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Syriac as the Intermediary in Scientific Graeco-Arabica: Some Historical and Philological Observations

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Abstract

The reception of Greek scientific and philosophical literature in Syriac, which had a major influence on the later reception in Arabic, is an area that has been the subject of a renewed wave of research in the past few years. This paper provides a brief overview of the reception of the Greek sciences in Syriac, citing some of the latest research in the field. This is followed by the presentation of an example to illustrate how the Syriac intermediary text, when available, can help to elucidate the process of translation into Arabic, together with some observations on the ways in which the Syriac reception of the Greek sciences influenced the later reception in Arabic.

Keywords

Greek-Syriac translations – Greek-Arabic translations – scientific literature – philosophy

1 Introduction

When those groups of people using Syriac as their principal literary medium started translating Greek scientific works into their language, they did not do so with the aim of becoming "intermediaries" and passing them on to the Arabs, but by an accident of history the Syriacs and the Syriac language came to play an indispensable role in the transmission of scientific knowledge from the Greek-speaking to the Arabic-speaking world. It will be going a little too far to try, as Renan did, to prove that "in philosophy the Arabs saw nothing except

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through the Syriacs,"[1] but it is true that the Syriac reception of Greek philosophy and other sciences facilitated, and in many ways determined the course of, the reception of the same sciences in Arabic. The exact manner in which the Syriac-language material functioned as intermediaries in this process, however, is less well known, mainly because of the loss of a large proportion of the relevant literature in Syriac, especially the Syriac translations made in the ʿAbbāsid period that served as the immediate *Vorlage* of the Arabic translations. This large-scale loss means that we have often to rely on speculation and circumstantial evidence in talking about the development of philosophy and the sciences in Syriac in itself and how the Syriac development influenced the later developments in Arabic. The problem had been compounded by the relative lack of interest in and research on the secular literature in the field of Syriac studies, where the emphasis has, understandably, always been on the study of the religious material, but the situation in this respect has seen a significant improvement in the past few decades. After the work carried out by such scholars as François Nau and Giuseppe Furlani at the end of the nineteenth century and in the first half of the twentieth century, there was something of a lull in the research on secular literature in Syriac in the middle of the twentieth century, but the pace began to pick up again with the research conducted in the last two decades or so of the last century, and there has been what may be described as a minor explosion in the number of articles being published in this field since the turn of the century.[2] In what follows an attempt will be made to present a summary of what we know today about the reception of the Greek sciences in Syriac, to provide an illustration of how the surviving Syriac texts may help us to understand the manner in which the related Arabic

1 Renan, *De philosophia peripatetica*, p. 1: "Arabas equidem in philosophia nihil vidisse nisi per Syros demonstrare conabor." Cf. Gutas, "Pre-Plotinian Philosophy," pp. 4941–4943: "From this derives the first rule of thumb in Graeco-Arabic studies, which says that whatever was not available, either as an idea or a cited text, or as a discrete written work, in the philosophy of late antiquity is by the same token not to be expected to appear in Arabic … From this derives the second rule of thumb in Graeco-Arabic studies, which says that whatever was not and could not have been available, either as an idea or a quoted text, or as a discrete work, to Syriac-speaking Christians is by the same token not to be expected to appear in Arabic."

2 For a historical survey of the research on the philosophical material in Syriac since the middle of the nineteenth century, together with some pertinent comments on the direction for future research, see King, "Continuities." Some further items of latest research in this field are found in the same volume, which is dedicated to Henri Hugonnard-Roche. On the state of the research on the literature in the different branches of the sciences in Syriac, see the articles in Villey (ed.), *Les sciences en syriaque*.

texts were produced, and then to offer some disparate observations on the ways in which the Syriac reception of the Greek sciences influenced the later reception of the same material in Arabic.

2 Translation of Greek Scientific Literature into Syriac

This is not the place for a comprehensive account of the translation of Greek philosophical and scientific literature into Syriac, but, especially in view of the recent progress of research, it may be useful to provide here a brief overview of the materials translated into Syriac in the period down to the early ʿAbbāsid period, noting in the process some of the most recent research on the relevant material.[3]

Since its earliest stages, the Syriac language had been in contact with and under the influence of Greek as the culturally and politically dominant language of the region.[4] It was probably in the fifth century that non-Christian Greek literary texts began to be translated into Syriac. The translations and paraphrases that are likely to belong to this period include those of the *Physiologus*, the agricultural work of Anatolius of Berytus ("Syriac *Geoponica*")[5] and the alchemical work of Zosimos of Panopolis,[6] as well as those texts that fall under the category of what has been termed "popular philosophy," such as the collections of sayings attributed to Secundus the Silent Philosopher, Menander, Pythagoras, Plato and Theano, and the ethical works of Plutarch, (Pseudo)-Isocrates, Lucian of Samosata and Themistius.[7] The Syriac translation of the

3 For an overview of translations from Greek into Syriac in general, see the article by McCollum in the present volume. For basic lists of earlier studies not covered here, see Fiori, "Translations"; Takahashi, "Between Greek and Arabic," pp. 32–35; for a fuller list of relevant items to 2004, D'Ancona, "Traduzioni," pp. 180–191, 234–237.

4 See Butts, "Greek and Syriac," with the literature cited there.

5 See Guignard, "Sources et constitution" and "L'agriculture en syriaque."

6 On alchemical literature in Syriac, see now Martelli, "L'alchimie en syriaque"; also idem, "Medicina ed alchimia" and Martelli and Rumor, "Near Eastern Origins."

7 For an overview of the Syriac material in this category, see Brock, "Greek Popular Philosophy"; Hugonnard-Roche, "Le corpus philosophique," pp. 279–282. As recent studies on the translations of Plutarch, Lucian and Themistius, see Rigolio, "From the 'Sacrifice to the Gods'," "Plutarch in the Syriac Tradition" and "Syriac Translations"; on the sentences in MS Vatican, Syr. 135, attributed to Diogenes and others, see Arzhanov, "Sirijskij sbornik" and "Florilegium"; and on the Syriac sentences of Menander, Monaco, *The Sentences of the Syriac Menander*, who considers these sentences to be original productions in Syriac rather than translations from Greek.

Pseudo-Aristotelian *De virtutibus et vitiis*, of which an abbreviated version survives, may also belong to this period.[8] While the translations especially of the latter group were evidently appreciated for their moral content by monks, and have often come down to us in monastic manuscripts, their original setting may have been in urban schools, as part of propaedeia to higher studies.[9] A good number of these works were also translated into Armenian at around the same time, so that a comparison of the circumstances and the manner in which the reception took place in the two languages will be a useful exercise.[10] It is also of some interest that similar kinds of works, such as the *gnomologia*, were among the Greek works translated into Arabic at an early stage.[11]

It is in the sixth century that the Syriacs began translating and commenting on the works of a more serious scientific nature, such as the logical works of Aristotle and the medical works of Galen, receiving their texts and drawing their inspiration, as has been made increasingly clear in recent studies, especially in those by Hugonnard-Roche, from their contemporaries in Alexandria. The most important personality in the reception of Greek learning among the Syriacs in this period is Sergius of Rēš-ʿAynā (d. 536),[12] who is reported to have received his education in Alexandria and to have translated over thirty works of Galen into Syriac, although only a small portion of these translations survive.[13] His other extant works include two commentaries on Aristotle's *Categories*

8 On this translation, see now Brock, "Abbreviated Syriac Version" (on the date of the translation, see p. 102). On a quotation from the Syriac version of this work in Barhebraeus, see Zonta, "Structure and Sources," pp. 285–288; cf. Takahashi, "Edition," p. 117, n. 22.

9 On their possible use by grammarians and rhetoricians, see Watt, "Enkyklios Paideia," pp. 62–63; on "prephilosophical ethics" as a preliminary stage to the study of philosophy in the Alexandrian Neoplatonic school tradition, see Gutas, "Starting Point."

10 For a comparison of the Greek works translated into Syriac and Armenian, see Hugonnard-Roche, "La tradition gréco-syriaque," pp. 166–168; cf. Rigolio, "Translation of Greek Texts," p. 438.

11 See Gutas, "Pre-Plotinian Philosophy."

12 On Sergius and his works, see now Fiori, "Un intellectuel alexandrin"; for a translation of the second chapter of Sergius' commentary addressed to Theodore, Watt, "Sergius of Reshaina on the Prolegomena."

13 On the newly discovered palimpsest manuscript containing Sergius' translation of Galen's *On Simple Drugs*, see Bhayro et al., "Collaborative Research" and "Syriac Galen Palimpsest"; Bhayro and Hawley, "Littérature botanique," pp. 294, 297, 299. On a newly identified Syriac version of what is probably Gesius' commentary on Hippocrates' *Epidemics*, Book VI, probably to be attributed to Sergius (in MS Damascus, Syrian Orthodox Patriarchate 12/25), see Kessel, "Syriac *Epidemics*."

addressed to a certain Philotheos and to a Theodore, as well as translations of such works as the Pseudo-Aristotelian *De mundo*, Alexander of Aphrodisias' *On the Principles of the Universe*,[14] and the Pseudo-Dionysian corpus. Also from around the same period or a little later are the anonymous early translations of Porphyry's *Isagoge* and Aristotle's *Categories*,[15] *On Interpretation* and *Prior Analytics* (to Book I, chapter 7).[16] Of these, the translations of *On Interpretation* and *Prior Analytics* may be by Prōbā (Probus), to whom are due the commentaries on Porphyry's *Isagoge* and Aristotle's *On Interpretation* and *Prior Analytics*.[17] Sergius and Prōbā both worked in areas under Roman rule, so that if Ḥunayn is correct in identifying Theodore, the addressee of a number of Sergius' Galen translations, as well as his commentary on the *Categories*, as Theodore of Karḫ Ǧuddān, a city on the Diyālā River near the present-day Iraq-Iran border,[18] this will be of significance as an early instance where Syriac functioned as a vehicle for the transfer of the knowledge of Greek medicine and philosophy across the border into Sasanian Persia. We have less extant literature devoted to the secular sciences from the hands of the East Syrians than from those of the West Syrians, partly because of the way in which such sciences were studied in East Syrian circles,[19] and partly because a larger proportion of early East Syrian literature is lost. One sixth-century East Syrian author whose work on Aristotelian logic has survived is Paul the Persian, or Paul the Philosopher, the author of a commentary on Aristotle's *On Interpretation* and an introductory treatise on

14 Most recently on the Syriac and Arabic versions of this work, Fazzo and Zonta, "Towards a Textual History."

15 See King, *The Earliest Syriac Translation*.

16 As recent items on the much debated question of the "shorter Organon" ending at *Prior Analytics* I.7 (cf. Gutas, "Alexandria to Baghdad," pp. 178–187; idem, "Origins," pp. 14–15; Daiber, "Aristotelesrezeption," pp. 330–335; Hugonnard-Roche, *La logique*, p. 173; Watt, "Al-Fārābī"), see Vagelpohl, *"Prior Analytics*," pp. 140–144 (cf. King, "Continuities," p. 242); Watt, "Syriac Aristotle," pp. 32, 37–40.

17 As recent studies on Prōbā, see Brock, "Commentator Probus," and Hugonnard-Roche, "Le commentaire syriaque de Probus."

18 Bergsträsser, *Neue Materialien*, p. 80 (text, p. 12, 21–22); cf. p. 51; and idem, *Galen-Übersetzungen*, text, p. 12, l. 21–22, trans., p. 10; Hugonnard-Roche, "Notes sur Sergius," p. 124, n. 13 (= idem, *La logique d'Aristote*, p. 124, n. 2); Takahashi, "Syriac as a Vehicle," p. 36, n. 12.

19 See, for example, Becker, *Fear of God*, p. 13: "… the East-Syrian tradition in particular might be categorized as 'scholastic,' since unlike the West Syrians, the East Syrians did not have a strong tradition of 'secular' studies but rather incorporated the Greek literature they found more fully into their theological and exegetical system." Cf. Bettiolo, "Le scuole nella Chiesa siro-orientale," pp. 28–35.

Aristotelian logic dedicated to the Sasanian king Chosroes I Anūširwān (531–578/9).[20]

The period just after the Arab conquest of Syria and Mesopotamia was another important one for the reception of the Greek sciences in Syriac. Here again, most of the surviving literature devoted to the secular sciences comes from the pens of the West Syrians, although we do have some extant East Syrian works relating to Aristotelian logic from a slightly later period.[21] An important centre of learning among the West Syrians in the seventh century was the monastery of Qennešrē on the Euphrates to the southwest of Edessa.[22] A leading figure here was Severus Sēbōkt (d. 666/7) who has left us some important works on astronomy, as well a treatise on syllogisms and two explanatory letters on *On Interpretation*.[23] Among the disciples of Severus was the later patriarch Athanasius of Balad (d. 687) who made a revised translation of the *Isagoge*, which has survived, and is also reported to have translated parts of the *Posterior Analytics*, *Topics*, and *Sophistical Refutations*. A particularly important figure from around this time is Jacob of Edessa (d. 708), with whom "philhellenism" in Syriac scholarship may be said to have reached its peak.[24] A little later, we find George, Bishop of the Arabs (d. 724), with translations of and commentaries on the *Categories*, *On Interpretation*, and *Prior Analytics*.[25]

We know relatively little about the scholarly activities in Syriac in much of the remainder of the eighth century. It is under the ʿAbbāsids that the translations from Greek into Syriac resume again with scholars who are now found working in both Syriac and Arabic, such as Job of Edessa (Ayyūb al-Ruhāwī, d. ca. 835?)[26] and Ḥunayn ibn Isḥāq (807–873). The majority of those who trans-

20 As recent studies on Paul the Persian, see Hugonnard-Roche, "Du commentaire à la reconstruction" and "Sur la lecture tardo-antique."

21 For an overview of East Syrian works relating to philosophy from the early Islamic period, see Daiber, "Die syrische Tradition," pp. 47–51; cf. King, "Continuities," p. 241. On a passage from the commentary on the *Isagoge* by Denḥā the Logician (fl. first half of 9th c.; cf. Daiber, "Die syrische Tradition," p. 51) quoted in Arabic by Elias of Nisibis (d. 1046), see Kessel, "Neoplatonic Treatment."

22 On the scholarly activities at Qennešrē, see Tannous, "Syria between Byzantium and Islam" and "You Are What You Read" (cf. King, "Why Were the Syrians," pp. 80–81); Villey, "Qennešre et l'astronomie."

23 On Severus' astronomical work, see Villey, "Qennešre et l'astronomie," pp. 163–174.

24 On Jacob's use of philosophy, see Hugonnard-Roche, "Jacob of Edessa," and Wilks, "Jacob of Edessa's Use."

25 On George, see Tannous, "Between Christology and *Kalām*?"

26 As a recent study on Job's principal surviving work, the *Book of Treasures*, see Hansberger, "Ticklish Questions."

lated scientific works from Greek (and Syriac) into Arabic under the ʿAbbāsids were members of Syriac-rite churches,[27] and these scholars often also made translations of Greek scientific works into Syriac. We learn from the famous letter in which Ḥunayn discussed the translations of Galen's works[28] that Job translated thirty-six works of Galen into Syriac, while Ḥunayn himself translated ninety-nine.[29]In many cases, these Syriac translations served as a preparatory step for the translation into Arabic, but the direction of the translation could, on occasion, be from Arabic into Syriac.[30]The majority of the Greek-Syriac translations, as well as original scientific works written in Syriac, from this period are unfortunately now lost,[31] and, except in the case of translations of Galen where ample information is provided in the letter just mentioned, we usually only know about the existence of Syriac versions from references in later sources, whereby the later Arabic sources often merely tell us that the Arabic versions were made from the Syriac, without providing any information on when or by whom the Syriac versions were made.

We learn from such later references about lost Syriac versions of Aristotle's *Prior Analytics*, *Posterior Analytics*, *Topics*, and *Sophistical Refutations*,[32] as well as of the *Rhetoric*[33] and the *Poetics*.[34] We learn furthermore from Ibn al-Nadīm's *Fihrist*[35] that most of Aristotle's works on natural philosophy,[36] as well as a

27 Cf. Troupeau, "Le rôle des syriaques," p. 4.

28 Bergsträsser, *Galen-Übersetzungen* and *Neue Materialien*; cf. Degen, "Galen im Syrischen."

29 So the tally made by Macomber, "Literary Activity," p. 568, including revisions of earlier translations and partial translations; cf. Brock, "Syriac Background," p. 140.

30 Bergsträsser, *Galen-Übersetzungen*, text p. 24, ll. 4, 24, p. 49, ll. 13–14, trans. pp. 19–20, 40.

31 On what remains of Ḥunayn's work in Syriac, see Brock, "Syriac Background," pp. 153–158; on what once existed, Macomber, "Literary Activity." For a brief discussion, with excerpts, of Ḥunayn's Syriac version of Galen's *De alimentorum facultatibus*, Bhayro and Hawley, "La littérature botanique," pp. 300–303. For the edition and translation of the Syriac version of Ḥunayn's *Medical Questions*, see Wilson and Dinkha, *Hunain ibn Ishaq's "Questions on Medicine for Students"*; cf. Kessel, "Review Essay."

32 See the references cited by Brock, "Syriac Commentary Tradition," p. 5.

33 See Georr, *Catégories*, p. 188 (reference in Ibn al-Samḥ's note); cf. Aouad, "*Rhétorique*," p. 456; Watt, *Barhebraeus, Book of Rhetoric*, p. 7; Vagelpohl, *Aristotle's Rhetoric*, pp. 59–61.

34 See Gutas, "*Poetics*," with the literature cited there; also Rigolio, "Aristotle's Poetics."

35 *Fihrist*, ed. Flügel, vol. 1, pp. 250–252; trans. Dodge, pp. 602–606.

36 For the *Meteorology*, it is not clear from Ibn al-Nadīm's wording whether the work he tells us was translated from Syriac into Arabic by Yaḥyā ibn ʿAdī was Aristotle's *Meteorology* itself or Olympiodorus' commentary on it. What we have extant in Arabic includes both a version of Aristotle's *Meteorology* made, according to Ibn Ḫallikān, by Yaḥyā ibn al-Biṭrīq

part of his *Metaphysics* (Book Λ) and, probably, his works on ethics,[37] were once available in Syriac. In the realm of natural philosophy, we do have extant fragments of the Syriac versions of Theophrastus' *Meteorology*, which may be by Job of Edessa,[38] and of Nicolaus Damascenus' *Compendium of Aristotelian Philosophy*, probably by Ḥunayn.[39] In a study of the references to Syriac in the marginal notes of the Leiden manuscript of the Arabic version of the *Physics*, Arzhanov and Arnzen have shown that the information on the Syriac material there is likely to derive from a Syriac version of Alexander of Aphrodisias' commentary on the *Physics*.[40]

Similarly for the Syriac translations of Greek works on mathematics, what we have for the most part are just references and citations in later works. From such references we know of the existence of Syriac versions of Archimedes' *On the Sphere and Cylinder* and *On Triangles*, Menelaus' *Spherics*, and Nicomachus of Gerasa's *Introduction to Arithmetic*, as well as of Ptolemy's *Almagest*. In the case of Nicomachus' *Introduction*, it is not from a Syriac or Arabic work but from the preface to the Hebrew version made in 1317 that we learn of the existence of a Syriac translation of the work that was used by ʿAbdīšōʿ (Ḥabīb) bar Bahrīz (fl. ca. 820–830) in producing the Arabic translation, a revised version of which was then used by Qalonymos ben Qalonymos in making the Hebrew translation. One Syriac translation for which we have extant fragments is that of Euclid's *Elements* (Book 1, Propositions 1–23, 27–40). In a recent study where he gathered together the disparate information concerning these Syriac versions of mathematical works, Hugonnard-Roche has indicated that most of these

probably via a Syriac intermediary (Lettinck, *Aristotle's Meteorology*, pp. 7–8), and a version of Olympiodorus' commentary translated, according to the manuscript, by Ḥunayn ibn Isḥāq and Isḥāq ibn Ḥunayn certainly via a Syriac intermediary (see below), as well as a version of a *Compendium* of Aristotelian meteorology by Ḥunayn ibn Isḥāq, for which too there was most probably a Syriac counterpart (Daiber, *Kompendium*).

37 On the passages corresponding to Aristotle, *Nicomachean Ethics* 1130a 5–10 and 1131a 2–9 in Barhebraeus' *Cream of Wisdom* (Book of Ethics, 3.4.3), which may have been taken from the Syriac *Vorlage* of the *Summa alexandrinorum*, see Zonta, "Structure and Sources," pp. 288–291; cf. Takahashi, "Edition," p. 117, n. 22. On the elusive question of the knowledge of the *Politics* in Syriac (and Arabic), see Joosse, "Between Enigma and Paradigm."

38 See Daiber, "*Meteorology* of Theophrastus," p. 174.

39 See Takahashi, "Syriac Version by Ḥunain." The surviving fragments deal mostly with natural philosophy, but there are also some fragments relating to the *Metaphysics*. On some further Syriac pieces from the early Islamic period relating to natural philosophy, see Arzhanov, "Fizika Aristotelja," and Arzhanov and Arnzen, "Glossen," pp. 419–425.

40 Arzhanov and Arnzen, "Glossen."

Syriac versions, including, probably, the version of Euclid, are likely to have been made in the early part of the ninth century.[41]

The translation of scientific works from Greek into Syriac seems to have ceased not long after the beginning of the tenth century, but the Syriac versions made by then continued to be used as the basis for the Arabic translations and in revising the Arabic translations of the same works, as evidenced most famously by the manuscripts of the "Paris Organon" (MS Paris, Bibliothèque nationale, arab. 2346) and "Leiden Physics" (MS Leiden, Or. [Warner] 583), especially by the scholars of the so-called Baghdad Peripatetic school, many of whom, from Abū Bišr Mattā ibn Yūnus (d. 940) to Abū al-Faraǧ ibn al-Ṭayyib (d. 1043), were members of the Syriac churches. Going in the opposite direction, already in the ninth century, authors like Moses bar Kepha (d. 903) were beginning to draw on Arabic sources in composing their Syriac works,[42] and the flow of scientific knowledge from Arabic into Syriac becomes particularly marked in the so-called Syriac Renaissance of the twelfth and thirteenth centuries, but there were still instances in the thirteenth century and later, where authors like Naṣīr al-Dīn al-Ṭūsī (d. 1274), and "Pseudo-Ṭūsī," working on revised Arabic versions of Euclid and the *Almagest*, evidently had access to the Syriac versions of these works and saw it fit to refer to them.[43]

3 Syriac Translations and Their Arabic Counterparts: An Illustration

One major problem that we face in assessing the role played by the Syriac translations in the transmission from Greek to Arabic is the fact that most of the Syriac translations, especially those used as the basis for the Arabic translations in the ʿAbbāsid period, are now lost. This is not to say, however, that we do not have any Syriac translations surviving that served as the *Vorlage* for the Arabic translations. One of the earlier Syriac translations of a Greek scientific work that has survived and is known to have been used later in making the Arabic translations is the translation of the Pseudo-Aristotelian *De mundo* by Sergius of Rēš-ʿAynā. In editing the three Arabic translations of this work, Brafman did not take the opportunity to compare the Arabic texts with the Syriac version of Sergius in any detail,[44] but, as has been noted elsewhere,

41 Hugonnard-Roche, "Mathématiques"; cf. Takahashi, "Mathematical Sciences," pp. 482–484.

42 Teule, "Moses bar Kephā," p. 99.

43 See Hugonnard-Roche, "Mathématiques," pp. 82–84.

44 Brafman, "The Arabic 'De Mundo'."

even a cursory comparison of the Syriac and Arabic texts shows that having the Syriac text helps to explain some of the oddities that we find in the Arabic version, such as the occurrence of the rare Arabic word *ǧarbī* ("northern") which may be explained as being due to the use of the Syriac word *garbyāyā* at the corresponding place, and the reason why the Syrtes are turned into islands in the Arabic version instead of being bays, even if, in the latter case, there is no satisfactory explanation as to why they appear as islands already in the Syriac version other than ignorance or carelessness on the part of the Syriac translator.[45]

Some interesting and important research has been conducted in recent years on the way Ḥunayn ibn Isḥāq and his collaborators went about their work of translation.[46] Reporting on the comments by Ḥunayn that have been copied together with the main text of his Arabic version of Galen's commentary on Hippocrates' *Epidemics*, Vagelpohl has given us indications of how Ḥunayn worked to produce a text that was useful to his readers through the addition of explanatory material to his version. In those cases where we have the Syriac version surviving in addition to the Greek and the Arabic, further insights into how Ḥunayn and his collaborators went about their work may be gained by comparing the three. As an example, I present below a number of passages from Olympiodorus' commentary on Aristotle's *Meteorologica*, together with the corresponding passages found among the additions to the Syriac version of Nicolaus Damascenus' *Compendium of Aristotelian Philosophy*, which are likely to be due to Ḥunayn, and in what has come down to us as the Arabic version of Olympiodorus' commentary, which according to the manuscript was made by Ḥunayn ibn Isḥāq and revised by his son Isḥāq ibn Ḥunayn.[47]

The passages quoted below relate to Aristotle's refutation of Hippocrates' view that wind is moving air. In the Greek text of Olympiodorus, we find the following passage, not in the main, continuous text of the commentary but in one of the lemma comments.[48]

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45 See Takahashi, "*On the Cosmos*," pp. 163–164.

46 See, for example, Vagelpohl, "In the Translator's Workshop," Overwien, "The Art of the Translator," Pormann, "Development," and Arnzen, "Proclus."

47 On the relationship between the three works presented here, see Takahashi, "Syriac Version by Ḥunain," where some further examples are given showing how passages of Olympiodorus were transmitted from Greek to Arabic via Syriac, then on to later authors such as Ibn Sīnā; on the passages discussed below, see idem, "Genesis of Winds," pp. 178–179, 187–189.

48 On Aristotle, *Mete*. 360a 26, ὥστε καθάπερ ἐκ συμβόλων συνίσταιτο ἂν ὁ ἀὴρ ὑγρὸς καὶ θερμός.

> ἐντεῦθεν τὸ δεύτερον ἐπιχείρημα. τί γάρ φησιν; ὅτι οὐκ ἔχει ἰδίαν κίνησιν ἄνεμος, ἀλλὰ πρὸς τὸ φερόμενον σῶμα ... τοῦτο δὲ πάσχει [sc. ὁ ἀήρ] (1a) διὰ τὸ εἶναι αὐτὸν ὑγρὸν καὶ θερμόν· ὑγρὸς γὰρ ὢν καὶ θερμὸς ἔκλυτός ἐστιν. (1b) ὁ μέντοι ἄνεμος ἐπειδὴ ἀπὸ τῆς καπνώδους ἀναθυμιάσεώς ἐστιν, (1b) αὕτη δὲ θερμή ἐστι καὶ ξηρά, οὐχ ὡς ἔτυχε μένει πρὸς τὸ φερόμενον σῶμα, ...[49]

In Syriac, a passage related to the Greek passage quoted above appears near the beginning of a series of arguments presented in refutation of Hippocrates' theory. Whereas in the Greek the point is a subsidiary one given in support of the second proof (*epikheírēma*), and the arguments are not given a numbering in the Syriac text as we have it in the Cambridge manuscript, the corresponding Arabic text turns the point into an independent proof (*dalīl*). The actual content of the Arabic passage is close to that of the Syriac, but the order is slightly rearranged (through the postponement of clause [1b]), and an addition is made at the end to strengthen the point.

Syriac[50]	**Arabic "Olympiodorus"**[51]
(1a) Air is hot and moist, (1b) but winds are hot and dry. (2) The two exhalations always accompany air, (3) and from the smoky [exhalation] (air) acquires heat, since smoky exhalation is hot, (4) and from the vapoury exhalation, which is moist, it acquires moisture, because the vapoury exhalation is cold.	The second proof for that is that (1a) air is hot and moist. (2) This is known from the fact that the two vapours, i.e. the smoky and the moist, accompany it constantly, (3) so that (air) acquires heat from the first, (4) and moisture from the latter. (1b) Wind, on the other hand, is hot and dry. (5) This is indicated by the fineness, intensity, strength, and vehemence of its movement. It must be the case, therefore, that air is not the material of wind.

49 *In Arist. Mete.*, ed. Stüve, p. 172, ll. 17–18, 21–25.

50 MS Cambridge University Library, Gg. 2.14, fol. 337^{r} (p. 25), l. 26–337^{v} (p. 26), l. 2: ܐܝܪ ܐܝܟ ܕܡܚܡܐ ܘܡܪܛܒܐ ܗܘ ܣܝܡ. ܡܢ ܬܪܝܗܘܢ ܡܫܬܟܚ ܐܝܪ ܕܥܫܢܐ ܘܡܫܬܟܚ ܐܝܟ ܕܥܫܢܐ ܡܚܡܐ. ܘܥܫܢܐ ܐܝܟ ܐܢ ܢܫܟ. ܘܡܢ ܗܘ ܕܥܫܢܐ ܕܚܡܐ ܘܡܪܛܒܐ ܗܘ ܕܡܫܬܟܚ ܐܝܟ ܕܥܫܢܐ ܡܚܡܐ. ܐܝܟ ܕܬܡ ܐܝܟ ܡܐ ܕܡܫܬܟܚ ܐܝܟ ܕܥܫܢܐ ܡܐ ܕܡܫܬܟܚ ܐܝܟ ܡܐ ܕܥܫܢܐ ܕܩܪ. [نصفم scripsi: نصبق cod.; ممه scripsi: ممح cod.].

51 Badawi (ed.), *Commentaires*, p. 116, ll. 18–21: والدليل الثاني على ذلك أن الهواء حار رطب ويُعلِم ذلك أنه قد يلزمه دائماً بخاران أعني الدخاني والرطب فيفيد من الأول حرارة ومن الثاني رطوبة. وأما الريح فحارة يابسة ويدل على ذلك لطافة حركتها وشدتها وقوتها وحدتها. فيجب من ذلك أن لا يكون الهواء مادة الريح.

A passage corresponding to the main part of Olympiodorus' second proof is found in a very curtailed form in the Syriac text. The corresponding Arabic text, given as the "third" proof due to the insertion of the passage quoted above as the "second" proof, is also short in comparison with the Greek, but it contains two elements that are absent in Syriac but present in Greek, namely the mention of the movement of air caused by a falling building (ἐν ταῖς καταπόσεσι τῶν οἴκων) and the sudden subsidence of such movement (καθίσταται παραχρῆμα); the movement of air caused by a fan is mentioned by Olympiodorus not in the corresponding passage but in the lemma comment quoted above (ed. Stüve, p. 172, l. 20, ῥιπὶς ἤ ἄλλο τι). Since the Syriac text presented here is preserved only in a late manuscript, it is possible that the passage has been curtailed by later copyists, but if the text here is in its original form, the person composing the Arabic text cannot be dependent solely upon the Syriac text, but must have had recourse to the original Greek text as well.

Olympiodorus[52]	**Syriac**[53]	**Arabic "Olympiodorus"**[54]
δεύτερον ἐπιχείρημα· οὐ καλῶς λέγεις, Ἱππόκρατες, τὸν ἄνεμον ἀέρα εἶναι κινούμενον· πολὺ γὰρ διαφέρει ἡ τοῦ ἀνέμου κίνησις τῆς τοῦ ἀέρος κινήσεως. (1) ἡ μὲν γὰρ τοῦ ἀέρος ἔκλυτός τε ὑπάρχει καὶ χαλαρά (εἰ γὰρ ἐν ταῖς καταπόσεσι τῶν οἴκων διὰ τὴν βίαν τὴν κάτω φερομένην συντεταμένη καὶ σφοδρὰ γίνεται, ἀλλ' οὖν οὐκ ἐπιμένει, ἀλλὰ πάλιν καθίσταται παραχρῆμα), (2) ἡ δὲ τοῦ ἀνέμου κίνησις τυραννική ἐστι καὶ βιαιοτάτη, ὡς δηλοῦσι	(1) Air persists [only] for a short time in its movement, (2) but winds persist for a long time.	The third proof is based on the brevity and length of the duration of the movement of each of them. That is, (1) the air moved by a fan or a falling wall subsides suddenly, (2) whereas winds persist for a long time. (3) Air therefore is not the material of wind.

52 *In Arist. Mete.*, ed. Stüve, p. 168, l. 36–p. 169, l. 7, p. 169, ll. 11–12.

53 Gg. 2.14, fol. 337^{v} (p. 26), l. 9: ܘܐܐܪ܆ ܙܒܢܐ ܙܥܘܪܐ ܡܩܘܐ ܒܙܘܥܗ. ܪ̈ܘܚܐ ܕܝܢ܆ ܙܒܢܐ ܐܪܝܟܐ ܡܩܘܝܢ.

54 Badawi (ed.), *Commentaires*, p. 116, ll. 21–24: والدليل الثالث من سرعة زمان حركة كل واحد منها وطوله وذلك أن الهواء المتحرك بالمروحة أو حائط يسقط تسكن حركته بغتة وأما الرياح فتثبت مدة طويلة. فليس الهواء إذن مادة الريح.

Olympiodorus	Syriac	Arabic “Olympiodorus”
καὶ οἱ σεισμοὶ τὰ μέγιστα βάρη σαλεύοντες, φημὶ δὲ τὴν γῆν … (3) ᾧ δῆλον, ὅτι ἄλλη κίνησις ἀέρος καὶ ἄλλη ἀνέμου· οὐκ ἄρα ἀὴρ ἐστιν ἄνεμος.		

The following passages, occurring a little later, involve a case where the Arabic expands on both the Greek and Syriac texts.

Olympiodorus[55]	Syriac[56]	Arabic “Olympiodorus”[57]
εἶτ᾽ ἐν μέσῳ ἀπορεῖ ὁ φιλόσοφος, (1) ὅτι τί δήποτε ἐν τοῖς αὐχμώδεσι καὶ τοῖς ἐπόμβροις ἔτεσιν οὐχ ὁμοίως πᾶσαι αἱ πόλεις καὶ αἱ χῶραι αἱ ὑπὸ τὸν αὐτὸν παράλληλον οὖσαι	(1) Why do winds and rain not occur equally in cities in the same clime?	(1) On the reason why winds and rain are not found in all places in the same way even though they are produced from smoky vapour and moist vapour. In the case of

---

[55] *In Arist. Mete.*, ed. Stüve, p. 169, ll. 20–23, 31–35.

[56] Gg. 2.14, fol. 337v (p. 26), ll. 10–17: ܡܛܠ ܡܢܐ ܒܡܕ̈ܝܢܬܐ ܕܒܚܕ ܩܠܝܡܐ܆ ܠܐ ܫܘܝܐܝܬ ܗܘܝܢ ܪ̈ܘܚܐ ܘܡܛܪ̈ܐ. ܘܗܕܐ ܗܘ̇ܝܐ܆ ܡܛܠ ܫܘܢܝܐ ܕܡܕ̈ܝܢܬܐ. ܐܡܬܝ ܓܝܪ ܕܛܘܪܐ ܩܐܡ ܒܐܦܝ̈ܗ ܠܐ ܡܫܟܚܐ ܪܘܚܐ. ܘܐܣܘܬܐ ܡܛܠ ܕܡܪܚܩܝܢ ܠܗ̇ ܡܛܪ̈ܐ܆ ܘܥܢ̈ܢܐ ܟܠܗܘܢ ܪ̈ܘܚܐ܆ ܗܘܝܢ ܩܪ̈ܝܪܬܐ ܪ̈ܘܚܐ. ܐܠܟܣܢܕܪܝܐ ܡܛܠ ܕܩܪܝܒ ܝܡܐ ܠܓܒܗ̇ ܓܪܒܝܐ܆ ܩܪ̈ܝܪܢ ܒܗ̇ ܪ̈ܘܚܐ. ܡܛܠ ܕܡܬ̈ܟܠܝܢ ܡܢܝܢܘܬܐ ܡܢ ܡܝ̈ܐ܀ ܠܘ ܓܝܪ ܡܛܠ ܕܠܐ ܡܬܒܠ̣ ܠܗܘܓܐ ܒܟܠܗܘܢ ܡܕ̈ܝܢܬܐ ܠܐ ܐܬܝܢ ܡܛܪ̈ܐ ܫܘܝܐܝܬ܆ ܐܠܐ ܡܛܠ ܗ̇ܘ ܕܡܢ ܕܘ̈ܟܝܬܐ ܐܚܪ̈ܢܝܬܐ ܡܬܕ̈ܚܝܢ ܥܢ̈ܢܐ.

[57] Badawi (ed.), *Commentaires*, p. 117, ll. 7–17: في السبب الذي له لا توجد الرياح والأمطار في جميع المواضع على جهة واحدة وإن كان حدوثها عن البخار الدخاني والبخار الرطب. أما المدن التي ليست في اقليم واحد بعينه فسببه اختلاف الأقاليم. ولذلك يكون تولد هذين البخارين فيها مختلفاً. فلهذه العلة لا تتولد الريح ولا المطر فيها على جهة واحدة. وأما المدن التي في اقليم واحد بعينه إلا ان وضعها يختلف وسبب اختلاف وضعها متى اتفق أن يكون للمدينة جبل يسترها ويمنع أن تصير إليها رياح كثيرة لم تهب فيها من تلك الناحية ريح بسبب الجبل الساتر لها. وأما المطر فيقل تولده فيها لأن السحاب يرتفع إليها. ومتى كان بالقرب من المدينة مياه كثيرة تتبرد الريح من تلك المياه بمرها عليها فتهب باردة. ولهذه العلة تكون الرياح الهابة فيها باردة. ومتى تدافعت في المدينة من نواح أخر غمامات كثيرة تولد فيها أمطار كثيرة بسبب تلك السحاب المندفعة إليها من الرياح.

Olympiodorus	Syriac	Arabic "Olympiodorus"
ἀπολαύουσι τῶν ὑετῶν ἢ τῶν αὐχμῶν, ἀλλ᾽ αἱ μὲν μᾶλλον, αἱ δὲ ἧττον; …		cities which are not in the same clime, the reason is the difference of climes. Because of that [difference of climes] the generation of these two vapours in them is different, and for this reason, neither wind nor rain is generated in them in the same way. (2) In the case of cities which are in the same clime, except that their position is different—(3) the reason for the difference of the position being that the city happens to have a mountain which shields it and prevents winds from coming to it—often the wind does not blow in (that city) from that direction because of the mountain shielding it. There is little generation of rain in (that city) because clouds ascend towards it (?).[58] (4) When there is much water in the vicinity of the city, the wind is cooled by those waters as it travels over them and blows as cold (wind), and for this reason the wind which blows in (that city) is cold.
(2) εἰπὲ δὲ καὶ ἄλλως, ὅτι συμβαίνει τοῦτο διὰ τὴν θέσιν τῆς πόλεως ἢ τῆς χώρας,	(2) This happens because of the position of the cities. (3) For when a mountain stands in front of (the city), it does not receive wind.	
(4) εἰ γὰρ καὶ αὐχμηρὸν εἴη τὸ ἔτος, εἴη δὲ ἡ μὲν πόλις παραθαλασσία ἢ παρὰ ποταμοὺς ἢ παρὰ λίμνας,	(4) [In] another [city], because there is water close to it and winds cross over (the water), the winds become cold.	

58 Or "are removed [while on their way] towards it" (?).

Olympiodorus	Syriac	Arabic "Olympiodorus"
(5) ὥσπερ ἡ ἡμετέρα πόλις, ἡ Ἀλεξάνδρεια λέγω, κεκόσμηται· ὅθεν θέρος ἔχει ψυχρόν, καίτοι καὶ τῆς Αἰγύπτου καὶ τῆς Λιβύης θερμοτάτης οὔσης.	(5) In Alexandria, because the sea is close to the northern side of it, winds are cold, because they receive coldness from the water.	
	(6) It is not because vapour is not generated in all cities that rain does not come [to them] equally, but because clouds are driven [to them] from other places.	(6) When much clouds are driven into the city from other directions, much rains are generated because of those clouds which are driven towards it by winds.

The Syriac version is relatively faithful to the Greek text of Olympiodorus, especially in the phrasing of the opening part of the answer (sentence [2]) and in retaining the mention of Alexandria, but, besides the addition of what may be seen as a summary of the reasons given (sentence [6]), it does make a substantial addition to the content of the Greek text in mentioning the role of mountains in obstructing winds (sentence [3]).[59] The Arabic text makes some major additions to the Syriac text, but most of the points made in these additions, including the explanation of what happens in the case of cities in different climes, are points that can be deduced from the corresponding Syriac text. It is also to be noted that the mention of Alexandria, retained in the Syriac, disappears in the Arabic version.

As has been stated, the Syriac text here may not be preserved in its original state, so that we can only draw tentative conclusions, but the comparison made above will serve to show, firstly, that the Arabic translator is likely to have consulted the Greek text of Olympiodorus in addition to the Syriac text in making his Arabic version. It also helps us to see how he has rearranged

59 The effect of the mountains in blocking winds is mentioned in the Pseudo-Aristotelian *Problemata physica*, 26.7 (940b 33–38). Since Ḥunayn is most likely the translator of the Arabic version of the *Problemata*, it is possible that he knew that passage, even though the Arabic version of the work that we have today only has parts corresponding to Books 1–15 of the Greek (Filius, *Problemata Physica*).

and added to the material found in the corresponding Greek and Syriac texts. These alterations made by the Arabic translator are evidently intended to make the resulting text easier to follow and more self-explanatory, and are in line with the observations made elsewhere about the techniques employed in the production of reader-oriented translations by Ḥunayn.

4 Syriac and Syriacs as Intermediaries: Texts, People, and Attitude to Learning

In considering the way in which the reception of Greek learning by the Syriacs influenced the later reception of the same body of learning by the Arabs, it may be useful to think of the way the influence was exercised at the levels of the content of the reception, the people involved in the reception, and the attitude of the people and communities involved towards the kind of learning that was received.

In terms of the content of the reception, or the texts which were translated and received, it is clear that the translation movement into Arabic was a much larger undertaking than that of the earlier translations into Syriac, and that a much larger body of Greek scientific literature was translated into Arabic than was ever available in Syriac. Nevertheless, the kinds of materials that were translated into Arabic show a close resemblance to the kinds of works that had been translated into Syriac. Mention has been made of how the same kind of gnomological literature was made available at relatively early stages of both the translation movements into Syriac and Arabic. In medicine it was the works of Galen, and in philosophy it was the works of Aristotle and the commentaries on his works, which were received first by the Syriacs and later by the Arabs.

In considering this issue, we need also to think about what was not translated into Syriac and Arabic. The absence of certain categories of works in the two traditions is due in part to the monotheistic religious views shared by the majority of the users of the two languages. If the epics of Homer were barely known to the Syriacs and even less to the Arabs,[60] that is due, besides the linguistic difficulties involved in translating such and similar works of litera-

60 On the fragments of, and reference to, Homer in Syriac, see Hilkens, "Syriac Ilioupersides," pp. 286–289; on two quotations from the *Iliad* in the scholia (probably by Ḥunayn) to the Syriac version of Nicolaus Damascenus, see Takahashi, "Syriac Version by Ḥunain," p. 25. For the view that knowledge of Homer among the Arabs was more widespread than has been supposed, see Signes Codoñer, "Homero en tierra del Islam."

ture,[61] to the fact that the Christian Syriacs and the Muslim, as well as Christian, Arabs had little time for the world of the Greek epics and tragedies inhabited by the pagan gods,[62] and if the Syriacs knew little of the oratory of Demosthenes and the historiography of Herodotus and Thucydides,[63] that is because for the Christian Syriacs the model of oratory was Gregory of Nazianzus[64] and the version of history to be followed was that of Eusebius.[65] One absence that is of somewhat greater significance for the consequences it had on the Arabic tradition and that calls for a different explanation is the total absence in Syriac of genuine works Plato,[66] which is all the more surprising given that the early reception of the Greek sciences in Syriac drew largely on the tradition of the Neoplatonic school at Alexandria. It has been suggested that in his proposed curriculum of study Sergius of Rēš-ʿAynā intended to replace the dialogues of Plato with the mystical writings of Pseudo-Dionysius as the works to be studied at the highest level, and that this had an impact on the subsequent Syriac tradition,[67] but, as has been pointed out by King, whether the influence of Sergius really suffices as an explanation for the absence of Plato in subsequent ages is a matter that requires further investigation.[68]

The role played by the Syriacs as translators in the Graeco-Arabic translation movement is undisputed, and the role played by Syriac physicians in the early ʿAbbāsid society and as promoters of the translation movement is also

61 We remember that even Ḥunayn, who is said have been able to recite Homer from memory (Strohmaier, "Homer in Bagdad"), had difficulties in translating a quotation from Aristophanes which he encountered in Galen's *De nominibus medicis*, as he tells us in a note to the Syriac translation preserved in the Arabic translation by Ḥubayš (see Rosenthal, *Classical Heritage*, p. 19).

62 On the treatment of the pagan elements in the Syriac translation of Plutarch etc., see Rigolio, "From the 'Sacrifice to the Gods'."

63 For an argument that the author of the so-called "Chronicle of Joshua the Stylite" knew Herodotus and Thucydides, see Watt, "Greek Historiography."

64 Cf. Watt, "Enkyklios Paideia," p. 62; idem, "Rhetorical Theory," p. 245.

65 On the Syrian Orthodox historiographical tradition and its relationship to the Eusebian model, see Weltecke, *Beschreibung der Zeiten*, pp. 35–53.

66 On indirect knowledge of Plato in Syriac, see Hugonnard-Roche, "Platon syriaque"; on Pseudo-Platonic works in Syriac, Brock, "Greek Popular Philosophy," p. 14; idem, "Pseudo-Platonic Curiosities."

67 Bettiolo, "Scuole e ambienti," pp. 97–98; Watt, "From Sergius to Mattā," pp. 241–246; idem, "Syriac Aristotle," 33–36; cf. Hugonnard-Roche, "Platon syriaque," p. 322; Fiori, "Un intellectuel alexandrin," pp. 77–78; King, "Why Were the Syrians," p. 79, idem, "Continuities," pp. 236–237.

68 See King, "Continuities," pp. 235–238.

well known. Somewhat less, it seems, has been said about the role played by the churchmen in the movement. ʿAbdīšōʿ bar Bahrīz (fl. ca. 820–830), who has been mentioned above as the translator of Nicomachus of Gerasa's work and who, besides translating other works from Syriac into Arabic, composed an Arabic treatise based on Porphyry's *Isagoge* (*Kitāb Ḥudūd al-manṭiq*), was known also as a canonist and served as the Church of the East metropolitan first of Ḥarrān and later of Mosul.[69] Another important leader of the same church is Catholicos Timothy I (ca. 728–823), who stood at the head of his church over a period of forty-two years spanning the reigns of five ʿAbbāsid caliphs from al-Mahdī (775–785) to al-Maʾmūn (813–833). The role he played in producing the Arabic translation of the *Topics* for Caliph al-Mahdī and the interest he took in other works of Aristotle, including the *Sophistical Refutations*, *Rhetoric*, and *Poetics*, as well as the *Posterior Analytics*, as evidenced in two of his letters, has been known for some time.[70] The recent publication of his hitherto unedited letters,[71] as well as an extensive study of his life and works,[72] has made it possible to explore his works with greater ease, and has served to draw our attention to the extent of his knowledge of and interest in Greek philosophy and sciences.[73] In one of his letters addressed to Sergius, his old school friend and now metropolitan of Elam (Letter 46), Timothy jokingly uses a syllogistic argument to prove that what Sergius had said was a "gift of the land of Elam" was in fact a "gift from Sergius," indicating that such familiarity with Aristotelian logic was something that the two men shared.[74] In another memorable letter addressed to the students at the Monastery of Mar Gabriel in Mosul (Letter 42), Timothy gives detailed answers to the questions he received from the students concerning certain passages of Aristotle's *Categories* and Porphyry's *Isagoge*, as well as to questions on the works of the Fathers such as Gregory of Nazianzus. Near the beginning of the letter Timothy commends the students for their interest in such subjects and for having become inheritors of "logic and orthodox

69 See Roggema, "ʿAbdishoʿ," with the literature cited there.

70 Brock, "Two Letters."

71 Timothy I, *Die Briefe*; also idem, *Disputation*.

72 Berti, *Vita e studi*.

73 See, for example, Watt, "Commentary and Translation," pp. 38–40; idem, "Syriac Aristotle," pp. 30–31; Heimgartner, "Der ostsyrische Patriarch"; Berti, "Provvidenza"; Arzhanov and Arnzen, "Glossen," p. 420; Hugonnard-Roche, "Mathématiques," p. 85.

74 Timothy I, *Briefe*, text, pp. 76–78, trans., pp. 60–62. On a comparable instance of a satirical and no doubt jocular use of a syllogistic argument by Catholicos Ḥnānīšōʿ II some decades earlier in 775, see King, "Why Were the Syrians," p. 77.

teaching," indicating the interest he took in promoting the study of logic alongside the study of the Fathers.[75]

Another old schoolmate and associate of Timothy was Abū Nūḥ al-Anbārī, his collaborator in the translation of the *Topics*, who is reported also to have translated Aristotle's *Categories*, *On Interpretation*, and *Prior Analytics* into Arabic, and whose descendants are known to have served as secretaries for at least three more generations under the ʿAbbāsids.[76] In addition to the role of the Syriac ecclesiastical leaders, the role played by such bureaucrats may be worth further exploration in our attempt to understand the way the Syriacs influenced the development of the sciences under the ʿAbbāsids.[77]

Just as there was a variety of views regarding the validity and acceptability of the "foreign" Greek sciences in the Islamic society, there were differing opinions about the same sciences among the Syriacs. The changes in the attitude of the Syriacs towards Greek learning were well illustrated in an important article by Brock.[78] It may be worth recalling in this context also the story of how Jacob of Edessa was forced to leave the Monastery of Eusebona, where he taught the "Greek Psalms, the reading of the scriptures, and the [Greek] language," by those "brothers who begrudged and hated the Greeks."[79] What is important, however, is that there were leaders like Jacob of Edessa and Timothy I in the two main Syriac ecclesiastical communities, who had a genuine appreciation of the Greek sciences and devoted themselves, among other things, to the study of Aristotelian logic, not merely as a tool for theological disputation, but as an integral part of their search for the true knowledge of God,[80] and who by doing so fostered a positive attitude towards Greek learning among the members of the communities under their guidance.

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75 Timothy I, *Briefe*, text, pp. 3–64, trans., pp. 3–46.

76 See, Cabrol, "Une famille de secrétaires."

77 On the Syriacs serving as secretaries under the ʿAbbāsids, see further Cabrol, "Fonctionnaires" and *Secrétaires*.

78 Brock, "From Antagonism."

79 Michael I, *Chronicle*, ed. Ibrahim, p. 449 (= ed. Chabot, vol. 4, p. 446), right column, ll. 13–16 (trans. Chabot, vol. 2, p. 472); cf. Barhebraeus, *Chronicon ecclesiasticum*, part 1, coll. 291–292; Brock, "Syriac Intermediary," pp. 299–300.

80 For an important criticism of the widely accepted view that the Syriacs were interested in Aristotelian logic primarily as a tool for theological disputation, see King, "Why Were the Syrians"; see also idem, "Logic in the Service" (with thanks to Daniel King for allowing me access to this article prior to publication). As another study attempting to show, from a somewhat different angle, that there was an intimate connection between the study of philosophy and theology among the Syriac Christians, see Stroumsa, "Philosophy as Wisdom."

One of the factors that make the Graeco-Arabic translation movement an event of major significance in the cultural and intellectual history of world is that it proved that philosophy and other sciences originally developed by the Greeks were not the preserve of the Greeks but could be cultivated also by other peoples in other languages, and that they thus belonged to the common heritage of mankind.[81] In his influential study of the Graeco-Arabic translation movement, Gutas drew a link between this universalist claim and the Zoroastrian Sasanian imperial ideology.[82] A notable expression of such a view about scientific knowledge is also found in the writings of a Syriac scholar working at the beginning of the Islamic period, so that the Syriac Christian communities might also be considered, if not as the source of such universalist ideas, as a milieu in which they were propagated. The passage occurs in the famous letter of Severus Sēbōkt (probably of Iranian descent, as his name would suggest)[83] containing the first known reference to the Indian decimal numerals.[84]

ܗܕܐ ܕܝܢ ܠܘ ܕܝ̈ܘܢܝܐ ܒܠܚܘܕ܇ ܐܠܐ ܘܕܟܠ ܚܦܝܛܐ ܡܗܝܪܐ ܕܬܗܘ̣ܐ. ܘܐܢ
ܝܘܢܝܐ ܒܥܬ ܐܬܘܬܗܘܢ, ܗܢܝܐ ܘܐܦ ܒܪ̈ܒܪܝܐ܀ ܓܬܘ ܐܢܝܐ ܕܝܢ ܗܟܢܐ
ܠܡܐܡܪ܆ ܡܛܠ ܕܡܛܐ ܕܫ̈ܘܕܥܐ܆ ܗ̇ܢܘܢ ܕܐܦܠܐ ܗܘܪ̈ܢܐ ܐܬܘܬܗܘܢ܆
ܘܟܠ ܥܡ̈ܝܩܬܐ ܩ̈ܛܝܢܬܐ ܕܝܠܗܘܢ ܕܝܘܠܦܢܐ ܗܢܐ ܕܐܣܛܪܘܢܘܡܝܐ܆
ܫ̇ܠܡ ܕܝܬܝܪ ܐܣ̈ܟܡܝܢ[85] ܡܢ ܕܝܘܢܝܐ ܒܢܬ ܘܡܢ ܕܒ̈ܒܠܝܐ܆ ܘܡ̈ܨܪܝܐܦ[86]
ܬ̈ܠܝܠܬܐ ܕܫܘܥܒܝܢܘܦܢ ܘܫܥܒܘܗܝܬܐ ܕܟ̈ܒܝܐ ܠܡܠܬܐ܆ ܐܚ̈ܪܢܐ ܕܝܢ ܗ̇ܝ
ܕܟܬ̈ܒܟ ܐܬܘ̈ܬܐ ... ܘܗܠܝܢ ܐܡܪܬ܂ ܠܘ ܟܕ ܡܣܠܐ ܐܢܐ ܣܟܠܬܐ
ܕܝ̈ܘܢܝܐ ܕܒܐܝܟ ܗܠܝܢ ܘܒܐܣ̈ܛܘܟܝܬܐ ܕܪܕܝܢ ܠܗܝܢ ܠܐ ܬܗܘܐ. ܠܘ ܟܢ
ܟܠܗ ܗܢܐ ܛܥܝܢܐ ܐܢܐ. ܐܠܐ ܟܕ ܦܟܐ ܐܢܐ ܕܐܝܢܐ ܕܕܟܘܐ ܐܬܘܬܗ̇

81 See, for example, Gutas, *Greek Thought*, p. 192; idem, "Anfänge," p. 66.

82 Gutas, *Greek Thought*, pp. 28–60.

83 On the meaning of the name (sē-bōxt, "saved by the Trinity" [?]), see Gignoux, *Noms propres*, p. 157.

84 MS Paris, Bibliothèque nationale, syr. 346, fol. 170r, ll. 10–17, fol. 170r, l. 22–fol. 170v, l. 3; Reich, "Ein Brief," pp. 481 (text), 486–487 (translation); cf. Nau, "Notes d'astronomie," pp. 225–226; Brock, "From Antagonism," pp. 23–24. The attribution of this letter to Severus has recently been questioned by Villey ("Les textes astronomiques syriaques," p. 47, n. 154, and pp. 139–140, and "Qennešre et l'astronomie," pp. 168–170; cf. Debié, "Sciences et savants syriaques," p. 10). While it is true that the attribution needs to be reconsidered in the light of the contents of the letter, the words at the end of the letter, "have mercy on/forgive Severus Sebōkt" (ܢܚܘܣ ܠܣܘܐܪܘܣ ܣܝܒܘܟܬ, fol. 171v ult.), which are understood in a different sense by Villey, must be considered as a factor favouring its attribution to Severus.

85 ܐܣ̈ܟܡܝܢ cod. et Nau: ܐܣܟܡܝܢ Reich.

86 ܗ ܐܝܟ ܬܪ̈ܥܐ ܡܕܝܢ in marg. cod.

ܗܳܐ ܕܠܐ ܠܝܘܢܝܐ ܒܠܚܘܕܝ ܐܠܐ ܠܟܠ ܕܡܨܝ ܠܡܐܟܠ ܒܝܢ ܝܘܢܝܐ ܘܒܪܒܪܝ̈ܐ ܒܝܢ ܠܐ ܡܬܡܠܝ ܗܫܬܐ ܥܠ ܚܟܡܬ ܗܢܘܢ ܕܗܢܕܝ̈ܐ ܕܠܐ ܐܦ ܣܘܪܝ̈ܝܐ ܗܢ ܘܥܠ ܣܒܠ̈ܬܢܘܬ̈ܗܘܢ ܕܒܗ̇ܢ ܒܗ̇ܢ ܐܘܠܦܢܐ ܕܝ̈ܬܪ ܡܢ ܕܝܘܢܝܐ ܘܕܒܒܠ̈ܝ̈ܐ ܗ̇ܢ ܕܡܠ̈ܝ̈ܐ ܕܚܫܒܢܗ̇ܘܢ ܘܚܫܒܢܐ ܕܡܦܣ̈ܩ ܒܗ̇ܘܢ ܡܠ̈ܝ̈ܐ ܐܝ ܕܐܡܪ ܐܢܐ ܕܒܗ̇ܢ ܬܫܥ ܐ̈ܬ̈ܘܬ ... ܐܡܪ̈ܬ ܗ̇ܢ ܗ̇ܠ̈ܝ̈ܢ ܠܐ ܕܒܙܝܬ ܐ̈ܢܐ ܚܟ̈ܡ̈ܬܐ ܕܝܘܢܝܐ ܒܗ̇ܠ̈ܝ̈ܢ ܘܒܫ̈ܪ ܕܡ̈ܝ̈ܐ ܕܕ̈ܡ̈ܝ̈ܢ ܠܗ̇ܢ ... ܐ̈ܢܐ ܕܠܐ ܠܟ̈ܠ ܐ̈ܢܐ ܠܐ ܡ̈ܬ̈ܝ̈ܕ̈ܥ ... ܐ̈ܠܐ ܕܒܥ̈ܐ ܐ̈ܢܐ ܕܐܚܘܝ ܕܚܟ̈ܡ̈ܬܐ ܗ̇ܝ ܕܟ̈ܠ ܕܒܥ̈ܐ ܠܡܗ̇ܘܐ ܕܙܟ̈ܝ ܗ̇ܘ ܒܗ̇ܢ ... ❖ ܘܒ̈ܝ̈ܬ̈ ܗ̇ܢ ܕܝܘܢܝ ܐܘ ܒܪܒܪܝ

But this [*sc*. philosophy] does not belong to the Greeks alone, but can be acquired by all who are diligent, whether they are Greeks or non-Greeks (*barbarāyē*).—I shall not talk now about the science of the Indians, who are not even Syrians, and about their subtle inventions in this teaching of astronomy, which are more artful than those of the Greeks and of the Babylonians, the verbal methods of their calculation and the computation that dispenses with words,[87] I mean, that with the nine signs ... I have said these things not because I despise the wisdom of the Greeks in such matters as these [i.e. in astronomy] and other similar matters—for I am not altogether unfamiliar with it—but because I want to show that knowledge is the common property of anyone who wishes to be diligent, regardless of whether he is Greek or non-Greek.

5 Conclusion

As was stated at the beginning, the research on the reception of the Greek sciences in Syriac has seen a major expansion in recent years. An attempt has been made above to skim some of the highlights of this research in the process of presenting an overview of the reception and offering a few observations on the significance of the Syriac reception for the later reception in Arabic. It is hoped that the jottings above, hurriedly put down and disjointed as they are, will be of some use in furthering the progress of this research both in terms of

87 I follow here the interpretation recently proposed by Hugonnard-Roche ("Mathématiques," pp. 72–74), who, taking his cue from the otherwise incomprehensible marginal note *hānaw ak tarʿē meddem* ("i.e. as certain stanzas") on the word "methods," understands the phrases here as referring to two different methods of calculation, the first of which, described as *mlīlātā* (which may mean "eloquent," "logical/rational," or simply "related to words"), made use of mnemonic verses. One might also consider the possibility that the description of the method as "verbal" points to the alphanumeric system of the kind devised by Āryabhaṭa I (476–550) for oral representation of numbers in verse (Datta and Singh, "History of Hindu Mathematics," part I, pp. 63–75; Plofker, "Mathematics in India," p. 73). The verb *ʿābar* used in the description of the second system of computation involving the use of decimal numeral signs could then be understood either in the sense of "surpass" (so Hugonnard-Roche, "leur mode de calcul qui surpasse le mode rhétorique"), or, perhaps, "depart from, dispense with," i.e. indicating that this second method dispensed with the use of the spoken word (*melltā*).

the studies on the Syriac reception in itself and as a part of the larger project of the research on the Graeco-Arabica.

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