

## Book Reviews

G. E. R. LLOYD, *Magic, reason and experience. Studies in the origins and development of Greek science*, Cambridge University Press, 1979, 8vo, pp. xii, 335, £20.00 (£7.95 paperback).

*Reviewed by Vivian Nutton, M.A., Ph.D., Wellcome Institute for the History of Medicine, 183 Euston Road, London NW1 2BP.*

That the Western scientific and medical tradition is built on Greek foundations is well known: what is far less obvious is how and why Greek science arose and developed, and what distinguished it from its Egyptian and Babylonian contemporaries. In this elegant book, Dr. Lloyd addresses himself to these difficult questions and points towards their solution. He examines again the role of magic and divine causation in archaic and classical Greece – Herodotus' ambivalence, pp. 29–32, is particularly striking – and shows how gradually some thinkers came to emphasize the regularity of nature and to seek its causes.

Their tools of enquiry similarly evolved over a long period – dialectic, where public debate on medicine and philosophy helped sharpen rhetorical arguments, and empirical research, where the road from casual observation to the purposeful dissections of Erasistratus and Galen was long and stony. Even in the Ptolemaic system of astronomy, observations were more often deployed to illustrate and support theories rather than to test them. Aristotle, by his programme of collective scholarship and by his interests in biology, politics, and logic, sums up the achievements of the classical Greeks and provides a model for the development of empirical research under the Hellenistic monarchs. More might have been said here about the relationship between technological development and scientific theory in medicine and geography, cf. the controversial discussion of early maps in *J. Hellenic Studies*, 1967, 87: 86–94.

Having identified some of the distinctive features of early Greek science, Dr. Lloyd explains its origins in the social structure of the Greek city. Its widespread literacy, and its high level of technological and economic development are rightly seen as necessary, but not sufficient, causes, and the catalyst is assumed to be the new experience of radical political confrontation and debate in a small-scale, face-to-face society. Skill in political argument produced an audience appreciative of dialectical skill, and claims to particular wisdom and knowledge in other fields were similarly liable to scrutiny. The result was a science strong in argument and epistemology, often at the expense of empirical content, and vigorous in its competitive contentions.

The agonistic spirit, however, is absent from this lucid and thought-provoking book, which even as an expensive paperback is essential reading for the understanding of the achievements of the Greeks and of the origins of Western medicine and science.

FRANK C. MEVERS (editor), *The papers of Josiah Bartlett*, Hanover, New Hampshire, University Press of New England for the New Hampshire Historical Society, 1979, 8vo, pp. xxxix, 477, illus., \$25.00.

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

Josiah Bartlett was born in Massachusetts in 1729. After being apprenticed to a local physician he set up in practice in New Hampshire in 1750 and continued in his