Brigitte Englisch, *Die Artes liberales im frühen Mittelalter (5.–9. Jh.)*. Stuttgart (Franz Steiner) 1994. 494 pp., DM 148 kart. ISBN 3-51506431-1 (Sudhoffs Archiv, Beiheft 33).

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The title of the book under review is misleading. More to the point is its subtitle, "Das Quadrivium und der Komputus als Indikatoren für Kontinuität und Erneuerung der exakten Wissenschaften zwischen Antike und Mittelalter". Actually, however, *music* is told to be "hardly relevant" because no general treatment of the development of this discipline in late antiquity and the early Middle Ages has as yet appeared (p. 12).

What is offered is thus a discussion of the way Macrobius, Martianus Capella, Cassiodorus, Isidore, Bede and Hrabanus Maurus present arithmetic, geometry and astronomy, together with an extensive investigation of the computus treatises of Bede and Hrabanus. It follows from the arguments that the mediaeval encyclopaediae (Isidore's Etymologiae, Bede's De natura rerum and Hrabanus's De universo) continue a trend inaugurated in the Roman world by similar handbooks (Macrobius's Somnium Scipionis, etc.), and that the gradual (but ultimately radical) decline of contents was a natural consequence of the characteristics of the genre, and no result of ecclesiastical hostility to pagan learning. It is argued that the purpose of the genre was to dispense a general culture (Bildung) by which the elite could legitimize its social standing (much in the vein of the Gadamer-Habermas analysis of the function of modern humanities). Most interesting is the investigation of Bede's *De temporum ratione*; here it is suggested that Bede included material which future workers might use to correct the length of the year even though Bede did not dare draw the conclusion himself – in part because he had already once been accused of heresy, in part because it would undermine his own argument from the Nicaean Easter definition.

The actual assertions go much further. The author repeatedly denies that the gradual disappearance of substance from the treatises corresponds to declining competence, claiming (e.g., p. 474) that the handbooks were meant as introductions to the reading of more advanced treatises, without giving the slightest evidence for the presence of such works in the early Middle Ages. She also identifies the totality of Ancient science with the "static-reductionist reception of pre-existent formulae" that characterized the encyclopaediae (p. 476) – the *Almagest* is believed to be nothing but "a systematic compendium of the precursors" with interspersed refinements (p. 33 n. 88, totally misunderstanding the passage in Stahl's *Roman Science* that is cited as source). No

distinction is made between ancient "ideas about the aims of science" (*Wissenschaftsvorstellungen*) and "the need for conservation of inherited cultural structures" (*Bildungsstrukturen*) (p. 477).

These weaknesses of conceptualization and precision are not isolated cases but characteristic of the book as a whole – space only allows sampling and no thorough discussion:

The author asks, quite sensibly, that the single presentations of the quadrivial disciplines be seen in the context of the works within which they belong. However, she does not seem to have looked far beyond the relevant chapters herself (cf. also the reason that *music* is omitted). Thus she explains (p. 472) the omission of geometry from Hrabanus's *De universo* by the closeness of this topic to measure and bodily shape, which would make it inappropriate as "demonstration of a theosophical principle" – ignoring that the presentation of *number* is subordinated precisely to a treatment of *measure*, and in general overlooking the conflict between her interpretation of Hrabanus's intentions and his detailed descriptions (bookish thought they are) of agriculture, warfare and armament, construction, etc. (As she overlooks that what she sees as "astronomy", *viz* book IX, is rather "natural philosophy" in general, combining books XIII and III of Isidore's *Etymologiae*; comparison with *De clericorum institutione* III.xxv shows Hrabanus to have known fully well how to delimit astronomy when that was his aim).

The style is heavily repetitive and convoluted, which obscures the absence of arguments for critical points. One example is the route leading to the conclusion that Hrabanus understood Bede's hints (suddenly turned into an explicit *theme* on p. 446) that the true year might be shorter than $365\frac{1}{4}$ days. At first it is implicitly taken for granted (p. 441, and more directly p. 444). P. 450 it becomes a question to be taken up later; p. 460 the opposite conclusion would be over-hasty – and p. 462 it has become a fact. The obvious counter-evidence is ignored: in his preface, Hrabanus censures the disorderly presentation of a precursor treatise, convincingly identified by B. Englisch as Bede's treatise – and the components of Bede's hint are indeed relocated by Hrabanus to places where they would belong as general extensions of the presentation, as would be done by somebody who did not understand the specific aim of introducing then.

The lack of precision even on elementary points is astonishing in a revised *Promotionsabhandlung*. Thus *astronomy* is claimed (p. 471) to receive the most bulky treatment in all the encyclopaediae considered, as a consequence of its cosmic importance. Simple page counting reveals Cassiodorus to allot twice as much space to arithmetic, while Martianus allocates less space to astronomy than to any other quadrivial discipline. Since neither Bede nor Rhabanus present the quadrivium as a whole, "all" reduces to Macrobius plus Isidore.

To sum up, nobody should borrow the conclusions of the present publication without checking the precision of the argument as well as the source references and the citations of the secondary literature on which they are built.

Readers who are untrained in a particular German academic style should be warned that the syntax is more complex than Kant's, though no more tangled than Hegel's in *Phänomenologie des Geistes*.

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