

27 octobre 1949

Mr. Baxter D. Wilson
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Dear Sir,

I have read with much interest your paper about the astrolabe in Popular Astronomy, April 49. As I have made a special study of this instrument, I can congratulate you on the very good contribution which you brought to the history of the astrolabe. I take this occasion to send you a few complementary remarks, upon which I should be glad to have your opinion.

1) page 162: The "Anticythera astrolabe" is probably not an astrolabe as we understand that word. It seems to be a fragment of an instrument showing the motion of the sun and the moon (cf. Zinner: die Copernicanische Lehre, p.48). A similar fragment was found in Salzburg (Ungerer: Les horloges astronomiques etc.). I have besides seen a plate found, a few years ago, in Lake Strymon (Greece), which might belong to a similar instrument. All this does not mean that this instrument was a planispheric astrolabe. Any plane projection of the heaven with a moving part may be considered as an ancestor of the astrolabe, and such maps can have existed at the time of Hipparchus; but lenses existed before the telescope, and magnets before the compass. I think that the famous letter of Synesius refers to such a map.

2) page 162: The oldest extant english instrument is an astrolabe of the Liège (Belgium) museum, which I have described in Ciel & Terre Mars 1948, p.73, and in my Traité de l'Astrolabe, Pl.III. It must have been made between 1190 and 1200. The next one is the (nearly identical) astrolabe of South-Kensington, described by Gunther under N° 293. Gunther has wrongly dated this instrument of the XIVth cent; it was made about 1225.

3) page 162: Planispheric astrolabes have been imagined in Alexandria about AD 500 (Traité de l'Astrolabe p.7). They cannot have been brought across North Africa by the Arabs in AD 650, as at that time the Arabs had not the least idea of science and were just conquering Egypt. The transmission of alexandrine science is the work of the syrian monks, and the Arabs did not show any mathematical capacities before the 2d half of the IXth cent. As to the development of the so-called arabic science in Spain, it took place during the XIth cent and was contemporaneous with the beginnings of latin science in the convents of Catalogne. I think that the oriental (syrian) knowledge must have been brought simultaneously to Spain and to Catalogne by Jews.

4) page 163: Adelard of Bath's treatise is clearly inspired by the "de Mensura Astrolabii" of Hermann de Reichenau. It shows the same clumsiness in geometry. As to Hermann, it is doubtful wether his work was an original; more probably it is an interpretation of a previous treatise, perhaps the Sententiae Astrolabii (by Gerbert ?). Adelard was thus not "the first to assimilate arabic science etc.."

5) page 168: I think that the first line is missing. What was the full sentence ?

6) page 167; Chaucer's originality: I cannot find here Mr. Harvey's study on Chaucer. If the text of Messahalla is the mss. reproduced by Gunther, it is not a scrupulous translation of an original arabic treatise, but a very free interpretation by a latin writer of the XIIIth cent. I have only to remind you of the mention (Gunther, p. 141) of a latin calendar, which was of course completely ignored by Mash'allah; the star coordinates, f°70v and 71 of the mss, reproduced in Gunther p. 162, and mentioned in Gunther pp 141 and 152. Such interpretations are very frequent, and the medieval manuscripts are very unreliable sources. I have discovered in the Brussels Royal Library a similar treatise, intitulated "Tractatus Albumazaris ad faciendum astrolabium", which has of course nothing of Abu'l-Mashar but the name, and is a compilation of about 1370. Ptolemy's Planisphaerium has reached us after two "translations" by Maslamah and Rodolph of Bruges, and is full of mentions of the Arabs, or of the latin calendar etc. etc.

As a good example of these "borrowings", you know of course the "Travailer's Joy and Felicitie", fully reproduced by Gunther (Astrolabes, II, 502). This book is a shameless translation, word by word, of the "Astrolabii Declaratio" by Koebel (1552). This in turn is made of "borrowings" from Stoeffler's "Elucidatio Astrolabii" (1512). In this Elucidatio, I have found complete sentences "borrowed" from the Albumazar manuscript mentioned above ! And as this manuscript was written in 1370 in Brussels, it could not have been known by Stoeffler and thus both are probably a pilferage of an older work !!!

If I send you all these remarks, please do not consider them as criticisms. The history of science, and particularly the history of the astrolabe is far from being definite. All the available informations must be gathered, compared, discussed and classified. Since you are interested in such questions, I think that we should establish the contact between all those who have the same preoccupations. For my part, I place my documents at your disposition, and hope to read your remarks as soon as you care to send them.

By the way, I had to borrow the Popular Astronomy from the Brussel Observatory. If you happen to have a reprint of your paper, you would greatly oblige me by sending me a copy, for my own documentation.

yours very truly

H. Michel

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20 June 1950.

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Dear Sir,

I hope that you will forgive a delay that has stretched into months since I received your kind letter. There was some delay in securing a copy of the paper you desired. I am mailing the print today under separate cover. Too, I am sorry that it could not be in a more convenient form; but, a copy of the issue was the only thing available to me. Allow me to take this opportunity to thank you for the reprint from Ciel et Terre; I enjoyed it very much. I have recently secured a copy of your Traite de L'Astrolabe; it is a handsome volume and an indispensable tool for the student of the tools of early astronomy.

As you noted, there is an error on pp. 167-8 of my paper as it appears in Popular Astronomy. There is an omission, one which came about in the page make-up at the printer's after the galleys had been proofed. I have inserted the correct readings in the copy which I am sending to you.

With regard to your inquiry concerning S. W. Harvey's article: Mr. Harvey's article appeared, as noted, in the Journal of English and Germanic Philology, published by the University of Illinois at Urbana, Illinois. It is a short paper and was intended to serve as a preliminary sketch of the work he had begun on an analysis of Chaucer's Astrolabe. His objective, as he described it, was to determine whether Chaucer's treatise was a synthesis of a number of works on the astrolabe, or whether it was, as many editors believe, merely a re-working of a Latin translation of a treatise by Messahalla. Whether Mr. Harvey completed the proposed work, I cannot say. To the best of knowledge, he has not.

However, it must be noted that Mr. Harvey's interest was primarily literary. He was more concerned, it seemed, with Chaucer's literary methods than with the subject matter of the Astrolabe. Mr. Harvey does not indicate the edition or editions of the Latin versions of Messahalla's treatise used in his studies. One text which I am sure would have been readily available is found in Walter W. Skeat's edition of Chaucer's Astrolabe: A Treatise on the Astrolabe...by Geoffrey Chaucer. London: Trübner (1872),

for The Early English Text Society (Extra Series No. XVI). In this edition, Skeat included an excerpt of a Latin treatise attributed to Messahalla as proof of his contention that Chaucer relied heavily on Messahalla in writing his treatise. Skeat included the "Operatio" section (pp. 88-105, op. cit.). The manuscript Skeat prints from is "MS. Camb. Univ. Lib. II. 3.3, p. 74." Too, it might be mentioned that Skeat's edition of the Astrolabe is highly suspect insofar as the text of Chaucer's treatise is concerned; his edition is not the critical edition it should be.

There are a couple of books which have appeared recently that might be of some interest to you. Lynn Thorndike's The 'Sphere' of Sacrobosco and Its Commentators, University of Chicago Press (1949), also available at the Cambridge University Press, London, N. W. 1, England; and I. Bernard Cohen's Some Early Tools of American Science, Harvard University Press, Cambridge, Massachusetts (1950). The latter volume is quite limited in scope, but it is interesting as a new approach to the study of the history of the sciences in America. It pointedly throws light on eighteenth and nineteenth century thought in America, and on a phase still neglected by most historians of early America.

May I thank you again for your kind interest in my rather meager paper? Your letter is a spur to continued effort. I regret that I am unable to return your courtesy by replying in French; like too many Americans, I read French, but hesitate to attempt writing in French. And again, please forgive the delay in getting the paper off to you.

Very truly yours,

Baxter D. Wilson

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