

## Book Reviews

as addresses to physicians and medical educators, are exceptionally erudite, sustained permutations on some fundamental arguments for the medical humanities: for the examined medical education, the examined medical system, and the examined medical life. At the heart of Pellegrino's position is the claim that "Rarely are the humanities in medicine assessed for what they really are—neither educational flourishes nor panaceas but indispensable studies whose everyday use is as important for the quality of clinical decisions as the basic sciences are presumed to be". This claim is premised on a philosophy of clinical medicine in which medical practice is seen as half applied ethics and half applied science. On this conception, it follows naturally that a medical education deficient in ethics is as absurd as a medical education lacking in basic training in anatomy or biochemistry.

Pellegrino's arguments are directed to the antihumanists, the unconverted, who may find Pellegrino an experience as he queries their unanalysed beliefs, catching the unreflective by surprise, for example, by treating the history of medicine as a branch of the history of philosophy (which, indeed, it is, in his view). The converted will appreciate the ingenuity of Pellegrino's presentations and can crib from his erudition – his quotation from St. Cyprian, "Custom without truth is but the seniority of error" is a perfect opening line for a report to the curriculum committee arguing for a place for the humanities. Whatever one's beliefs about the role of the humanities in medicine, however, the unexamined Pellegrino is not worth leaving unopened.

Robert Baker

Department of Philosophy, Union College, N.Y.

NOEL G. COLEY and VANCE M. D. HALL (editors), *Darwin to Einstein. Primary sources on science and belief*, Longman in association with the Open University Press, 1980, 8vo, pp. ix, 358, £9.95 (£5.65 paperback).

COLIN CHANT and JOHN FAUVEL (editors), *Darwin to Einstein. Historical studies on science and belief*, Longman in association with The Open University Press, 1980, 8vo, pp. x, 335, £9.95 (£5.65 paperback).

Students and teachers will welcome these two additions to the already substantial materials that the Open University has produced for its course on science and belief from Darwin to Einstein. The two books divide their interest between a collection of extracts from primary sources, and an accompanying volume that provides extracts from contemporary historians of the sciences.

The primary sources volume attempts to organize itself around a competing series of metaphysical propositions which can be thought of as determining (and sometimes being determined by) scientific investigation. It must be said that this can often be a little hard to see as a thematic consistency: in Section 1 for example, entitled "Beliefs in Science", there are extracts from Haeckel, Agassiz, J. D. Bernal, Karl Pearson, and C. H. Waddington. But if the reader bears with these difficulties, a genuine theme comes to present itself in the next couple of sections. By concentrating on developments in the physical sciences, with appropriate quotations from Clausius, Thomson, Maxwell, and Einstein, the editors convey successfully how the logic of these scientific developments was the dissolution of any consistent theory of matter. Of course, this is a complex issue and one not easily reduced to social explanations as to why particular

## Book Reviews

theories of matter were preferred at any given historical time. But one figure particularly makes a welcome appearance among these extracts and that is Oswald Spengler. Spengler could see, with considerable historical accuracy, that science itself should properly be seen as evolving out of prior religious precedents; but perhaps more strikingly he sensed that what he called “Western physics” was drawing near to the limits of its possibilities. In that sense Spengler makes use of many of the thinkers who are represented elsewhere in this volume and provides its theme. So much of nineteenth-century science performs this double act: the double act of advancing materialist explanations of phenomena, while at the same time rendering those phenomena even more mysterious. By completing, in Sections 5 and 6, their work by providing extracts from the life sciences, one of these being entitled “The Mystery of Life” the editors complete what by now has become a consistent thread in this volume. This leaves them open, rather intriguingly, to leave the last extract to Emile Durkheim, where the case is put for regarding scientific belief as analogous to religion.

The volume on historical studies is even more varied, but all students of nineteenth-century science must be grateful that it at last provides a home for a much-quoted but until now unavailable article: R. M. Young’s “Natural theology, Victorian periodicals and the fragmentation of a common context”. There are also useful reprintings, notably J. Farley and G. L. Geison on the Pasteur-Pouchet debate; J. Burchfield on Kelvin and the age of the earth; and E. Fee on the sexual politics of Victorian social anthropology. It is also very welcome that the editors have reprinted Paul Forman’s piece on Weimar culture and the development of quantum theory, particularly since they managed to follow it with John Hendry’s reply to the exciting, if occasionally misconceived, claims that Forman made in his original, and indeed seminal, article.

Both volumes will be particularly useful for students in these fields, and both follow the notion of science and belief, and indeed science *as* belief. This prompts the reflection that a good deal of the approach favoured by the Open University in this Darwin to Einstein course is one that seeks to expose the misconceptions that will accompany a purely materialist philosophy of life. Is it possible that the very nineteenth-century idea that religion has little to fear from science has found its latest advocate in the history of science courses of one of our most notable public services?

Michael Neve

Unit for the History of Medicine, University College London

MICHAEL HUNTER, *Science and society in Restoration England*, Cambridge University Press, 1981, 8vo, pp. xii, 233, £18.50 (£5.95 paperback).

The appearance of this book will be one of the most welcome events of this publishing year for historians of science. In view of the seminal importance of the Restoration period for British science, and the fierce scholarly campaigns which have been waged over the territory in the learned periodicals during the last generation, it is staggering that till now no general survey has been written. Dr. Hunter’s book not only fills the gap, but fills it admirably.

Dr. Hunter has sensibly avoided writing either a narrative of the lives of late seventeenth-century scientists, or a chronicle of their achievements (there is not much