

Reviews

Vernet, Joan and Parès, Ramón (eds.): *La Ciència en la Historia dels Països Catalans*. Vol. I: Dels àrabs al Renaixement. Institut d'Estudis Catalans and Uni-versitat de València, 2004. 629 pp.

This monumental book is a comprehensive survey of what is presently known of the revival, under Arabic influence, and further development of the sciences in Catalonia from the late tenth century on. The ground for such studies has been laid by J.M. Millàs Vallicrosa by the publication, in 1931, of his famous *Assaig d'història de les idees físiques i matemàtiques a la Catalunya medieval*. As J. Vernet and J. Samsó explain in the introductory chapter (pp. 31-43) (Catalan "countries", in the English version of the list of contents on p. 25, seems to be a misprint for "counties" (comtats catalans)), already Millàs thought of the continuation of his studies through all periods into modern times. But after the *Assaig*, called "vol. I" in 1931, no further volumes in this intended series appeared. Instead Millàs published numerous studies of individual items

from later periods in the history of the sciences in Catalonia. The present project, edited by J. Vernet, Millàs' disciple and successor, and R. Parès, now resumes and realizes Millàs' former project and will draw a complete survey of the history of the sciences in Catalonia of which the volume under discussion here is the first and will be followed by two more volumes. A survey of the contents of the entire project is here given in pp. 15-20.

Vol. I falls into two parts, Part 1 on the "hums" (*remors*, echoes or influences) of the Arabs on the Catalanian counties in a first period (pp. 45-235), and Part 2 on the succeeding developments into Renaissance times (pp. 237-595). Pp. 597-602 follow biographic profiles of the various authors who have contributed to this volume, and pp. 603-626 the index of personal and geographical names.

Part 1 contains articles by M. Forcada on the situation of the sciences in the Arabic area south of Catalonia (which itself had remained a Christian area), by R. M. Comes on the intellectual environment in Catalo-

nia in the 10th and 11th centuries, by J. Samsó on the first contacts with Arabic science in Catalonia and its radiation into other regions in Europe, by D. A. King on astrolabes of medieval Catalonia and by M. Viladrich on agricultural and pre-industrial techniques in the Catalonia of this period.

As through the whole book, all articles were written by first hand specialists and offer the present state of knowledge, based on the most recent studies published in each field.

While it is, of course, impossible to go into the details of each article in a review of such a huge work treating so many fields, let me here just touch two individual items.

In discussing the so-called 'Carolingian astrolabe', once acquired by the late M. Destombes and now housed in the Institut du Monde Arabe, Paris, King (p. 175) speaks of the incapability of European astrolabe makers of rendering the Arabic star names in Latin. One may here compare the case of the drawings of the astrolabe of Khalaf ibn al-Mu'adh in MS Paris, BnF lat. 7412 (cf. also here, Samsó, pp. 121, 133). While the draftsman here drew all the parts of the astrolabe faithfully including the Arabic inscriptions (in Arabic script!), even the maker's signature, he treated the drawing of the rete, on fol. 19v, differently. Here he did not render the star names in Arabic script like the inscriptions on the plates etc., but rather he wrote the Arabic names in Latin transliteration, in two series: one series added to the star pointers in the rete itself, and an alternative series,

with different forms and spellings, in a separate list below the drawing. This separate treatment of the star names seems to point to a special problem around these names. King may therefore be right to assume that the scholar who provided the old layer of Latin inscriptions on the 'Carolingian astrolabe' was not capable to transform these names into Latin script or, at the moment of his work, had no source at hands from which to collect the names and put them in their correct places on the rete.

A word on two star names in the Catalonian astrolabe of ca. 1300 (King, p. 186): MENCER: perhaps here the maker of the instrument, having other (Arabic or Western?) instruments in front, misplaced the name from the position of the pointer of the neighbouring star alpha Ceti (called *mencar*, *menkar* and the like in Latin sources) to the pointer of alpha Orionis; Latin forms of Arabic *mankib* (for alpha Orionis) do otherwise not appear in the family of names here used. ELAYYE, alpha Ophiuchi: while this form of the name seems to echo Arabic *al-hayya*, the name of the constellation Serpens (and perhaps a star in it), one may assume that the maker misread two V's in his source for Y's. The name then corresponds correctly to forms like *Elhavve* or the like, for Ophiuchus (*al-hawwā*).

Part 2 of the book contains, after a general introduction, again by J. Vernet and J. Samsó, eleven chapters treating the development of various branches of the sciences in Catalonia into Renaissance times. It begins with a survey of the transmission of

scientific Arabic material into the north-east of the Iberian peninsula in the 12th century (J. Samsó). There follows a very instructive chapter on the less known Jewish contribution to the transmission of sciences in Catalonia and in Languedoc and the Provence (J. Samsó). Ll. Cifuentes then discusses the use of Catalan in the scientific texts during the late Middle Ages and the early Renaissance. Hereafter follow chapters on medicine (M. R. McVaugh), on universities (J. Arrizabalga), on Ramon Llull (L. Badia), on Arnald of Villeneuve (M. R. McVaugh), on alchemy (M. Pereira), astronomy (J. Chabás), cartography (M. Comes; unfortunately, most of the map illustrations appear too dark and, therefore, almost illegible), and on hydraulic, agricultural and pre-industrial technology (M. Viladrich).

The mass information here assembled, according to the most up-to-date state of knowledge, is overwhelming. The editors are to be praised and deserve the gratitude and acknowledgment of the scholarly community for having invested this huge amount of work and organisation necessary for presenting a comprehensive volume of this kind. Readers should, however, keep in mind that this admirable piece of work is centered on the developments in Catalonia. It is not a general history of sciences in medieval to Renaissance Spain. All those acquainted with Millàs *Assaig* of 1931 find here a worthy continuation of these earlier endeavours, and it is to be hoped that many will feel tempted to continue the

study of these intriguing materials – notwithstanding the unfavourable conditions that are presently prevailing in many places towards such historical research.

Paul Kunitzsch

George Saliba, *Islamic Science and the Making of the European Renaissance*. Transformations: Studies in the History of Science and Technology. The MIT Press. Cambridge, Mass. & London, England. Cambridge, 2007. 315 pp.

1998 saw the publication of two important essays on the origins of Islamic Science and its connections with its Greek predecessors: on the one hand, Dimitri Gutas published *Greek Thought, Arabic Culture. The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbāsīd Society (2nd-4th/8th-10th centuries)* (Routledge, London), which stressed the significance of the 'Abbāsīd period in the process of transmission of Graeco-Arabic science, and argued that the previous stage, the Umayyad Caliphate, was less important. In the same year George Saliba published, in Arabic, *al-Fikr al-'Ilmī al-'Arabī. Nash'atu-hu wa-taṭawwuru-hu* (Markaz al-Dirāsāt al-Masīhiyya-al-Islāmiyya, Balamand University, Lebanon), a book that has many points of contact with the one I am presenting here and which defended the opposite view: that is, that the Umayyad period is vital to an understanding of the beginnings of this transmission. Both