, a central theme in his diverse works. He wrote on scientific method, practical science, law, pedagogic theory, English history, myth interpretation, and he occasionally published literary work. In the past these have usually been thought to be isolated from one another, but Dr. Jardine discovers a common thread: the central organizing role of *method* which included investigatory procedures to reveal new knowledge (*discovery*), and procedures for selecting and arranging information to be used for communication and instruction (*art of discourse*). This interpretation introduces a consistency into his writings, and, for example, one can equate his inductive method with the structure and strategies of his books dealing with ethics, politics, literature and history.

As an excellent presentation of Bacon's sixteenth-century roots this book is most valuable. However, it cannot be denied that he went beyond his dialectical forms of thought and his sources in presenting the new natural philosophy. Dr. Jardine is less successful in explaining why he was so influential in the advancement of science long after his death.

L. L. LANGLEY (editor), *Homeostasis. Origins of the concept*, Stroudsburg, Penn., Dowden, Hutchinson & Ross, 1973, 8vo, pp. xi, 362, illus., £11.40.

The publishers have initiated a praiseworthy series in which they will "... publish the original writings in a variety of fields which developed an important concept..." The author of this contribution to the project and its editor, is a physiologist. He has selected twenty-two extracts, ranging from a paper published by Charles Blagden (1748–1820) in 1775 entitled, 'Experiments and observations in an heated room',

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to one on 'Feedback theory and its application to biological systems' by K. E. Machin (1924– ), which appeared in 1964. The texts that were in English originally are reprinted in facsimile and are taken from journals or books; nine are translated from French (8) or German (1). They are grouped into, 'The power of the body to destroy heat', 'Le milieu intérieur', 'Homeostasis', and 'Closing the feedback loop'. Each of these sections is introduced by the editor, the total material amounting to only ten pages, and much of it being devoted to biographical notes.

The selection is good and will provide the student with a ready source of landmark papers, a similar collection never having been made before. However, the paucity of explanatory and introductory material limits the usefulness of the book. If the way through it is led by an instructor this will not be needed, providing the teacher is aware of the history of homeostasis. On his own the student will have difficulties, but in view of the price he is unlikely in any case to possess his own copy. There is no reference to the extensive secondary literature on the history of this vital biological principle, or on the individuals whose work is represented here. These, and suggestions for further reading, may have stimulated the reader to peer further into the history of physiology. Perhaps the editor's deficiencies in the history of medicine are responsible. They are certainly responsible for John Hunter being classed as an Englishman (p. 4), for the inadequacy of the biographical sketches, and for naïvety concerning the long-s (p. 4).

JOHN NEUBAUER, *Bifocal vision. Novalis' philosophy of nature and disease*, Chapel Hill, University of North Carolina Press, 1971, 8vo, pp. [x], 194, \$7.75.

"Novalis" is the pseudonym of the German poet and philosopher, Friedrich von Hardenburg (1772–1801), who was first attracted to Fichte's philosophy and then to Schelling's *Naturphilosophie*. In so doing he became one of the most outstanding exponents of German Romanticism, and was inevitably involved with Romantic medicine, which attempted to elucidate medical problems by the use of the humanities, in particular philosophy. He was intensely interested in nature and the natural sciences, as well as in philosophy, but his writings have always presented a problem because of their fragmentary and disorganized state. It is Professor Neubauer's purpose in this book to bring together Hardenburg's work on the philosophy of nature and of disease; its title, *Bifocal vision*, refers to the conflicts engendered by opposing points of view, which were bound to appear in a person attempting to equate science and medicine with philosophy and poetry.

John Brown of Edinburgh initiated Romantic medicine in Germany with his medical system based on excitability and excitement, and Novalis too worked out a disease scheme discussed here; his medical theory was, in fact, anti-mechanical and he argued that a central entelechy governed the body. Professor Neubauer studies this and other aspects, and deals with "the anthropology and physiology of magic", and with the poet's plan to prepare an encyclopaedia. It is clear that Hardenburg had little if any influence upon the Romantic medicine movement, but in discussing his deliberations on it and on related themes the author provides an excellent account of it. It is probably the best presently available in English, but there is still an urgent