## Book Reviews

JOANNES MORSINK, Aristotle on the generation of animals. A philosophical study, Washington DC, University Press of America; London, Eurospan, 1982, 8vo, pp. viii, 184, £20.75 (£9.75 paperback).

The greater part of this book is devoted to a study of Aristotle's theory of heredity in the De generatione animalium. Morsink argued that Aristotle is there engaging in dialectical dispute against the pangenesis theory of inheritance as advocated in "Hippocrates" On semen and On the nature of the child, and that Aristotle's own explanation in terms of form provided by the male parent and matter by the female is advanced as a scientific hypothesis better able to explain the facts. Some scholars have gone wrong, Morsink argues, in emphasizing the simple form-matter theory of book 1 without due regard to the part played by "powers" (dunameis) from both male and female in the more complex theory of book 4; on the other hand, he claims, the theory of book 4 is a development of the initial theory of book 1 and not in effect a rejection of it.

In the first chapter of the work, Morsink argues that Aristotle's approach in *De gen. an.* is in accord with his remarks on the usefulness of dialectical argument to the scientist in *Topics* 1.2, but not in accord with the strictly inductive approach put forward in *Posterior analytics* 2.19. Nor is the conflict to be explained, he argues, in terms of Owen's contrast between *a priori* principles established by dialectic, on the one hand, and empirical observations on the other. Morsink himself offers no explanation of the conflict; he is clearly right to try to relate it to Aristotle's actual practice in a scientific treatise.

The book is well produced from typescript; I noticed a few minor misprints. At p. 120 line 11 "against" should be "gains".

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MANFRED ULLMANN (editor), Die Schrift des Rufus von Ephesos über die Gelbsucht, Göttingen, Vandenhoeck & Ruprecht, 1983, 8vo, pp. 87, illus., DM.60.00 (paperback).

Professor Ullmann continues his rehabilitation of the writings of Rufus of Ephesus, fl. AD 110, the only doctor of Antiquity to rival Galen as an author and clinician of genius. By careful scholarship he shows that from fragments in a Greek medical encyclopaedia, an Arabic summary preserved among the rubbish in the Cairo Geniza and another wrongly catalogued in Berlin, and a medieval Latin translation of the therapeutic sections, but wrongly ascribed to Galen, it is possible to reconstruct large parts of this lost Greek work on jaundice. He himself provides a German translation of the Arabic, but not, unfortunately, of the Greek or Latin; he offers a brief commentary also upon the Arabic, concentrating in particular on the drugs recommended, and discusses the place of Rufus' teaching on jaundice. One can have only praise for the quality of the detective work, which also, in passing, reveals that the so-called Arabic version of Galen's (lost) tract on the same topic is but a later compilation taken largely from *De locis affectis*.

The Latin version which is here printed was made from the Greek, and there is little reason to doubt that it was made by the famous translator, Niccolò da Reggio (fl. 1308-1345). But here Professor Ullmann's touch is less sure, and his discussion both of the translator and of the manuscripts omits much of significance. The work of Weiss, Thorndike, and Durling is passed over in silence, to say nothing of my recent (1979) discussion in my edition of Galen, On prognosis, pp. 23-39. The hard-to-find article of G. Pezzi, 'La vita e l'opera di Maestro Nicolao da Reggio', Atti del IX biennale della Marca e dello Studio Firmano per la storia dell'arte medica, 1971, pp. 228-233, adds much new archival information as well as many errors. The relationship between the two Cesena MSS., obscured by an error of Diels, was clarified in 1911 by Minor, and confirmed by Marinone, Galeno, La dieta dimagrante, Turin, 1973, and by me: MS. D is a direct copy of MS. E. A further manuscript of this treatise was revealed as long ago as 1909, by Boinet in his catalogue of the manuscripts of the Paris Académie Nationale de Médecine, MS. 51, fols. 324r-327v. This manuscript is a twin of Dresden Db 92-93, as I showed in K. Treu (ed.), Studia codicologica, 1977, pp. 331-340, and

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was written c. 1450 in N. France. Such errors and omissions by Professor Ullmann do not seriously diminish the value of what he has offered us, but they emphasize that any editor of a text of an ancient medical author, in whatever language, should first check with the office of the Corpus Medicorum in East Berlin, whose files constitute the most up-to-date and correct list of manuscripts. For all its many merits, the old Diels catalogue is not enough, and it is sad that Professor Ullmann, who by his own researches in Arabic manuscripts has transformed our understanding of the Greek heritage in Islamic medicine, should have failed to note similar developments in the Western tradition.

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RICHARD SORABJI, *Time, creation and the continuum*, London, Duckworth, 1983, 8vo, pp. xviii, 471, £29.50.

This impressive book offers far more than its title suggests. Although time lies at its heart, it ranges over topics as varied as the origins of idealism, mystical experience, fear of death, atomism and the problem of creation, and the possible eternity of the world. The reader is led elegantly and carefully from early Greek philosophy to modern discussions of quantum physics, and can only marvel at the author's deep acquaintance with the philosophical writings of late antiquity and the early Middle Ages. If nothing else, it shows that vital philosophical debate did not end with Rome's conquest of Greece or even with the problematic closure of the schools of Athens in AD 529.

The contribution of Galen to these discussions gets perhaps unduly short shrift, although, given the obscurity of the sources, Professor Sorabii can in no way be blamed for overlooking them. Galen, in both On demonstration and in On my own opinions, ch. 2 (soon to be published in a Festschrift for Paul Moraux), declared that both the creation of the world in time and its destruction were matters that could in no way be proved on the evidence available, and that arguments in favour of one position, even if accepted, did not entail any solution for the other problem. Galen's scepticism (briefly noted, p. 301) was bitterly opposed by his contemporary, Alexander of Aphrodisias (see my forthcoming article in Bull. Hist. Med.), and by a whole tribe of Arabic philosophers almost into the fourteenth century. Some, like as-Sijistani and al-Amiri (tenth century, see S. M. Stern, Medieval Arabic and Hebrew thought, 1983, V.331), merely reported briefly on the celebrated confrontation between the two Greeks who had shared the same philosophical teacher, but others thought it important to counter Galen in detail. They based themselves on Galen's own writings, and argued against him with considerable respect (cf. J. C. Bürgel, Nachr. Akad. Wiss. Göttingen, 1967, 280-290). They included the great trio of Rhazes (cf. S. Pines, Actes 7 Congr. Hist. Sci., 1953, 480-487; M. Mohaghegh, Proc. 27 Int. Congr. Orient., 1971, 240-242), Geber (II.327-329, ed. Kraus) and al-Fārābī (M. Steinschneider, Al-Farabi, 1869, 134), and culminated in the Jewish doctor and philosospher, Maimonides. Professor Sorabji refers to his views on time and on the impossibility of proving conclusively whether the universe began, but without noting the clear influence of Galen, acknowledged by Maimonides himself in his Guide for the perplexed, I.73.3; II.13.1; II.15. But Galen's scruples could be exaggerated, and in his later Aphorisms, XXV.40, Maimonides took strong issue with his views on philosophy and cosmogony, which contradicted the Scriptures. Galen might have been a considerable logician, but he lacked the faith to resolve his doubts (cf., for an English translation of the relevant texts, J. Schacht, M. Meyerhof, Bull. Fac. Arts Univ. Egypt, 1937, 5: 53-76).

These addenda in no way diminish the value of this important book, which combines rigour, erudition, and elegance within its substantial covers.

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JOEL MOKYR, Why Ireland starved: a quantitative and analytical history of the Irish economy, 1800-1850, London, Allen & Unwin, 1983, 8vo, pp. x, 330, £22.50.

This book challenges conventional wisdom on the pre-famine Irish economy. Applying