

Ex Oriente Lux
Translating Words, Scripts and Styles
in Medieval Mediterranean Society



Selected Papers

Edited by
Charles Burnett & Pedro Mantas-España

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Stylistic Evidence for Identifying John of Seville with the Translator of Some Twelfth-Century Astrological and Astronomical Texts from Arabic into Latin on the Iberian Peninsula*

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John of Seville, who lived in the first half of the twelfth century, was one of the most important Arabic-Latin translators of the Middle Ages. Eleven translations carry his name as translator, some of them very influential, such as Albumasar's astrological *Liber introductorii maioris*. It is a long-standing surmise that John was responsible for more translations which are not explicitly attributed to him. The present article furnishes stylistic evidence for the attribution of several anonymous translations to John of Seville. At the same time, it is a first step towards a comprehensive authorship analysis of all astronomical and astrological texts translated from Arabic into Latin in twelfth-century Spain. In this regard, it runs parallel to an article that I am publishing together with Andreas Büttner on anonymous translations in the discipline of philosophy.¹

The eleven translations explicitly attributed to John of Seville in colophons are the following: Pseudo-Aristotle's *Secretum secretorum*, Qusṭā ibn Lūqā's *De differentia spiritus et animae*, six texts on astrology, two on the astrolabe and one on astronomy. John of Seville was active in the 1120s and 1130s. One of these translations, al-Farḡānī's (Alfraganus's) astronomical *De scientia astrorum*, bears a precise date: it was finished on 11 March 1135. Since John never mentions a fellow translator, it is likely that he was a native Arabic speaker. Several translations of his were produced 'in Limia', that is, the region of the Lima valley in northern

* I am very grateful for advice to David Juste and Henry Zepeda (of the project *Ptolemaeus Arabus and Latinus*), Jean-Patrice Boudet and Charles Burnett, for the responses from the audience at the Cordoba colloquium in May 2015, for the transcription work of Irina Galynina and Felicitas Haber and for the help of Andreas Büttner, who has provided the IT support for this study. Research for this article was funded by the German Federal Ministry of Education and Research as part of *Kallimachos: Zentrum für digitale Edition und quantitative Analyse* at the University of Würzburg.

¹ Hasse – Büttner, 'Notes', forthcoming.

Portugal. Tarasia, Queen of the Portuguese, is the dedicatee of his *Secretum secretorum* translation. Since John of Seville also dedicates one translation, that of Qusṭā ibn Lūqā, to the archbishop of Toledo, he must have had connections to Toledo too. But the evidence for his activity in the Lima region is much stronger. In fact, he is often called *Iohannes Hispalensis et Limiensis* in the manuscripts. Note that John of Seville should not be confused with the translator Johannes Hispanus (John of Spain), canon of Toledo cathedral and collaborator of Dominicus Gundisalvi on at least two Arabic-Latin translations in the latter half of the twelfth century. Nor with Avendauth, the Jewish scholar, who also worked together with Gundisalvi on several translations.²

Among John of Seville's translations is the above-mentioned magnum opus of Albumasar (Abū Ma'shar al-Balḥī, 787-886 AD), the very influential handbook of Arabic and Latin astrology called *Liber introductorii maioris* in Latin. It has been suggested, notably by Manuel Alonso, Richard Lemay and Charles Burnett,³ that John of Seville was responsible for more Albumasar translations, which do not transport the name of the translator in the colophons: *De magnis coniunctionibus*, *De revolutionibus annorum mundi* and *Flores*. These are texts on topics of general astrology, i.e., astrological theories that concern predictions of general matters of the world: weather, seasons, plagues, religions, dynasties etc.

The first of these Albumasar texts, *De magnis coniunctionibus*, which is known in Arabic as *Kitāb al-Milal wa-d-duwal* ('The Book of Religions and Dynasties'), is a major and comprehensive work of Arabic conjunctionist astrology. The theory of conjunctions of Saturn and Jupiter figures prominently in this book, but Albumasar also discusses many other planetary conjunctions. The text was translated in the twelfth century on the Iberian Peninsula, but the Latin version which became canonical in the Middle Ages seems to be the result of a revision of this translation made in Toledo with recourse to the Arabic. There exists a critical edition both of the Arabic text and of the Latin translation by Charles Burnett and Keiji Yamamoto. The second text, *De revolutionibus annorum mundi seu liber experimentorum*, is clearly a translation from the Arabic, but the Arabic original has not yet been identified. The *De revolutionibus annorum mundi* survives in more than 30 manuscripts, but was never printed. It is not identical⁴ with the third

² On John of Seville see Burnett, 'John of Seville and John of Spain', which is a great advance over previous scholarship.

³ See Alonso, 'Juan Sevillano', who (too optimistically) ascribes a great number of translations to John of Seville; Lemay, *Abū Ma'shar al-Balḥī*, vol. IV, p. 309; Burnett-Yamamoto, *Abū Ma'shar on Historical Astrology*, vol. 2, pp. xiii-xiv; Burnett, 'John of Seville and John of Spain', p. 61. Cf. also Thorndike, 'John of Seville', and Boudet, 'Un traité'.

⁴ As Pingree and Sezgin wrongly believed (Sezgin, *Geschichte*, vol. VII, pp. 142-143, no. 3); DSB s.v. 'Abū Ma'shar' (by Pingree, no. 9).

text, *Flores Albumasaris* ('Select Sayings of Albumasar'), whose title apparently derives from the Arabic *Kitāb an-Nukat* ('Book of Witty Sayings') attributed to Albumasar, which has a complicated Arabic transmission under various longer Arabic titles. The *Flores* discuss a long list of issues concerning revolutions of the years of the world. This text was very popular in the Latin world; it exists in more than 120 manuscripts and in at least three editions (1488 or 1506, 1488, 1495), but has not yet received a modern edition. The textual transmission is best explained by Burnett and Yamamoto.⁵

An argument advanced in previous scholarship for identifying John of Seville with the translator of these three texts concerns the similarity of the colophons. The colophons of John of Seville's authentic translations follow a regular pattern: *Perfectus est ... cum/sub laude Dei et eius auxilio/adiutorio, translatus/interpretatus a Iohanne Hispalensi (et/atque Limiensi) ex Arabico in Latinum*.⁶ Compare the colophons of the three anonymous translations, all of which contain the phrases 'completed is the book ...' and 'with the praise of God and his help':

(1) *De magnis coniunctionibus*: 'Completo est liber coniunctionum, ordinatio Albumasar Iafar filii Machometi Albalichi, quod est gentile vel patrium, cum laude Dei et auxilio eius, et maledictio Domini super Machometum et super socios eius'.⁷

(2) *De revolutionibus annorum mundi* (MS Paris BN lat. 16204, f. 333rb): 'Perfectus est liber experimentorum Albumasar sub laude Dei et eius adiutorio feliciter explicit'.

(3) *Flores* (ed. Augsburg 1488, sig. c3v): 'Opus florum Albumasaris explicit feliciter'. But compare the wording in MS Oxford BL Digby 51, f. 55ra: 'Finit liber florum Albumasar sub laude Dei et eius adiutorio'.⁸

As David Juste has pointed out to me, this argument cannot convince, because colophons with these phrases are standard among translators. He has drawn my attention to colophons with the phrases *perfectus est liber* and *cum laude Dei et eius adiutorio* in translations of Plato of Tivoli, Johannes Toletanus, Salio of Padua and of the tandem Johannes Brixiensis/Prophatius Judeus.⁹

⁵ Burnett – Yamamoto, *Abū Ma'šar on Historical Astrology*, vol. 1, pp. xvi-xviii (work no. [I]), referred to as *The Report*). Cf. Carmody, *Arabic Astronomical*, pp. 92-94 (no. 3).

⁶ Burnett, 'John of Seville and John of Spain', p. 61.

⁷ Burnett – Yamamoto, *Abū Ma'šar on Historical Astrology*, vol. 2, p. 317.

⁸ For examples of colophons of these three texts, also from other manuscripts, see Burnett, 'Magister Iohannes Hispalensis', pp. 225-227, and Lemay, *Abū Ma'šar al-Balḥī*, vol. IV, 307-309.

⁹ Compare: (1) Plato of Tivoli's translation of Albohali's *De nativitatibus*: 'Finit liber nativitatium Abuali Alchayat translatus de Arabico in Latinum a Platone Tiburtino in civitate Bar-

The attribution of anonymous translations to John of Seville or other authors thus rests on similarities in style only. In the past, Alonso, Lemay and Burnett have pointed to stylistic similarities and improved our knowledge of the vocabulary of the translators by providing glossaries to their critical editions. But stylistic arguments remain impressionistic as long as they are not based on a systematic approach. The present paper is meant to be a first step towards such an approach in the field of astronomical and astrological translations. This can only be a preliminary enterprise, since many texts needed for stylistic comparison are not yet accessible in editions or transcriptions. The table below lists astronomical and astrological translations from Arabic into Latin, of which we know or presume that they were made in the twelfth century on the Iberian Peninsula. Adelard of Bath is included, even though it is not certain that he was indeed active in that region.¹⁰ The table is arranged chronologically. Not considered in this table is the complex genre of *Iudicia*, among which are many compilations from various authors. The texts available to me in searchable format are highlighted.

The table is impressive for its sheer length. It is very apparent that the transport of Greek and Arabic astronomical and astrological texts into Latin Europe was a central concern of the Iberian translators of the twelfth century.

Astronomical and Astrological texts (without *Iudicia*)
Translated from Arabic into Latin on the Iberian Peninsula

anonymous	Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	transcr. Lemay-Boudet
	Ps.-Ptolemy, <i>Centiloquium Abugarafus</i>	transcr. Lemay-Boudet
	Messahalal, <i>De cogitatione</i>	ed. 1549
	Messahalal, <i>De mercibus</i> (or: <i>Super annona</i>)	
	Messahalal, <i>De nativitatibus II</i>	
	Messahalal, <i>De revolutionibus annorum mundi</i>	ed. 1493, 1549
	Messahalal, <i>De significationibus</i>	ed. 1549

chinona cum laude Dei et eius adiutorio'. (2) Plato of Tivoli's translation of al-Isrā'īlī, *Capitula Almansoris*: 'Perfectus est liber capitulorum Almansor cum Dei auxilio translatus de Arabico in Latinum a Platone Tiburtino quem Deus exaltet in civitate Barchinonia anno...' (See Juste, *Catalogus II*, pp. 100 and 233). (3) Johannes Toletanus's translation of Albohali's *De nativitatibus*: 'Perfectus est liber nativitatum anno ab incarnatione ... cum laude Dei et eius adiutorio' (see Juste, *Catalogus II*, p. 144). (4) Salio of Padua's translation of Alubater's *De nativitatibus*: 'Completus est liber Alchasibi de nativitatibus cum laude et adiutorio Dei, translatus a magistro Salomone canonico Paduano de Arabico in Latinum anno...'. (5) Johannes Brixiensis's and Prophatius Judeus's translation of Azarchel's *Saphea*: 'Explicit liber tabule que nominatur Saphea patris Isaac Azarchelis cum laude Dei et eius adiutorio'.

¹⁰ Mantas, 'Was Adelard of Bath in Spain?', pp. 195-208.

Stylistic Evidence for Identifying John of Seville

	<p>Messahalah, <i>In pluviis et ventis epistola</i> Messahalah, <i>Liber de intentionibus secretorum astron.</i> Messahalah, <i>Liber interpretationum</i> (or: <i>De occultis</i>) Gergis (?), <i>De significatione septem planetarum</i> Alkindi, De mutatione temporum Alkindi, De radiis Albumasar, De magnis coniunctionibus Albumasar, <i>De revolutionibus annorum</i> <i>nativitatum</i> Albumasar, De revolutionibus annorum mundi</p> <p>Albumasar, Flores Thebit, De recta imaginatione Thebit, De quantitate stellarum Ps.-Thebit, De anno solis Ps.-Haly (Aḥmad ibn Yūsuf), <i>Comm. on Centiloquium</i> Alhazen, Liber Aboali</p> <p>Toledan Tables Ca, Cb, Cc</p>	<p>ed. Burnett-Bos ed. d'Alverny-Hudry ed. Burnett-Yamamoto</p> <p>Ms. BN 16204 transcr. Galynina ed. 1488 transcr. Haber ed. Carmody ed. Carmody ed. Carmody ed. 1484 et al.</p> <p>ed. Millás-Vallicrosa, 285-312 ed. Pedersen</p>
Adelard of Bath	<p>Ps.-Ptolemy, Centiloquium Albumasar, Ysagoga minor</p> <p>Thebit, <i>Liber prestigiorum</i></p>	<p>transcr. Lemay-Boudet ed. Burnett-Yamamoto - Yano</p>
John of Seville	<p>Messahalah, <i>Epistola de rebus eclipsium</i> Messahalah, <i>Liber receptionis</i> Zahel, <i>De interrogationibus ... De electionibus</i> Omar Tiberiadis, <i>De nativitatibus</i> Alfraganus, <i>De scientia astrorum</i> Albumasar, Liber introductorii maioris Alcabitius, Introductorius</p> <p>Thebit, De imaginibus (versions I and J) Anonymous, Astrologicae speculationis exercitium</p> <p>Ibn aṣ-Ṣaffār, De opere astrolabii</p>	<p>ed. 1493, 1549 ed. 1493, 1549 ed. 1493 et al. ed. 1503 ed. 1493 et al. ed. Lemay ed. Burnett-Yamamoto - Yano ed. Carmody ed. Millás-Vallicrosa, 316-321 ed. Millás-Vallicrosa, 261-283</p>
Plato of Tivoli	<p>Ptolemy, Tetrabiblos</p> <p>Ps.-Ptolemy, Centiloquium Albohali (al-Ḥayyāt), <i>De nativitatibus</i> Albubater (Ibn al-Ḥaṣīb), <i>De revolutionibus</i> <i>nativitatum</i> Albategnius (al-Battānī), <i>De motu stellarum</i> al-Isrā'īlī, <i>Capitula Almansoris</i></p>	<p>ed. 1484, transcr. Juste (bk. 1-2) transcr. Lemay-Boudet</p> <p>ed. 1537, 1645 ed. ca. 1492 et al.</p>

	Haly Embrani, <i>De electionibus horarum</i> Ibn aṣ-Ṣaffār, <i>De opere astrolabii</i>	part. ed. Millás-Vallicrosa, 328-339 ed. Lorch et al.
Hugo of Santalla	Ps.-Ptolemy, <i>Centiloquium</i> Messahalāh, <i>Liber Aristotilis</i> Messahalāh, <i>Liber de nativitatibus 14 capitulis</i> Omar Tiberiadis, <i>De interrogationibus</i> Jafar (?), <i>Liber imbrium</i> Ibn al-Muṭannā, <i>Comm. on al-Ḥwārizmī's Tables</i>	transcr. Lemay-Boudet ed. Pingree-Burnett ed. Burnett 2004 ed. Millás Vendrell
Hermann of Carinthia	Ptolemy, <i>Planisphaerium</i> Zahel, <i>Fatidica</i> Albumasar, <i>Liber introductorius in astrologiam</i>	ed. Heiberg, 227-259 ed. Low-Beer ed. Lemay
Johannes Toletanus	Albohali (al-Ḥayyāt), <i>De nativitatibus</i>	ed. 1546, 1549
Gerard of Cremona	Ptolemy, <i>Almagest</i> Geminus of Rhodes, <i>Liber introductorius Ptolomei</i> Hypsicles, <i>De ascensionibus</i> Theodosius, <i>De habitationibus</i> Autolycus, <i>De spera mota</i> Messahalāh, <i>De scientia motus orbis</i> Alfraganus, <i>De scientia astrorum</i> Thebit, <i>De his que indigent (On the Almagest)</i> Ps.-Thebit, <i>De motu octavae sphaerae</i> Geber filius Affla, <i>Super Almagesti</i> Ibn Mū'āḍ, <i>De crepusculis</i> Ibn Mū'āḍ, <i>Tabulae Jahen</i>	ed. 1515 transcr. Georges ed. Kunitzsch-Lorch ed. 1504, 1549 ed. Carmody ed. Carmody ed. 1534 ed. 1542 et al. ed. 1549
Salio of Padua (via Hebrew)	Alubater (Ibn al-Ḥaṣīb), <i>De nativitatibus</i> Omar Tiberiadis, <i>De interrogationibus</i> ¹¹	ed. 1492, 1501, 1540 ed. 1503, 1525

Given the state of research in this field, in which the majority of texts have not yet received a modern edition, the table cannot be but preliminary and incomplete. It is good to have Francis Carmody's bibliography *Arabic Astronomical and Astrological Sciences in Latin Translation* of 1956 as a starting-point, but this study is in great need of revision. A 'new Carmody' is under work by David Juste and Charles Burnett.¹² But even though there remains a great amount of research to

¹¹ Burnett, 'De meliore homine', pp. 295-326. This version of Omar's *De interrogationibus*, which is a translation of an abbreviated version of Omar's *Iudicia*, is printed by Luca Gaurico in 1503 and 1525 as the fourth chapter of Omar's *De nativitatibus*.

¹² Some results of this work are now summarised in Burnett – Juste, 'A New Catalogue', pp. 63-76. Note that my table does not yet include the anonymous translation of Ps.-Ptolemy's *Liber de imaginibus super facies signorum* edited by Boudet, 'Un traité', pp. 17-35.

be done, it is possible to begin with a stylistic analysis, on the basis of the editions by Lemay, Burnett, Yamamoto and others, and by using newly made transcriptions. Thanks to Richard Lemay and Jean-Patrice Boudet, there exist transcriptions of several Latin versions of Pseudo-Ptolemy's *Centiloquium*. In recent years, important transcriptions have been produced as part of the project *Ptolemaeus Arabus et Latinus* (Munich-Würzburg): David Juste's transcription of the first half of Plato of Tivoli's translation of Ptolemy's *Tetrabiblos* (*Quadripartitum*) after the 1484 edition, and Stefan Georges's transcription of all thirteen books of Gerard of Cremona's translation of Ptolemy's *Almagest* after the 1515 edition. Two transcriptions were produced specifically for the purpose of the present article: Irina Galynina's transcription of Albumasar's *De revolutionibus annorum mundi* after MS Paris BN lat. 16204, f. 302vb-333rb, and Felicitas Haber's transcription of Albumasar's *Flores* after the 1488 edition. Moreover, the possibilities of stylistic comparison are constantly improving due to the search possibilities offered by the online lexicon *Arabic and Latin Glossary*.¹³

In the above-mentioned article on philosophical translations, I was able to analyze the authorship question not only philologically, as in the present paper, but also computationally, with the help of Andreas Büttner, by way of a statistical analysis of the most frequent words.¹⁴ This is not yet sensible for astronomical and astrological translations, since the corpus of searchable texts is still too small.

The principal idea of the analysis below is that the stylistic fingerprint by which the translators can be identified is a set of small words and phrases that are regular and specific at the same time: they are used regularly by the translator, but still specific to him, so much so that they are never or hardly ever used by any other translator. Experience shows that content words, and technical vocabulary in particular, is likely to travel from one translator to another, and may be changed consciously.¹⁵ This is why the analysis is focused on words that can be used in different contexts and disciplines. The first step of the investigation concentrated on texts with translators we know by name: the translations by Adelard of Bath, Plato of Tivoli, John of Seville, Hugo of Santalla, Hermann of Carinthia and Gerard of Cremona. With the help of a search programme written by Andreas Büttner, I was able to create lists of words and phrases that appear only in one of these translators, but not in any of the others. From these lists I then extracted all those words and phrases that appear regularly and are independent of topic and genre. More precisely, I extracted all those single words and

¹³ Hasse et al., *Arabic and Latin Glossary*.

¹⁴ Hasse-Büttner, 'Notes', forthcoming.

¹⁵ See Hasse, *Latin Averroes Translations*, pp. 11-12

phrases consisting of two, three or four words which appear more than five times in the works of a translator and which could, in principle, be found in texts of other scientific disciplines of the time. Hence, among the stylistic terms selected are terms such as *examinatio*, *annullare* or *demonstrare voluimus*, which are stylistic only in the special sense that they could appear in any scientific Latin text of the twelfth century. Finally, I have selected only those terms that appear in two or more texts by one translator, with the exception of Adelard of Bath and Hermann of Carinthia, since for these two I had only two texts each at my disposal, which is why I have retained terms that appear in only in one of the two translations.

I then took care that the selected terms are not typical of Dominicus Gundisalvi and Alfred of Shareshill, Toledan translators of works of philosophy, whose translations are not in the present corpus of texts. As a result, I arrived at six sets of terms specific to the six translators Adelard, John, Plato, Hugo, Hermann and Gerard. To isolate specific terms was easy for the idiosyncratic stylist Hugo, unproblematic for John, Gerard and Hermann, and difficult for Adelard and Plato. This difficulty will hopefully be reduced in the future when further translations by Adelard of Bath and Plato of Tivoli are added to the corpus of searchable texts.

In a next step, I produced the following six tables indicating for each translator which of the specific words appear in which anonymous translations. The first table is of Adelard of Bath. The four terms *examinatio*, *quodque inde*, *se applicare*, *cetera ut superius* can be found only in those texts of the entire corpus which are attributed to Adelard. The term *atque inde* is found twice also in texts by other translators of the twelfth century (including Dominicus Gundisalvi and Alfred of Shareshill), which is why it is marked with italics:

anonymous translation	words and phrases shared with Adelard of Bath (<i>examinatio</i> , <i>quodque inde</i> , <i>se applicare</i> , <i>cetera ut superius</i> , <i>atque inde</i> (2))
Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	
Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	
Alkindi, <i>De mutatione temporum</i>	
Alkindi, <i>De radiis</i>	
Albumasar, <i>De magnis coniunctionibus</i>	
Albumasar, <i>De revolutionibus annorum mundi</i>	
Albumasar, <i>Flores</i>	
Thebit, <i>De recta imaginatione</i>	
Thebit, <i>De quantitate stellarum</i>	
Ps.-Thebit, <i>De anno solis</i>	

Stylistic Evidence for Identifying John of Seville

Alhazen, <i>Liber Aboali</i>	
Toledan Tables Ca	examinatio (1)
Toledan Tables Cb	examinatio (5)
Toledan Tables Cc	

As remarked before, the set of stylistic phrases specific to Adelard is not yet long enough to yield robust evidence. But at least one can see that there is no evidence so far that Adelard was the translator of any of the anonymous texts in our table.

I would like to refer in passing to two content words of astrology typical of Adelard of Bath that I happened to hit at while searching for purely stylistic terms: *cehem*, a transcription of the astrological term *sahm* in Arabic, which means ‘lot’ or ‘part’, and *horoscopus*, for Arabic *ṭāli*, ‘ascendant’, ‘ascendant point’. John of Seville, for example, uses *ascendens* rather than *horoscopus*. Only an unknown reviser of John of Seville’s translation of Alcabitius’ *Introductorius* also uses *horoscopus*,¹⁶ and the term appears three times in the *Centiloquium mundanorum*. The term *cehem* is even rarer; in our corpus, it only appears in Adelard’s translations. Such terms are very interesting historically, and they are a tempting basis for stylistic ascription, but it is content terms like these which are excluded from the present approach.

Let us turn to Plato of Tivoli:

anonymous translation	words and phrases shared with Plato of Tivoli (sibimet, indicabimus, ac in ¹⁷ , ideoque sunt, debemus quod, qualiter ad, sibimet invicem, et modicum, in maiori parte, vel qui, velut in, veluti si ¹⁸ , quod est huius, <i>quaedam etiam</i> , <i>at si</i>)
Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	sibimet (2), debemus quod (1), <i>quaedam etiam</i> (1)
Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	debemus quod (1), in maiori parte (1), veluti si (1), <i>quaedam etiam</i> (1)
Alkindi, <i>De mutatione temporum</i>	in maiori parte (1)
Alkindi, <i>De radiis</i>	
Albumasar, <i>De magnis coniunctionibus</i>	et modicum (1), in maiori parte (2)

¹⁶ Burnett – Yamamoto – Yano, *Al-Qabīṣī (Alcabitius)*, p. 482.

¹⁷ Both *ac in* and *at in* are phrases typical of Plato of Tivoli.

¹⁸ The phrase *veluti si* provides less reliable evidence than the other phrases because it is also used occasionally by Dominicus Gundisalvi in his philosophical translations.

Albumasar, <i>De revolutionibus annorum mundi</i>	et modicum (3)
Albumasar, <i>Flores</i>	
Thebit, <i>De recta imaginatione</i>	
Thebit, <i>De quantitate stellarum</i>	
Ps.-Thebit, <i>De anno solis</i>	
Alhazen, <i>Liber Aboali</i>	
Toledan Tables Ca	
Toledan Tables Cb	
Toledan Tables Cc	

The tableau of stylistic words specific to Plato of Tivoli is broader than for Adelard, but still not substantial enough to be satisfactory. One result is indicative, however, which concerns the translations of Pseudo-Ptolemy's *Centiloquium*.¹⁹ Of this text there exist at least five different Latin versions, one by Adelard of Bath, one by Hugo of Santalla, one by Plato of Tivoli, and two anonymous: the *Centiloquium Mundanorum* and the *Centiloquium Abugafarus*, which are called after their incipits. While the versions by Adelard and Hugo seem to be independent translations of their own, the other three – two anonymous, one by Plato of Tivoli – have many passages in common. As we can see in the above table, the anonymous *Centiloquium Abugafarus* contains four phrases typical of Plato of Tivoli. All four of them, in fact, appear in that part of the text which both versions have in common. Hence, it is more likely that the *Centiloquium Abugafarus* is a revision of Plato's translation than the other way around. Apparently, the author of the *Centiloquium Abugafarus* took over bits and pieces of Plato of Tivoli's text together with its distinctive terminology.

As to the *Centiloquium Mundanorum*, the other anonymous translation of the text, it also shares some sentences with Plato of Tivoli's version, notably one sentence with *debemus quod* and one sentence with *quaedam etiam*. But it differs from the *Centiloquium Abugafarus* in that there is evidence for the authorship of John of Seville. As we will see below in the next table, which is devoted to John of Seville and the terms specific to his translations, the *Centiloquium Mundanorum* contains several terms which are highly specific to John of Seville's translations, notably the idiosyncratic *boni esse* and *quamdiu duraverit*. A likely scenario therefore is the following: the first translation was either the *Centiloquium Mundanorum* or the version of Plato of Tivoli; whichever was the later of the two, it was a revision of

¹⁹ On the *Centiloquium*, its origin and its Byzantine and medieval Latin versions, see the contributions of Maria Mavroudi and Jean-Patrice Boudet to the proceedings of the conference *Ptolemy's Science of the Stars in the Middle Ages*, London, The Warburg Institute, 5-7 November 2015. See also Boudet, 'Astrology', pp. 47-73. Boudet comes to the conclusion too that the *Centiloquium Abugafarus* is a revision of Plato of Tivoli's translation.

the earlier one; this revised version was then once again revised and became the *Centiloquium Abugarafus*. In any case, it is clear that these three translations of Pseudo-Ptolemy's *Centiloquium* are closely interrelated and that John of Seville's hand is visible in the *Centiloquium Mundanorum*.

Let us turn now to the John of Seville table, which in fact is by far the richest of all:

anonymous translation	words and phrases shared with John of Seville (aspicies, nominabis, et scito, boni esse, quoque eius, sint inter, et volueris, quam volueris, cumque volueris, accipe a, finitus fuerit, quamdiu duraverit, qua fuerit, plus erit, serva eum, quod fuerit inter, et volueris scire, cum volueris hoc, qui si fuerit, in quo fuerit et, et cetera similia, post hoc aspice, <i>annullare</i> , et <i>aspice</i> , <i>nutu dei</i> , et <i>pones</i> , <i>quoque ac</i> (3) ²⁰)
Ps.-Ptolemy, Centiloquium Mundanorum	boni esse (1), et volueris (2), quamdiu duraverit (2), quod fuerit inter (1), et volueris scire (2), et <i>aspice</i> (3)
Ps.-Ptolemy, Centiloquium Abugarafus	aspicies (1), accipe a (1)
Alkindi, De mutatione temporum	sint inter (1), accipe a (4), plus erit (1)
Alkindi, De radiis	
Albumasar, De magnis coniunctionibus	et scito (1), boni esse (47), et volueris (3), cumque volueris (2), finitus fuerit (3), qua fuerit (3), plus erit (1), quod fuerit inter (3), et volueris scire (3), qui si fuerit (8), <i>quoque ac</i> (1)
Albumasar, De revolutionibus annorum mundi	aspicies (1), et scito (10), boni esse (1), quoque eius (1), qua fuerit (7), quod fuerit inter (1), qui si fuerit (5), in quo fuerit et (2), post hoc aspice (11), et <i>aspice</i> (9), <i>nutu dei</i> (14), <i>quoque ac</i> (15)
Albumasar, Flores	et scito (5), boni esse (7), qua fuerit (2), qui si fuerit (11), in quo fuerit et (1), post hoc aspice (1), et <i>aspice</i> (4)
Thebit, De recta imaginatione	
Thebit, De quantitate stellarum	
Ps.-Thebit, De anno solis	
Alhazen, Liber Aboali	
Toledan Tables Ca	aspicies (4), nominabis (1), et scito (15), sint inter (1), et volueris (7), quam volueris (4), accipe a (1), finitus fuerit (3), qua fuerit (7), serva eum (3), quod fuerit inter (6), et volueris scire (5), cum volueris hoc (3), qui si fuerit (1), in quo fuerit et (1), et <i>pones</i> (1)

²⁰ The phrase *quoque ac* is very typical of John of Seville (46 times in the *Liber introductorii maioris*, but also in other translations), but I have also found three other occurrences, one in Hermann and two in Plato.

Toledan Tables Cb	sint inter (2), et volueris (1), qua fuerit (1), serva eum (1), qui si fuerit (2), in quo fuerit et (2)
Toledan Tables Cc	aspicies (2), nominabis (2), et scito (41), quoque eius (1), et volueris (2), quam volueris (11), cumque volueris (11), accipe a (2), finitus fuerit (9), qua fuerit (6), plus erit (1), serva eum (33), quod fuerit inter (20), et volueris scire (2), cum volueris hoc (3), qui si fuerit (4), <i>et aspice</i> (5)

For the safe attribution of an anonymous translation on the basis of small words, it is important that the evidence consists not only of two or three such terms, which may always be accidental occurrences, but of a whole group of terms, which in combination amount to a stylistic imprint of the author. With John of Seville, we encounter such a clear stylistic imprint with five texts of our corpus: Albumasar's *De magnis coniunctionibus*, Albumasar's *De revolutionibus annorum mundi*, Albumasar's *Flores* and the *Toledan Tables* versions Ca and Cc. The evidence for the *Toledan Tables* version Cb is not as overwhelming, but still substantial enough to suggest that John of Seville was involved in the production of this text too. The same can be said about the *Centiloquium Mundanorum*.

It is reassuring to see that the three anonymous Albumasar translations, which have long been thought to be by John of Seville, clearly show the stylistic characteristics of John of Seville's translations. The case of the *Toledan Tables*, however, is surprising. It has been surmised that a later translator, Johannes Hispanus, was one of the translators of the *Toledan Tables*, because Johannes Hispanus, the late twelfth-century author of *De differentiis tabularum* and *Algorismi liber de practica arismetice*, refers several times to a *liber de cursibus* ('Book of the Courses <of the planets>') with canons and tables, which he claims to have translated himself from Arabic into Latin.²¹ This 'Book of Courses' could be a version of the *Toledan Tables*. In order to exclude that Johannes Hispanus was identical with John of Seville, I have checked all of John of Seville's catchwords of the above table against Johannes Hispanus's two texts, which are not translations, but original compositions. Only two of these words appear in Johannes Hispanus's texts, once *nutu dei* and once *et pones*, both in *De differentiis*. Whether this is due to John of Seville's influence on Johannes Hispanus or not, is not important for the present purpose. What it shows is that the large group of stylistic terms specific to John of Seville which is present in *Toledan Tables* Ca and Cc is not shared by Johannes Hispanus. Gerard of Cremona is another translator whose name was asso-

²¹ For a critique of earlier, but mostly speculative attempts to identify the translators of the *Toledan Tables* with John of Seville, Gerard of Cremona or John of Spain, see Pedersen, *The Toledan Tables*, vol. I, pp. 15 and 194-195; vol. II, pp. 337-339; Burnett, 'John of Seville and John of Spain', p. 65, n. 29.

ciated in scholarship with the *Toledan Tables*, especially with Tables Cb. We will see below that the evidence for Gerard as translator of the *Toledan Tables* is very thin. Hence, we can safely conclude that John of Seville was the translator of *Toledan Tables* versions Ca and Cc, and possibly also of version Cb.

For reasons of space, it is impossible to present in this article all tables that would be necessary for a full documentation of the stylistic evidence. But I would like to document the evidence by presenting complete occurrences tables for at least three of the above-listed catchphrases of John of Seville: *finitus fuerit*, *boni esse* and *qui si fuerit*. When interpreting these tables, one ought to keep in mind that the absolute figures may well change in the future: they rely on scanned texts of editions of various levels of quality. Moreover, given the dearth of accessible Arabic editions, I was not yet able to study systematically the alternative Latin translations that other translators have used for the same Arabic phrase.

The first phrase in our corpus used exclusively by John of Seville is *finitus fuerit*. It translates the Arabic *nafida* ('to come to an end', 'to be used up'):

finitus fuerit (translating: *nafida*)

Anonymous	Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	0
	Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	0
	Alkindi, <i>De mutatione temporum</i>	0
	Alkindi, <i>De radiis</i>	0
	Albumasar, <i>De magnis coniunctionibus</i>	3
	Albumasar, <i>De revolutionibus annorum mundi</i>	0
	Albumasar, <i>Flores</i>	0
	Thebit, <i>De recta imaginatione</i>	0
	Thebit, <i>De quantitate stellarum</i>	0
	Ps.-Thebit, <i>De anno solis</i>	0
	Alhazen, <i>Liber Aboali</i>	0
	Toledan Tables Ca	3
	Toledan Tables Cb	0
	Toledan Tables Cc	9
Adelard of Bath	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Albumasar, <i>Ysagoga minor</i>	0
John of Seville	Albumasar, <i>Liber introductorii maioris</i>	10
	Alcabitius, <i>Introductorius</i>	3
	Thebit, <i>De imaginibus I</i>	0
	Thebit, <i>De imaginibus J</i>	0
	Anonymous, <i>Astrologicae speculationis</i>	0

	Ibn aṣ-Ṣaffār, <i>De opere astrolabii</i>	2
Plato of Tivoli	Ptolemy, <i>Tetrabiblos</i> 1-2	0
	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Haly Embrani, <i>De electionibus</i> (partial)	0
Hugo of Santalla	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Messahalāh, <i>Liber Aristotilis</i>	0
	Jafar, <i>Liber imbrium</i>	0
	Ibn al-Muṭannā, Commentary	0
Hermann of Carinthia	Ptolemy, <i>Planisphaerium</i>	0
	Albumasar, <i>Liber introductorius</i>	0
Gerard of Cremona	Ptolemy, <i>Almagest</i>	0
	Theodosius, <i>De habitationibus</i>	0
	Thebit, <i>De his que indigent</i>	0
	Ps.-Thebit, <i>De motu octavae M</i>	0
	Ps.-Thebit, <i>De motu octavae N</i>	0

The second phrase, *boni esse*, translates the Arabic *ḥasan al-ḥāl* or *ḥusn al-ḥāl* ('being in good condition'), for instance in sentences such as: *si Venus fuerit boni esse* ('if Venus is in a good condition').²² One may object that the evidence of *ḥasan al-ḥāl* and *naḥida* is unreliable because these terms may turn out to be typical of Albumasar's style rather than of John of Seville's. It is true that Albumasar may have had a predilection for these terms, but what is relevant for our purpose is that John of Seville uses the phrases also in other translations of his, namely in the Thebit and Ibn aṣ-Ṣaffār translations. Note also that the complete phrase *fuerit boni esse*, which appears 5 times in the *Liber introductorii maioris*, 45 times in the *De magnis coniunctionibus* and 4 times in the *Flores*, is very unusual not only in Latin translation literature, as the *Arabic and Latin Glossary* testifies, but also in Latin literature as a whole: it is not recorded in the *Library of Latin Texts*. Thus, it much contributes to the particular sound of John of Seville's translations. This is the occurrences table for *boni esse*:

***boni esse* (translating: *ḥasan al-ḥāl* or *ḥusn al-ḥāl*)**

Anonymous	Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	1
	Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	0

²² Michael Scot will later translate the Arabic term with the much more common Latin phrase *bonae dispositionis*, for instance when translating Aristotle's *De partibus animalium*, 680b7. See Hasse et al., *Arabic and Latin Glossary*, s.v. 'bonus' – 'ḥasan'.

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	Alkindi, <i>De mutatione temporum</i>	0
	Alkindi, <i>De radiis</i>	0
	Albumasar, <i>De magnis coniunctionibus</i>	47
	Albumasar, <i>De revolutionibus annorum mundi</i>	1
	Albumasar, <i>Flores</i>	7
	Thebit, <i>De recta imaginatione</i>	0
	Thebit, <i>De quantitate stellarum</i>	0
	Ps.-Thebit, <i>De anno solis</i>	0
	Alhazen, <i>Liber Aboali</i>	0
	Toledan Tables Ca	0
	Toledan Tables Cb	0
	Toledan Tables Cc	0
Adelard of Bath	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Albumasar, <i>Ysagoga minor</i>	0
John of Seville	Albumasar, <i>Liber introductorii maioris</i>	26
	Alcabitius, <i>Introductorius</i>	0
	Thebit, <i>De imaginibus I</i>	3
	Thebit, <i>De imaginibus J</i>	1
	Anonymous, <i>Astrologicae speculationis</i>	0
	Ibn aṣ-Ṣaffār, <i>De opere astrolabii</i>	0
Plato of Tivoli	Ptolemy, <i>Tetrabiblos 1-2</i>	0
	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Haly Embrani, <i>De electionibus</i> (partial)	0
Hugo of Santalla	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Messahalāh, <i>Liber Aristotilis</i>	0
	Jafar, <i>Liber imbrium</i>	0
	Ibn al-Muṭannā, <i>Commentary</i>	0
Hermann of Carinthia	Ptolemy, <i>Planisphaerium</i>	0
	Albumasar, <i>Liber introductorius</i>	0
Gerard of Cremona	Ptolemy, <i>Almagest</i>	0
	Theodosius, <i>De habitationibus</i>	0
	Thebit, <i>De his que indigent</i>	0
	Ps.-Thebit, <i>De motu octavae M</i>	0
	Ps.-Thebit, <i>De motu octavae N</i>	0

The third occurrences table concerns the phrase *qui si fuerit*. John of Seville has a liking for this syntactical construction, which translates the Arabic *fa-in kāna*. As alternative translations for this phrase I have found *si autem* (Dominicus

Gundisalvi) and *si ergo fuerit* (Gerard of Cremona). While the neuter phrase *quod si fuerit* is used by almost all translators in the corpus, *qui si fuerit* and *quae si fuerit* remain constructions typical of John of Seville only.

qui si fuerit (translating: *fa-in kāna*)

Anonymous	Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	0
	Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	0
	Alkindi, <i>De mutatione temporum</i>	0
	Alkindi, <i>De radiis</i>	0
	Albumasar, <i>De magnis coniunctionibus</i>	8
	Albumasar, <i>De revolutionibus annorum mundi</i>	5
	Albumasar, <i>Flores</i>	11
	Thebit, <i>De recta imaginatione</i>	0
	Thebit, <i>De quantitate stellarum</i>	0
	Ps.-Thebit, <i>De anno solis</i>	0
	Alhazen, <i>Liber Aboali</i>	0
	Toledan Tables Ca	1
	Toledan Tables Cb	2
	Toledan Tables Cc	4
Adelard of Bath	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Albumasar, <i>Ysaqoqa minor</i>	0
John of Seville	Albumasar, <i>Liber introductorii maioris</i>	3
	Alcabitius, <i>Introductorius</i>	5
	Thebit, <i>De imaginibus I</i>	0
	Thebit, <i>De imaginibus J</i>	1
	Anonymous, <i>Astrologicae speculationis</i>	0
	Ibn aṣ-Ṣaffār, <i>De opere astrolabii</i>	0
Plato of Tivoli	Ptolemy, <i>Tetrabiblos 1-2</i>	0
	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Haly Embrani, <i>De electionibus</i> (partial)	0
Hugo of Santalla	Ps.-Ptolemy, <i>Centiloquium</i>	0
	Messahalah, <i>Liber Aristotilis</i>	0
	Jafar, <i>Liber imbrium</i>	0
	Ibn al-Muṭannā, <i>Commentary</i>	0
Hermann of Carinthia	Ptolemy, <i>Planisphaerium</i>	0
	Albumasar, <i>Liber introductorius</i>	0
Gerard of Cremona	Ptolemy, <i>Almagest</i>	0
	Theodosius, <i>De habitationibus</i>	0

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	Thebit, <i>De his que indigent</i>	0
	Ps.-Thebit, <i>De motu octavae M</i>	0
	Ps.-Thebit, <i>De motu octavae N</i>	0

Let us now turn to the translators Hugo of Santalla and Hermann of Carinthia, who were active in the Ebro valley in the 1130s and 1140s and are known to have translated several astronomical and astrological texts. They are likely candidates as translators of the anonymous translations in our corpus. It is fortunate that their style can be very well described by the small words they are using. As the following two tables show, there is no trace of their involvement in any of the anonymous translations in the present corpus.

anonymous translation	words and phrases shared with Hugo of Santalla (agnitio, digressio, ut videlicet, deinceps quoque, nihilominus quoque, sive potius, dum videlicet, plerumque etiam, cuiusmodi sunt, rursus in, nisi inquam, dum tamen, quia item, vel potius, aliter quoque, ut inde, ut tandem, ubi videlicet, prout videlicet, si videlicet, praecipue dum, ante cetera, que quidem omnia, ad hunc quoque modum)
Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	nisi inquam (1)
Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	
Alkindi, <i>De mutatione temporum</i>	
Alkindi, <i>De radiis</i>	
Albumasar, <i>De magnis coniunctionibus</i>	
Albumasar, <i>De revolutionibus annorum mundi</i>	
Albumasar, <i>Flores</i>	
Thebit, <i>De recta imaginatione</i>	
Thebit, <i>De quantitate stellarum</i>	
Ps.-Thebit, <i>De anno solis</i>	
Alhazen, <i>Liber Aboali</i>	
Toledan Tables Ca	
Toledan Tables Cb	
Toledan Tables Cc	

anonymous translation	words and phrases shared with Hermann of Carinthia (indago, sumpta ab, sicque per, si pariter, quantum interest, tantum usque, sunt enim qui, primo quidem ut, que cum ita sint, consequens est ut, atque ad hunc modum, <i>qui quoniam, his habitis, ut ante (3), constans est (3)</i>)
Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	
Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	
Alkindi, <i>De mutatione temporum</i>	
Alkindi, <i>De radiis</i>	indago (1)
Albumasar, <i>De magnis coniunctionibus</i>	
Albumasar, <i>De revolutionibus annorum mundi</i>	
Albumasar, <i>Flores</i>	
Thebit, <i>De recta imaginatione</i>	
Thebit, <i>De quantitate stellarum</i>	
Ps.-Thebit, <i>De anno solis</i>	
Alhazen, <i>Liber Aboali</i>	
Toledan Tables Ca	
Toledan Tables Cb	
Toledan Tables Cc	

Finally, we come to Gerard of Cremona, the most prolific Arabic-Latin translator of twelfth-century Spain. There is a caveat to bear in mind when studying Gerard's style, which is that his stylistic preferences, in technical and non-technical words, are often shared by Michael Scot. Michael Scot, whose translations date from the 1210s in Toledo and the 1220s in Italy, lived at least one generation after Gerard of Cremona, who died in 1187. It is possible that Michael Scot, who was a canon of the cathedral of Toledo like Gerard before him, was consciously or unconsciously imitating Gerard's style. In the following table, I have marked those terms with 'MS' which appear in translations by Michael Scot, but otherwise are specific to Gerard of Cremona's style if we focus on the twelfth century only. This is important, because if all our alleged Gerard catchwords in one text also appear in translations by Michael Scot, we have to check the possibility that Michael Scot was the translator of that text. In the present corpus, one text is of this kind: Alhazen's (Ibn al-Hayṭam's) *Maqāla fī hay'at al-'ālam* ('On the Configuration of the World'), in the Latin translation known as the *Liber Aboali*.

anonymous translation	words and phrases shared with Gerard of Cremona (describam, ponam ut, ergo erit, declaratur quod, demonstrare voluimus,
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	vero fuit, neque est, quod volumus, ponam autem, quod narrabo, et neque, illud est quod, qui est inter, illud est quoniam, propter hoc erit, iam vero fuit, tunc propter illud, et propter illud, et propter hoc erit, in eo quod sequitur) MS = also in Michael Scot, thirteenth century
Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	
Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	
Alkindi, <i>De mutatione temporum</i>	ergo erit (1) (MS), qui est inter (1) (MS), in eo quod sequitur (1)
Alkindi, <i>De radiis</i>	
Albumasar, <i>De magnis coniunctionibus</i>	ergo erit (2) (MS), vero fuit (1), quod volumus (8), qui est inter (2) (MS), in eo quod sequitur (1)
Albumasar, <i>De revolutionibus annorum mundi</i>	quod narrabo (1) (MS)
Albumasar, <i>Flores</i>	
Thebit, <i>De recta imaginatione</i>	
Thebit, <i>De quantitate stellarum</i>	
Ps.-Thebit, <i>De anno solis</i>	describam (2), quod volumus (1), in eo quod sequitur (1)
Alhazen, <i>Liber Aboali</i>	ergo erit (1) (MS), quod narrabo (2) (MS), qui est inter (3) (MS), et propter illud (1) (MS) = Michael Scot
Toledan Tables Ca	qui est inter (3) (MS)
Toledan Tables Cb	illud est quod (1)
Toledan Tables Cc	quod volumus (1), illud est quod (2), qui est inter (1) (MS)

Because of this result, I have tested Alhazen's *Liber Aboali* for phrases typical of Michael Scot, if compared with twelfth-century translators on the Iberian Peninsula. The Alhazen text shares the following non-technical catchphrases with Michael Scot, which do not appear elsewhere either in the present corpus of astronomical and astrological translations or in the corpus of philosophical translations studied in the article mentioned at the beginning of this paper: *sicut diximus superius* (1), *quod dixit in* (1), *et in respectu* (1), *imaginati fuerimus quod* (1), *et est dicere* (1), *etiam declaratum est* (1), *et dicere est* (1), *ista est dispositio* (1). This list provides strong evidence that Michael Scot was the translator of Alhazen's *Liber Aboali*.²³ A few decades later in the thirteenth century, a second translation of the

²³ For the attribution of anonymous Averroes translations to Michael Scot see Hasse, *Latin Averroes Translations*.

same treatise was made, first into Spanish by Abraham Hebraeus for King Alfonso X (d. 1284) and from Spanish into Latin by an unknown translator. This version of Alhazen's treatise received the title *Liber de celo et mundo*.²⁴

Let us turn back to the Gerard of Cremona table above. There is some Gerard vocabulary in *Toledan Tables Cc*, but the evidence is not substantial enough to draw any conclusions. I had suspected that Gerard, as the attested translator of two texts by Thebit ben Corat (Thābit ibn Qurra), was responsible for translating Ps.-Thebit's *De anno solis* and also for the other two anonymous Thebit translations, but the evidence is not (yet?) conclusive.

More informative is the case of Albumasar's *De magnis coniunctionibus*, which contains five catchwords specific of Gerard of Cremona. This can be an indication that Gerard was involved in the revision or production of the text. The revision of this text, however, is a very complicated matter in itself. We have seen above that there is much stylistic evidence that John of Seville was the translator of the text in the so-called 'version V' format, which was edited by Charles Burnett and Keiji Yamamoto. In a long article, Burnett has listed and studied the many revised passages in the vulgate 'version C', which the great majority of manuscripts of *De magnis coniunctionibus* contain.²⁵ The revisions concern technical vocabulary in the first place, such as: *experimentores* (C) instead of *nigromantici* (V); *plebs* (C) instead of *populus* (V); *fraus* (C) instead of *ars* (V); *castigare* (C) instead of *afficere penis* (V); *apostemata* (C) instead of *pleuresis* (V); *legis observatio* (C) instead of *constitutio* (V); *magistratus* (C, in a gloss) instead of *scriptores* (V). I cannot trace any of these terms of version C in Gerard of Cremona's texts. The vocabulary rather points to Hermann of Carinthia's translation of Albumasar's *Great Introduction to Astrology* (*experimentores, fraus, castigare, apostemata, legis observatio, magistratus*) or to Hugo of Santalla's translations (*plebs, fraus, apostemata*). I do not want to put forward a hypothesis about the identity of the reviser or the revisers of *De magnis coniunctionibus* – for this purpose, the basis of only seven examples of revised terms among many dozens is too small. Rather, I would like to point out that, possibly, more than one person may have tried to revise the translation of Albumasar's text at different stages of the transmission; for instance, Hermann of Carinthia and Gerard of Cremona.

²⁴ This second Latin translation is edited by Mancha, 'La version Alfonsi', pp. 133-197.

²⁵ Burnett, 'The Strategy of Revision', pp. 51-113.

The conclusions to be drawn from this paper can be summarized as follows:

anonymous translation	translator based on analysis of particle usage
Ps.-Ptolemy, <i>Centiloquium Mundanorum</i>	probably John of Seville
Ps.-Ptolemy, <i>Centiloquium Abugafarus</i>	probably a revision of Plato of Tivoli's translation
Alkindi, <i>De mutatione temporum</i>	
Alkindi, <i>De radiis</i>	
Albumasar, <i>De magnis coniunctionibus</i>	John of Seville , perhaps revised by Hermann of Carinthia or/and Gerard of Cremona
Albumasar, <i>De revolutionibus annorum mundi</i>	John of Seville
Albumasar, <i>Flores</i>	John of Seville
Thebit, <i>De recta imaginatione</i>	
Thebit, <i>De quantitate stellarum</i>	
Ps.-Thebit, <i>De anno solis</i>	
Alhazen, <i>Liber Aboali</i>	Michael Scot
Toledan Tables Ca	John of Seville
Toledan Tables Cb	possibly John of Seville ?
Toledan Tables Cc	John of Seville

The surmise traditionally held in scholarship that John of Seville was the translator of the three anonymous Albumasar translations *De magnis coniunctionibus*, *De revolutionibus annorum mundi* and *Flores* is thus confirmed by the systematic stylistic analysis presented here. The paper also furnishes robust stylistic evidence for the attribution of the translations of Toledan Tables Ca and Cc to John of Seville and of the translation of Alhazen, *Liber Alboali* (*On the Configuration of the World*) to Michael Scot.

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