The *Prior Analytics* in the Syriac and Arabic tradition

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Abstract

The reception history of Aristotle's *Prior Analytics* in the Islamic world began even before its ninth-century translation into Arabic. Three generations earlier, Arabic authors already absorbed echoes of the varied and extensive logical teaching tradition of Greek- and Syriac-speaking religious communities in the new Islamic state. Once translated into Arabic, the *Prior Analytics* inspired a rich tradition of logical studies, culminating in the creation of an independent Islamic logical tradition by Ibn Sīnā (d. 1037), Ibn Rušd (d. 1098) and others. This article traces the translation and commentary tradition of the *Prior Analytics* in Syriac and Arabic in the sixth to ninth centuries and sketches its appropriation, revision and, ultimately, transformation by Islamic philosophers between the ninth and eleventh centuries.

Of the Aristotelian corpus, the body of logical works called the *Organon* was considered central in many of the traditions to which it was transmitted in various forms, e.g. translations, commentaries or epitomes. Certain parts of the *Organon* itself were regarded as more important than others, a distinction amply illustrated by the number and extent of translations, summaries, commentaries and other *Organon*-related texts that emerged in those traditions. One of the key components of the *Organon*, for many scholars its centrepiece, was the *Prior Analytics*, which lays out a general theory of rational argument. It was preceded by works dealing with the elements of logical speech, i.e. terms (treated in the *Categories*) and propositions (*On Interpretation*); the texts following it in the "canonical" arrangement of the *Organon*

devised by the late antique commentators[1] dealt with specific applications of the general theory of argument developed in the *Prior Analytics*: demonstrative or scientific arguments (*Posterior Analytics*), dialectical reasoning (*Topics*) and sophistical arguments (*Sophistical Refutations*). The late antique commentators added two texts we no longer regard as part of the *Organon*, the *Rhetoric* and the *Poetics* which, in their view, described theories of rhetorical and poetic arguments, respectively.[2] In addition, they prefaced the study of Aristotelian logic with Porphyry's *Isagoge*. Arabic philosophers took the basic organisation of logical works from the Syriac tradition, which in turn received it from Alexandrian neo-Platonic Aristotelianism.[3]

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[1] The "canonical" order of logical works transmitted to Arabic scholars was: the *Isagoge* (*al-Isāġūǧī*), Porphyry's (d. 305) introduction to Aristotelian logic which was considered part of the *Organon* early on; *Categories* (*al-Maqūlāt*); *On Interpretation* (*al-ʿIbārah*); *Prior Analytics* (*al-Qiyās*); *Posterior Analytics* (*al-Burhān*); *Topics* (*al-Ǧadal*); *Sophistical Refutations* (*al-Muġālaṭah* or *al-Safsaṭah*); *Rhetoric* (*al-Ḫiṭābah*); and, finally, *Poetics* (*al-Šiʿr*).

[2] Cf. R. Goulet (ed.), *Dictionnaire des philosophes antiques*, 4 vols. (Paris, 1989-), 1: 487. The historical context of the inclusion of the *Rhetoric* and *Poetics* and its philosophical implications have been discussed in detail by D. Black, *Logic and Aristotle's Rhetoric and Poetics in Medieval Arabic Philosophy* (Leiden, 1990).1-51.

[3] The link between these centres of philosophical learning and, via the Arabic tradition, high medieval Western philosophical teaching was close enough for Moritz Steinschneider to maintain "dass in den Ueberlieferungen eine ununterbrochene Kette besteht von der alexandrinischen Schule zu den Syrern, von den Syrern zu den Arabern, von den Arabern zu den Scholastikern" (M. Steinschneider, *Al-Farabi (Alpharabius)* (St Petersburg, 1869), 7, quoted by I. Friedmann, *Aristoteles' Analytica bei den Syrern*, (Berlin, 1898), 5). Arabic logical translations thus rested on a double foundation of Greek and Syriac sources; cf. H. Hugonnard-Roche, 'La formation de la vocabulaire de la logique en arabe', in *La*

The Syriac tradition

With the rapid advance of Muslim armies in the Middle East and North Africa shortly after the death of the Prophet Muḥammad in the year 632, large territories formerly controlled by the Byzantine and Persian empires became part of the new Islamic state. The population of some of these areas, particularly Syria and Egypt, had been ruled from Rome and Constantinople for hundreds of years; their culture and education had been thoroughly saturated with ancient Greek learning. This Hellenistic culture and education system did not suddenly disappear with the change of regime. In particular, church-based institutions, such as schools and monasteries run by various Christian denominations, continued to function for a long time as repositories and propagators of Hellenistic science and philosophy.

In Palestine, Syria and Iraq, the exponents of the church-based Hellenistic culture, while conversant with Greek, mostly spoke and wrote Syriac, a dialect of Aramaic that had developed into the *lingua franca* for scholars and traders across most of the ancient Middle East, not least thanks to the fact that, as the language of local Christian liturgy, it served as the vehicle for the spread of Christianity in the area.[4] Once limited to the uneducated populace in the countryside and also the towns,[5]

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formation du vocabulaire scientifique et intellectuel dans le monde arabe, ed. D. Jacquart (Turnhout, 1994), 22-38, here: 23).

[4] Cf. S. Brock, 'Greek into Syriac and Syriac into Greek', *Journal of the Syriac Academy (Baghdad)* 3 (1977), 406-422 , at 422; and idem, 'Greek and Syriac in Late Antique Syria' in *From Ephrem to Romanos*, ed. S. Brock (Aldershot, 1994), 149-160, 234f [orig. pag.], here: 158f for the liturgical role of Syriac. In spite of its long and prominent role in administration, military affairs and the law, Latin had quickly been replaced by Greek as the "language of political power" in the eastern parts of the Roman Empire (ibid., 149).

the importance of Syriac for scholarly exchanges grew with the development of an indigenous Syrian ecclesiastical structure independent from and mostly in conflict with the Byzantine church authorities.[6] Over time, the various denominations born out of the Christological conflicts of the fourth and fifth centuries established their own tradition of scholarship and teaching centered on schools and convents. With some exceptions, Syriac served as the language of instruction in these institutions.

Even though many of the scholars who worked and taught in the Syriac convents and schools were bilingual or at least reasonably fluent in Greek, the rise of Syriac as the predominant language of scholarship and the needs of a growing number of monolingual students initiated successive waves of translation from Greek into Syriac, starting with the New Testament. Already in the fourth century, the earliest non-biblical translations appeared. Besides the torrent of patristic literature which represented the lion's share of the translations, the centuries after the beginning of Greek-Syriac translation activities also saw a small but steady flow of secular texts into Syriac.[7]

Changing translation methods and terminological approaches marked successive stages in the development of the Greek-Syriac translation tradition. To illustrate the development of techniques and styles, we can classify translations according to their stance towards their source texts and their audience. On one end of

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[5] Brock, 'Greek into Syriac', 150.

[6] It was not the case, however, that Syriac was the unanimous choice for literary expression in the new, non-Chalcedonian denominations; to write in Syriac did not entail the rejection of Greek culture or serve as a mark of proto-"nationalist" ambitions (Brock, 'Greek into Syriac', 157f).

[7] Brock, 'Greek into Syriac', 422.

the scale, we have reader-oriented translations, i.e. an "expositional type" of translation that seeks above all to transfer the meaning of a text and "involve the reader emotionally by employing appropriate cultural equivalents". On the other are "mirror" translations prompted by a "self-effacing", reverential attitude of the translator to his source text. In terms of the linguistic features of the translated texts, these categories correspond to a certain extent to the widely used but misleading distinction between "free" and "literal" translations.[8]

According to this model, the history of Greek-Syriac translations went through three distinct phases: the earliest extant Syriac translations, dating back to the fourth and fifth centuries, are remarkably expositional and reader-oriented, sometimes tendential. In the process of translation, some texts were substantially expanded with added material. The sixth century represents a transitional phase between the reader-oriented style of the previous phase and the growing number of text-oriented renderings of the seventh century. Instead of replacing quotations from the Greek Bible in theological texts with passages from the *Pešittā*, the Syriac Bible text that had become the standard version by the beginning of the fifth century, translators

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[8] Cf. S. Brock, 'Towards a History of Syriac Translation Technique', in *III. Symposium Syriacum 1980: Les contacts du monde syriaque avec les autres cultures*, ed. R. Lavenant (Rome, 1983), 1-14 (reprinted in S. Brock, *Studies in Syriac Christianity, History, Literature and Theology*) (Aldershot, 1992), at 4f. Even where there was a desire for "literal" translation, translators were aware that they had to strike a balance between the imitation of the source text and the intelligibility of the translation. In an appendix to a translated text produced probably at the end of the sixth century, we read (my emphasis): "This [treatise] was translated and interpreted from Greek into Syriac word for word without alteration *in so far as possible*, so as to indicate, not just the sense, but, by its very words, the words of the Greek; and for the most part not one letter has been added or subtracted, *provided the requirements of the language have not hindered this*" (9f).

frequently re-translated such passages in an attempt to correct what they regarded as mistakes and a general lack of precision afflicting the *Pešittā*. In the seventh century, this regard for precision and the resulting tendency to produce ever more text-centered translations became the norm for all textual genres, not only theological works. In addition to the production of new translations, many of the older translations were revised and brought into line with the new methodological standard.[9] The requirements of formal equivalence at the level of words and sentences led to texts which mirrored the source texts in such detail that they were (and are) barely intelligible without knowledge of the Greek original.[10]

The chronological sequence above shows that translation activities into Syriac remained largely unaffected by the Muslim conquest of the Byzantine and Persian provinces of the Fertile Crescent. As we will see, Greek-Syriac translation activities even received a boost with the onset of Greek-Arabic translations. The relations between the two traditions are very close: on the one hand, the Syriac translators created some of the source texts that Arabic translators used in producing Arabic versions of a number of Greek texts; on the other, those very Arabic translators, for the most part Syriac-speaking Christians, were themselves still part of the scholarly tradition the previous translations fed into and derived their training and translation methods from the previous Greek-Syriac translation effort. Considering the intimate links between both traditions, we can draw a further distinction between Syriac translations undertaken before the beginning of the Greek-Arabic translation tradition

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[9] Brock, 'Towards a History', 10-13.

[10] H. Suermann, 'Die Übersetzungen des Probus und eine Theorie zur Geschichte der syrischen Übersetzung griechischer Texte', *Oriens Christianus* 74 (1990), 103-14 at 105.

and later ones that form part of the Arabic translation activities by providing new intermediary texts to serve as the immediate sources for Arabic translations.[11]

If, as any survey of Greek-Syriac translations will show, theological texts formed the bulk of the translations produced in the first phase of the Greek-Syriac translation tradition (between the fourth and the seventh centuries), why did so many translators spend so much energy on secular texts, including logical, some of which were even translated multiple times? A closer look at the biographical information and choice of source texts of prominent Syriac translators shows that there are several connections between logic on the one hand and their other scholarly pursuits, including theology, on the other. Firstly, logic played a prominent role in theological studies: it provided a conceptual framework for the articulation of and disputes about theological doctrines.[12] Many translators were experts in both fields and produced translations of both logical and theological texts. The very character of logical translations was influenced by methodological conventions developed in biblical studies: from a more periphrastic style, the translations of philosophical texts developed towards a more and more litteral approach.[13] Secondly, logic formed an

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[11] Cf. Hugonnard-Roche, 'La formation', 23.

[12] N. Rescher, *The Development of Arabic Logic* (Pittsburgh, 1964), 16.

[13] H. Hugonnard-Roche, 'Les traductions du grec au Syriaque et du Syriaque à l'Arabe', in *Rencontres de cultures dans la philosophie médiévale: traductions et traducteurs de l'antiquité tardive au XIVe siècle*, ed. J. Hamesse, and M. Fattori (Louvain-la-Neuve, 1990), 131-47, at 136. Syriac translation techniques have been researched in great detail by Sebastian Brock. In S. Brock, 'Towards a History', he gives a bird's eye view of the historical development of translation methods from the fourth/fifth to the seventh century. For an account of the development of the logical terminology in Syriac and Arabic, see H. Hugonnard-Roche, 'Sur la tradition syro-arabe de la logique péripatéticienne' in

integral part of the training and practice of another discipline many Syriac scholars, including theologians, studied: medicine. Galen (d. ca. 200 or 216), the most prominent medical authority of the day, wrote a number of logical treatises and argued that knowledge of logic was a necessary pre-requisite for the study of medicine. Its purpose in the study of the human body and its diseases was twofold: firstly, the physician was supposed to apply logic in classifying medical conditions into *species* and *genera*; secondly, in arguments about the function of the body and its parts, proofs had to be logically valid.[14] The crucial importance of logic for the study of all types of knowledge was a given for Syriac scholars; as early as the sixth century, Sergios of Rēšʿaynā (d. 536) maintained that philosophy and the sciences would be impenetrable without a solid grasp of logic.[15]

The translation history of the *Prior Analytics* (and other texts) into Syriac—and Arabic—was determined to a considerable degree by contemporary scholars' positions on the question of which Aristotelian texts constituted the *Organon* and/or were central for understanding and applying Aristotelian logic. Unlike today, the answer to this question was far from obvious. A look at the texts produced at different stages of the Syriac translation tradition that we know of (i.e. which are either extant

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Traduction et traducteurs au moyen âge: Actes du colloque international du CNRS organisé à Paris, Institut de recherche et d'histoire des textes les 26-28 mai 1986, ed. G. Contamine (Paris, 1989), 3-14 and Huggonard-Roche, 'La formation'.

[14] Cf. *Galens Abhandlung darüber, daß der vorzügliche Arzt Philosoph sein muß*, ed. P. Bachmann (Göttingen, 1965) (Nachrichten der Akademie der Wissenschaften in Göttingen. I: Phil.-hist. Kl., Jg. 1965, Nr. 1) 22/Arabic, 23/German.

[15] H. Hugonnard-Roche, 'L'intermédiaire syriaque dans la transmission de la philosophie grecque à l'arabe: le cas de l'Organon d'Aristote', *Arabic Sciences and Philosophy* 1 (1991), 187-209, at 187f.

or mentioned in the secondary literature) reveals that the corpus of texts which were considered important enough to be translated into Syriac and incorporated into the Syriac *Organon* fluctuated over time. As we have seen above, in addition to a varying number of Aristotelian logical works, these different "corpora" very often included Porphyry's *Isagoge* as well as Aristotle's *Rhetoric* and *Poetics*.

The two most important textual configurations came to be called the "*Four* Books" of logic (comprising the *Isagoge*, *Categories*, *On Interpretation* and parts of the *Prior Analytics*) and the "*Nine* Books" of logic, adding the rest of the *Prior Analytics*, the *Posterior Analytics*, *Topics*, *Sophistical Refutations*, *Rhetoric* and *Poetics*.[16] They will be called the "short" and "long" *Organon*.

In view of their prominence in medical and theological studies, it does not come as a surprise that Aristotelian logical texts were translated into Syriac early on. In fact, until the eighth century, logical and isagogical literature formed the bulk of secular texts translated from Greek.[17] The first translations of the *Prior Analytics* and the *On Interpretation* are sometimes associated with the name of Prōbā, probably of Antioch, and dated to the middle of the fifth or the sixth century. His activities in the field of logic are attested by fragmentary remains of his commentaries on the *Isagoge*, *On Interpretation* and *Prior Analytics*.[18] The translation of the *Prior Analytics* he is

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[16] This corpus was also sometimes known as the "*Eight* Books", excluding either the *Isagoge* or the *Poetics*.

[17] Hugonnard-Roche, 'Les traductions du grec', 132.

[18] Cf. A. Baumstark, *Geschichte der syrischen Literatur mit Ausschluß der christlich-palästinensischen Texte* (Bonn, 1922), 102; Goulet, *Dictionnaire*, 1: 514, 516; and J. Lameer, *Al-Fārābī and Aristotelian Syllogistics. Greek Theory and Islamic Practice* (Leiden, New York, Cologne, 1994), 2, 7. His commentary, which deals mainly with the first chapter of Book 1 and covers the following six chapters

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credited with does not cover the entire work, it breaks off after Book I.7—omitting the part of the book that, together with the *Posterior Analytics* and the texts following it, was allegedly deemed injurious to Christian faith.[19] To understand this curious phenomenon, we need to turn to the few historical sources we possess which describe the transmission of Greek philosophy and science to the Islamic world.

Several Arabic historical works contain reports about the transmission of medical, scientific and logical knowledge from the Greeks to Arab philosophers and scientists and attempt to account for the reduction and subsequent expansion of the corpus of texts used in teaching. These narratives occur in different forms and have been discussed in much detail elsewhere; I will focus on the material that is immediately relevant for the textual history of the *Prior Analytics*.[20]

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in a more cursory fashion, also contains lemmata from a (his?) translation of the text and has been edited and translated into French by A. A. Van Hoonacker, 'Le traité du philosophe syrien Probus sur les Premiers Analytiques d'Aristote', *Journal Asiatique* 16, 9. ser. (1900), 70-166. On the possible later dating of the commentaries, cf. Suermann, *Die Übersetzungen des Probus*.

[19] F. E. Peters, *Aristoteles Arabus: The Oriental Translations and Commentaries on the Aristotelian Corpus* (Leiden, 1968), 14. The text was edited twice, first by Friedmann, *Aristotele' Analytica* (up to 25b23) and then in its entirety by Albino Nagy in 'Una versione siriaca inedita degli Analitici d'Aristotele', *Reconditi della reale Academia dei Lincei, Cl. di scienze morali, storiche e filologiche* 5/7 (1898), 321-47.

[20] Cf. D. Gutas, 'The "Alexandria to Baghdad" Complex of Narratives. A Contribution to the Study of Philosophical and Medical Historiography among the Arabs', *Documenti e studi sulla tradizione filosofica medievale* 10 (1999), 155-93 for a comprehensive treatment of these reports. He defends their value for a reconstruction of the transmission against some of the criticisms voiced by Fritz Zimmermann in his edition of *Al-Farabi's commentary and short treatise on Aristotle's De interpretatione* (London, 1981) (Classical and Medieval Logical Texts 3), cvii; G. Strohmaier, '"Von

In his medical history *ʿUyūn al-anbāʾ fī ṭabaqāt al-aṭibbāʾ* (*The Sources of Reports on the Generations of Physicians*), the historian Ibn Abī Uṣaybiʿah (d. 1270) presents what purports to be a history of philosophical teaching narrated by none other than the philosopher Abū Naṣr al-Fārābī (d. 950).[21] Tracing the history of philosophy from the Greece of Aristotle down to his own teacher Yuḥannā ibn Ḥaylān (fl. in the late eighth/early ninth century), who was still in touch with exponents of the Syriac philosophical tradition,[22] al-Fārābī reports that some time after the institution of Christianity as the Roman state religion, the Christian authorities (the "Christian king" and an assembly of bishops) reformed the teaching of logic in Alexandria by restricting the logical curriculum to "the books on logic … up to the end of the existential figures", i.e. up to the end of the chapters on assertoric syllogisms (*Prior Analytics* I.7).[23] The remaining logical texts were not banned outright, but were to be studied in private (*mastūr*) and without a teacher. The reason for excluding a large number of Aristotelian logical texts from the curriculum: their teaching was allegedly "harmful" to Christianity, whereas the texts endorsed by the Christian authorities

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Alexandrien nach Bagdad" - eine fiktive Schultradition', in *Aristoteles. Werk und Wirkung. Paul Moraux gewidmet*, ed. J. Wiesner (Berlin, 1987); and S. Stroumsa, 'Al-Fārābī and Maimonides on the Christian Philosophical Tradition: a Re-evaluation', *Der Islam* 68 (1991), 263-87, at 285f.

[21] Ibn Abī Uṣaybiʿah, *ʿUyūn al-anbāʾ fī ṭabaqāt al-aṭibbāʾ*, 2 vols, ed. A. Müller (Cairo, 1882), 1: 134f.

[22] Peters, *Aristoteles Arabus*, 15.

[23] The limit corresponds to the end of what we have above called the "short" *Organon*.

could serve to defend Christian doctrine in theological debates. This restriction, al-Fārābī continues, remained in place for a long time until the advent of Islam.[24]

Analysing this and other versions of the transmission narrative, Dimitri Gutas draws a number of important conclusions that bear directly on the issue of the "long" and "short" *Organon* in the Syriac and Arabic tradition. Firstly, he points out that the information contained in these reports, which frequently seem to contradict each other, refer to two separate late antique teaching traditions in the field of logic: the *Greek* and the *Syriac*. We learn that the logical curriculum of the Greek course of *medical* studies in Alexandria concentrated on four texts, the *Categories*, *On Interpretation* and the *Prior* and *Posterior Analytics*. The status of these texts is indirectly confirmed by an earlier Arabic source, the historian Aḥmad ibn Abī Yaʿqūb al-Yaʿqūbī (d. 897). In his universal history, the *Taʾrīḫ*, he called them "primary".[25] Independently of al-Fārābī's report, the scientist and logician Ibn al-Ṣalāḥ (d. 1153) wrote in a logical treatise that the Alexandrian curriculum only included the

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[24] Gutas, 'The Alexandria to Baghdad Complex', 186f suggests that emperor Justinian's (r. 527-65) prohibition of any teaching whatsoever by certain groups (heretics, pagans and Samaritans) is the historical event behind the actions of the "Christian authorities". Zimmermann, *Al-Fārābī's commentary*, cvii cites the existence of translations of and commentaries on the remaining parts of the *Organon* as evidence *against* the existence of such restrictions: "it is unlikely that a group of scholars closely connected with the higher clergy should have defied an ordinance of their church." Cf. also Strohmaier, 'Von Alexandrien nach Bagdad'.

[25] Cf. Gutas, 'The Alexandria to Baghdad Complex', 172f. Al-Yaʿqūbī talks about Aristotle's eight logical works, which include the *Rhetoric* and the *Poetics*. His term is *muqaddamah* as opposed to the other four books, which he calls "secondary" (*ṯāniyah*).

beginning of the *Prior Analytics* to the end of chapter 7 of the first book.[26] He called the rest of the work "that which is not studied" (*al-ǧuzʾ allaḏī lā yuqraʾ*),[27] incidentally the same phrase al-Fārābī used in Ibn Abī Uṣaybiʿah's report.

The importance of chapter 7 of the first book of the *Prior Analytics* as the limit to which Aristotle's logical writings were studied is attested by numerous manuscripts of Syriac texts produced during the first wave of Syriac translation activities.[28] Already for the sixth-century translator and commentator Prōbā mentioned above, this chapter marked the end of translations and commentaries of the *Prior Analytics*. We do not know of any translation or commentary by him or his contemporaries that deals with the remainder of the *Organon*.[29]

The practice of restricting the study of the *Organon* seems to have persisted into the early days of the Arabic logical tradition. The author of one of the earliest logical treatises in the Arabic language, a paraphrase of Aristotelian logic ascribed to the famous Persian writer Ibn al-Muqaffaʿ (d. 756),[30] breaks off after *Prior Analytics*

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[26] S. Pines, 'A Parallel in the East to the "Logica Vetus"', in *The Collected Works of Shlomo Pines*, ed. S. Stroumsa (Jerusalem, 1987), 125-129 [orig. pag.], at 127f.

[27] Cf. Gutas, 'The Alexandria to Baghdad Complex', 181f.

[28] Cf. Pines, 'A Parallel', 127f.

[29] For a survey of the Syriac commentary tradition, cf. S. Brock, 'The Syriac Commentary Tradition', in *Glosses and Commentaries on Aristotelian Logical Texts: The Syriac, Arabic and Medieval Latin Traditions*, ed. C. Burnett (London, 1993) (Warburg Institute Studies and Texts 23), 3-18 and Hugonnard-Roche, 'Sur la tradition syro-arabe', 516-519 on translations and commentaries of the *Prior Analytics*.

[30] Discussed further below.

I.7 and informs his readers that this is the end of his paraphrase.[31] Thus, the transmission of the *Prior Analytics* was directly affected by the "shortening" of the *Organon* as taught in Alexandria due to what Gutas describes as a sixth-century reform of the medical and logical curriculum. The relegation of whole logical texts to "what was not studied", however, was not the same as prohibiting them outright—it only meant that they were not taught as part of the official course of medical and logical studies in Alexandria. A comparison of the number of translations of and commentaries on the texts that made the cut and those that did not, however, illustrates how much this official endorsement meant for the reception history of logical texts.[32]

Apart from any pressure on scholars applied through formal decrees by "the authorities", secular or religious, we find evidence for an early and widespread negative attitude towards Greek learning among religious scholars that might help to

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[31] Cf. Gutas, 'The Alexandria to Baghdad Complex', 183.

[32] The distribution of marginal notes across the different texts contained in the Parisian Arabic *Organon* manuscript discussed below (with the exception of the heavily annotated *Sophistical Refutations*), also roughly reflects the distinction between the "short" and the "long" *Organon*: notes on the former are usually more frequent, often also longer and their contents range from mere corrections to variants, glosses, terminological adaptations, explanations and comments. In comparison, those on the material that "was not read" tend to be shorter and are generally restricted to corrections, textual variants drawn from other (mostly Syriac) translations and glosses. This apparent imbalance need not necessarily be due to a lack of scholarly interest in specific texts. Clearly, the availability and variety of older translations and translated commentaries and related works on particular texts must have played a role, too—whereas for key texts such as the *Prior Analytics* and the *Categories*, scholars could draw on considerable resources and work them into their notes, pickings were much slimmer for other works.

explain the subsequent exclusion of certain texts from the corpus of logical material translated into Syriac. The writer and theologian Ephrem (d. 373) fulminated against the "venom of the Greeks". He and other patristic writers, both Greek and Syrian, rejected the application of Greek logic to areas of theology they considered to be "beyond the reach of the human intellect". In spite of the growing Hellenisation of Syriac culture in subsequent centuries, individual theologians continued to warn against using logic as a tool to understand theology.[33] Given this background, it is no surprise that many of the most prominent Syrian scholars and translators focussed their attention exclusively on the texts of the "short" *Organon*.

In the history of the reception of Aristotelian philosophy, Sergius of Rēšʿaynā played a particularly prominent role, both as a translator and commentator. His studies in Alexandria brought him into personal contact with the exponents of Alexandrian teaching in medicine and philosophy; his subsequent crucial role in the translation and dissemination of secular Greek science, particularly the works of Galen and Aristotle, was still known to Arabic observers several centuries after his death.[34] Apart from translations of both the *Isagoge* and the *Categories*, his contribution to the study of logic includes an original work detailing Aristotelian logical teachings in seven volumes and a treatise each on the relation between the

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[33] S. Brock, 'From Antagonism to Assimilation: Syriac Attitudes to Greek Learning', in *East of Byzantium: Syria and Armenia in the Formative Period*, ed. N. G. Garsoian et al. (Washington, DC, 1982), 17-34 at 17, 19.

[34] Baumstark, *Geschichte der syrischen Literatur*, 165f. His medical translations get very frequent mention (and decidedly mixed reviews) in Ḥunayn's *Risālah*; cf. G. Bergsträsser, 'Ḥunayn ibn Isḥāq über die syrischen und arabische Galen-Übersetzungen', *Abhandlungen für die Kunde des Morgenlandes* 17/2 (1925), 1-49, at nos. 4, 6f, 11-20, 49, 53f, 66, 71, 74, 76, 79f, 91, 101.

Prior Analytics and Aristotle's other writings and the use of the term σχῆμα in the *Prior Analytics*.[35]

The importance of Aristotelian logic and the *Prior Analytics* in particular led to the production of numerous other studies and commentaries. The renowned Jacobite philosopher Severus Sēbōḫt (d. 667)[36] of Qinnasrīn, an important centre of philosophical learning, wrote a treatise on the syllogism, extant in several manuscripts but unedited.[37] His name is also associated with a Syriac translation of the Persian *Introduction to Logic* by the Nestorian theologian and philosopher Paul the Persian (fl. mid-sixth century).[38] No longer extant is a complete commentary on the *Prior Analytics* by the Nestorian Catholicus Ḥenanīšūʿ I (d. 699/700), known to us only from the catalogue of authors by ʿAbdīšūʿ bar Berīḫā (d. 1318).[39]

Translations of parts of the *Organon* remained a popular activity in Syrian scholarly circles. Jacob of Edessa (d. 708), a Jacobite translator and theologian, is

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[35] Cf. Baumstark, *Geschichte der syrischen Literatur*, 168 and Lameer, *al-Fārābī*, 10. The latter text was translated by Giuseppe Furlani in 'Due scoli filosofici attribuiti a Sergio di Teodosiopoli (Rēshʿaynā)', *Aegyptus* 7 (1926), 139-45, at 143ff.

[36] On his life and works, see Baumstark, *Geschichte der syrischen Literatur*, 246f.

[37] Cf. Van Hoonacker, 'Le traité', 74; K. Georr, *Les Catégories d'Aristote dans leurs versions syro-arabes* (Beirut, 1948), 25; Peters, *Aristoteles Arabus*, 15; also Lameer, *al-Fārābī*, 10.

[38] Cf. D. Gutas, 'Paul the Persian on the classification of the parts of Aristotle's philosophy: a milestone between Alexandria and Baghdād', *Der Islam* 60/2 (1983), 231-67 and Lameer, *al-Fārābī*, 10. The Syriac text was edited together with a Latin translation by J. P. N. Land, *Anecdota syriaca* (Leiden, 1875; repr. Osnabrück, 1989), 4: 1-32 (Syriac) and 1-30 (Latin).

[39] On ʿAbdīšūʿ and his work, see Baumstark, *Geschichte der syrischen Literatur*, 323ff, esp. 325 and n. 2. On Ḥenanīšūʿ, see Peters, *Aristoteles Arabus*, 14f and Goulet, *Dictionnaire*, 1: 518f. Cf. also Baumstark, *Geschichte der syrischen Literatur*, 209.

credited with translating both the *Categories* and the *Prior Analytics*.[40] Jacob was the teacher of another prominent Syriac translator, George, Bishop of the Arabs (d. 724). George translated and commented on the *Categories*, *On Interpretation* and *Prior Analytics*.[41] His works have earned him the praise of later commentators, who commended him for not mechanically rendering Aristotle's text into Syriac, but carefully translating each term according to its context. Also, he did not "acculturate" the examples Aristotle cites in his text.[42]

Some of the works listed above still exist, others are only known through secondary literature. One of our most important sources for information about Syriac translations is the Paris manuscript Bibliothèque Nationale, ar. 2346, which contains Arabic translations of the entire *Organon*, i.e. the "Nine Books" (including the

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[40] Friedmann, *Aristoteles' Analytica*, 9; his copious writings are documented in Baumstark, *Geschichte der syrischen Literatur*, 248-56.

[41] Ibid., 257; Friedmann, *Aristoteles' Analytica*, 12. His version of the *Prior Analytics*, which is still extant, covers the entire work; cf. Peters, *Aristoteles Arabus*, 14. It was edited in two parts by G. Furlani, *Il primo libro dei Primi Analitici di Aristotele nella versione siriaca di Giorgio delle Nazioni* (Rome, 1935) and *Il secondo libro dei Primi Analitici di Aristotele nella versione siriaca di Giorgio delle Nazioni* (Rome, 1937). He also described and analysed the (still unedited) commentary in 'La versione e il commento di Georgio delle Nazioni all' Organo aristotelico', *Studi Italiani di Filologia Classica* 3 (1923), 305-33, 'Il proemio di Georgio delle Nazioni al primo libro dei Primi Analitici di Aristotele', *Rivista degli Studi Orientali* 18 (1939-40), 116-30 and 'Sul commento di Georgio delle Nazioni al primo libro degli Analitici Anteriori di Aristotele', *Rivista degli Studi Orientali* 20 (1942-3), 47-64; cf. Lameer, *al-Fārābī*, 7.

[42] Friedmann, *Aristoteles' Analytica*, 12.

Isagoge, the *Rhetoric* and *Poetics*).[43] We will discuss its contents below; at this point, suffice it to say that the marginal notes of the manuscript show that Syriac translations of the *Prior Analytics* were not limited to the scholars mentioned above and did not come to an end after George. While there is no indication that the authors of the notes, who often point out variants between the Arabic translation in the manuscript and

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[43] Several scholars have given descriptions of the manuscript, among them David S. Margoliouth in 'On The Arabic Version of Aristotle's Rhetoric' in *Semitic Studies in Memory of Rev. Dr. Alexander Kohut*, ed. G. A. Kohut (Berlin, 1897), 376-387, at 376f; somewhat more detailed: Georr, *Les Catégories d'Aristote*, 183-200; the editor of the manuscript, ʿAbdurraḥmān Badawī in *Manṭiq Arisṭū* (Cairo, 1948-52), 20-32; S. M. Stern, 'Ibn al-Samḫ', *Journal of the Royal Asiatic Society* (1956), 31-44, at 41-44. It showed signs of deterioration even at the time of Margoliouth's inspection at the end of the nineteenth century. At this point, the manuscript is damaged to such a degree that it was withdrawn from circulation. Unfortunately, the available microfilm often omits the marginal notes which hold invaluable information about translation techniques, the history of the Syriac and Arabic translation tradition and the state of logical studies in tenth- and eleventh-century Baghdad; cf. M. Lyons, *Aristotle's Ars Rhetorica: The Arabic Version*, 2 vols. (Cambridge, 1982), 1: xiii and E. Panoussi, 'The Unique Arabic Manuscript of Aristotle's Ars Rhetorica and its Two Editions Published to Date by ʿAbdurraḥmān Badawī and by M[alcolm] C. Lyons', in *Consciousness and Reality. Studies in Memory of Toshihiko Izutsu*, ed. S. Āshtiyānī and others (Leiden, 2000), 233-250, at 233f. H. Hugonnard-Roche, 'La traduction arabe des Premiers Analytiques d'Aristote', in *Perspectives arabes et médiévales sur la tradition scientifique et philosophique grecque. Actes du colloque de la SIHSPAI. Paris, 31 mars-3 avril 1993*, ed. A. Hasnawi, A. Elamrani-Jamal and M. Aouad, (Leuven, Paris, 1997), 395-407 discusses another thirteenth century Arabic logical manuscript, Istanbul (Topkapı Sarayı) Ahmet III 3362. It contains only the first four books of the *Organon*, the *Categories*, *Hermeneutics* and the *Prior* and *Posterior Analytics*. His analysis of the text and accompanying notes of the *Prior Analytics* leads him to the conclusion that the Istanbul translations, which are identical to the Paris versions, represent an earlier stage of textual reception and ultimately became the source for the Paris "edition" (407). Cf. also Lameer, *al-Fārābī*, 5.

Syriac translations they had access to, knew of the *older* Syriac translations of the *Prior Analytics*, i.e. the version ascribed to Prōbā and those by Sergius of Rēšʿaynā and George, Bishop of the Arabs, they frequently quote from translations by the Jacobite Athanasius II of Balad (d. 696), a student of Severus Sēbōḫt and noted logician,[44] and Theophilus of Edessa (d. 785), a renowned astrologer in the service of the caliph al-Mahdī (r. 775-85).[45]

Notes and subscriptions in the manuscript tell us that the compilation, collation and part of the annotation of its components was undertaken by the philosopher Abū l-Ḫayr al-Ḥasan ibn Suwār (d. after 1017), a student of Abū Zakariyāʾ Yaḥyā ibn ʿAdī (d. 974) and himself a noted logician[46] who belonged to a

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[44] He wrote a still extant introduction to Aristotelian syllogistics, edited and translated by G. Furlani, 'Una introduzione alla logica Aristotelica di Atanasio di Balad', *Reconditi del la Reale Accademia Nazionale dei Lincei. Classe di Scienze Morali, Storiche e Filologiche* 25/serie V (1916), 717-78 and idem, 'L'introduzione di Atanasio di Bālādh alla logica e sillogistica aristotelica, tradotto del siriaco', *Atti del Reale Instituto Veneto di Scienze, Lettere ed Arti* 85 (1925-6), 319-44; cf. Lameer, *al-Fārābī*, 10.

[45] R. Walzer, 'New Light on the Arabic Translations of Aristotle', in *Greek into Arabic: Essays on Islamic Philosophy*, ed. R. Walzer (Oxford, 1962), 60-113, at 69; Peters, *Aristoteles Arabus*, 14; Lameer, *al-Fārābī*, 2, 10; on the two scholars, see Baumstark, *Geschichte der syrischen Literatur*, 256f, 341f. Frequently, the marginal notes only speak of "the Syriac translations" or "the Syriac". At this point, we are not in a position to correlate these notes with one or more of the extant named translations. They might even contain traces of additional, unknown texts; cf. Lameer, *al-Fārābī*, 2.

[46] Ibn al-Nadīm, *Kitāb al-fihrist*, 2 vols., ed. G. Flügel (Leipzig, 1871-2), 1: 250 writes: "[h]e is one of the best of the logicians who studied under Yaḥyā ibn ʿAdī, having the greatest intelligence, comprehension, and ability for the sciences of his associates" (translated by B. Dodge, *The Fihrist of al-Nadīm*, 2 vols. (New York and London, 1970), 2: 632).

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circle of translators, commentators and scholars called the "Baghdad peripatetics". The contents of the manuscript are a lasting testimony to the immensely important philological and philosophical work undertaken by this group: in addition to translations of the entire "long" *Organon*, the manuscript contains notes which frequently refer to commentaries such as Yaḥyā's and Ibn Suwār's on the *Prior Analytics* and *On Interpretation* and other comments and glosses on all of the component works from the pen of several of the Baghdad peripatetics.[47]

Ḥunayn ibn Isḥāq (d. 873) and his son Isḥāq ibn Ḥunayn (d. 910) were the authors of another, somewhat later Syriac translation of the *Prior Analytics*, produced while the Greek-Arabic "translation movement" was already in full swing. A note in the Paris manuscript tells us that the former only translated up to 33b13-4 and his son finished the text.[48] This new Syriac rendering was part of an effort to prepare fresh Syriac versions of each text of the *Organon* on Ḥunayn's innovative, vastly improved methodological basis.[49]

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[47] Cf. Walzer, 'New Light,' 80. Zimmermann,, in his Introduction to Al-Fârâbî, *Commentary*, lxxix calls it a "school canon"; Dimitri Gutas in *Greek Thought, Arabic Culture* (London, New York, 1998), 147 considers it "one of the great achievements of the translation movement both for its influence and philosophical content".

[48] Peters, *Aristoteles Arabus*, 15; Lameer, *al-Fārābī*, 2.

[49] S. Brock, 'The Syriac Background to Ḥunayn's Translation Techniques', *Aram* 3 (1991), 139-62 discusses at length Ḥunayn's translation methods and their roots in the Syriac translation techniques. Cf. also Rescher, *The Development*, 28.

The Arabic tradition

The new series of Syriac translations of the *Organon* from the workshop of Ḥunayn ibn Isḥāq and his collaborators was only a preliminary step for an entirely new set of *Arabic* translations. With the help of his son Isḥāq ibn Ḥunayn and the translators Abū ʿUṯmān al-Dimašqī (d. ca. 920) and Ibrāhīm ibn ʿAbd Allāh al-Kātib (d. ca. 940), Ḥunayn produced Arabic translations of the whole *Organon* except for the *Posterior Analytics* and the *Poetics*. This enormous undertaking spanned two generations (ca. 840-900) and came to an end only after Ḥunayn's death.[50]

The motivations for this project and preceding attempts to translate parts of the *Organon* (and other secular texts) largely resemble those of previous Syriac translators. Some modern commentators emphasised the close relationship between medical and logical teaching: the early interest of Islamic authorities (caliphs etc.) in medicine prompted the translation and study of logical works which were, as we have seen above, viewed as a propaedeutical requirement for the study of medicine proper. Syriac physicians, who were the principal source of information about Greek medicine, transmitted their belief in the close link between the two fields to their Arab clients: "the central place of logic in the intellectual orbit of eastern Christian (especially Nestorian) scholars and physicians assured its transmission into Arabic."[51] Interest in medicine, however, was not the only factor. In fact, the logical knowledge

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[50] Ibid., 28. Even though the activities of Ḥunayn and his collaborators represent a decisive step forward in translation techniques and quality, the translations produced in this circle are for a large part not "new". Ḥunayn himself attests to the fact that he often only corrected previous translations, a practice of Syriac scholars as early as the seventh century and apparently still common in the ninth and tenth centuries; see Hugonnard-Roche, 'Les traductions du grec', 141.

[51] Rescher, *The Development*, 23, 25.

required to study medicine had already been extracted from the Aristotelian corpus and made available in a more easily digestible form by the leading authorities of antique and late antique medicine, chiefly Galen himself.[52]

The translation of the *Prior Analytics* in particular had an impact on all branches of learning in the Islamic world—the system of assertoric syllogisms Aristotle set out in this part of the *Prior Analytics* not only pervaded the fields categorised as "foreign" sciences, they provided a model for argumentation that was eagerly taken up in the Islamic sciences as well.[53] Once scientific material was available to scholars, the interplay between translation and research generated the need for the translation of further texts: the relationship between research and

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[52] According to Fritz Zimmermann in 'Some Observations on al-Fārābī and the Logical Tradition', in *Islamic Philosophy and the Classical Tradition*, ed. S. Stern et al. (Oxford, 1972), 517-46, at 528, such summaries and manuals, treating logic on a more basic level, might have given a Muslim audience a first taste of the logical subject matter. Subsequently, due to Ḥunayn's immense collection and translation efforts, the logical writings of Galen seem to have enjoyed a much greater prominence than those of Aristotle himself; as Zimmermann, Al-Fârâbî, *Commentary*, lxxxi explains, "until the gap had narrowed one or two generations later Galen, as a philosopher and logician, enjoyed an ascendancy over Aristotle apt to scandalize Aristotelians." One Galenic logical treatise Ḥunayn spent a lot of time and effort to find, reconstruct and translate was his *De demonstratione*; cf. Bergsträsser, 'Ḥunayn ibn Isḥāq', no. 115 (also nos. 116f and 126ff) and T. Street (2003), 'Arabic Logic', in *Handbook of the History of Logic*, 9 vols., ed. J. Woods and D. Gabbay (Amsterdam, 2003-), 1: 523-596, at 531f. The uses of logic listed in the treatise on the philosophical qualifications of physicians (cf. n. 14 above)—classificatory and demonstrative—are already specifically geared toward the requirements of medical study. Galen does not recommend any particular (Aristotelian) work, much less the study of the *Organon* as a whole; much more likely, the logical know-how selected and processed by Galen himself was to serve as the basis for logical instruction for future physicians.

[53] Cf. I. Madkour, L'Organon d'Aristote dans le monde arabe (Paris, 1969).

translation was dialectical with research promoting translation and translations changing or giving rise to entirely new research agendas.[54]

The translation history of another (and, from the point of view of the study of medicine, much less central) Aristotelian logical work, the *Topics*, shows the importance of *political* and *theological* factors for the course of the translation activities. Allegedly, the text was translated into Arabic already in the second half of the eighth century—not for any scientific reason, but to acquire *argumentative* know-how for the intra- and intercommunal theological debates between Muslims on one side and Christians and other religious minorities on the other[55] and against various groups of religious dissenters within their own ranks. Politically, the ruling ʿAbbāsid caliphal dynasty and their supporters were keen to bolster the legitimacy of the regime. One way to strengthen their Islamic credentials was to identify and squash alleged threats against religious orthodoxy; another, to fight external enemies of Islam.[56]

As we can see, logical (and other) translations were undertaken for a wide range of reasons: some had to do with issues of scientific (e.g. medical) research,

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[54] R. Rashed, 'Problems of the Transmission of Greek Scientific Thought into Arabic: Examples from Mathematics and Optics', *History of Science* 27 (1989), 199-209, at 208.

[55] For an overview of the polemics between Christian and Islamic writers and its historical function, see A. Charfi, 'La fonction historique de la polémique islamochrétienne à l'époque abbasside', in *Christian Arabic Apologetics during the Abbasid Period (750-1258)*, ed. S. Samir and J. Nielsen (Leiden, 1994), 44-56.

[56] The translation history of the *Topics* and the value of Aristotelian logic for the ʿAbbāsid cause, particularly for the caliph al-Mahdī (r. 775-85) and his immediate successors, are discussed in detail in Gutas, *Greek Thought*, 61-74.

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some with political and theological considerations. Once the translation activities had started, they were strengthened and sustained by the need for more and more precise translations to serve the purposes of different scholarly and scientific fields. In the end, the history of logical translations from Greek into Arabic lasted for more than two centuries.

Most of our information about the translation history of the Arabic *Prior Analytics* comes from two sources: Ibn al-Nadīm's (d. 995) *Fihrist*,[57] the catalogue of a Baghdad bookseller, and, again, the marginal notes contained in the Paris *Organon* manuscript (ar. 2346), already mentioned above.[58] The translation of the *Prior Analytics* its editor Ibn Suwār chose was the work of a certain Taḏārī;[59] he established

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[57] Ibn al-Nadīm, *Kitāb al-fihrist*, 1: 249.

[58] Cf. also the information in al-Qifṭī, *Taʾrīḫ al-ḥukamāʾ*, ed. J. Lippert (Leipzig, 1903), 36 and Ḥāǧǧī Ḫalīfah (1835-58), *Lexicon bibliographicum et enzyclopaedicum a Mustafa ben Abdallah Jelebi dicto et nomine Haji Khalfa celebrato compositum. (Kashf aẓ-ẓunūn)*, 7 vols., ed. and tr. G. Flügel (Leipzig, 1835-58; reprint Leiden, 1965), no. 1437.

[59] This person has variously been identified as the translator and Bishop of Ḥarrān, Theodore Abū Qurrah (d. 826), a follower of St John of Damascus, with who he shared an interest in psychology and logic (e.g. P. Kraus, 'Zu Ibn al-Muqaffaʿ', *Rivista degli Studi Orientali* 14/1 (1933), 1-20, at: 3 and Walzer, *New Light*, 78); or with a bishop of Karḫ by the same name (M. Steinschneider, *Die arabischen Übersetzungen aus dem Griechischen* (reprint Graz, 1960), 41, n. 209); Rescher, *The Development*, 97 suggests the Christian author Theodore bar Kōnī. Lameer, *al-Fārābī*, 3ff discusses the different theories and shows that none of them is entirely satisfying. His own suggestion is based on the ascription in the Istanbul manuscript, discussed above. According to the reading indicated by M. Dānēš-Pāžūh in his edition of *Manṭiq li-bn al-Muqaffaʿ. Ḥudūd al-manṭiq li-bn Bihrīz* (Tehran, 1978), viii, which Lameer was unable to verify, the translator of the *Prior Analytics* is Taḏārī ibn Basīl Aḫī Isṭifan, the brother of a translator who collaborated with Ḥunayn ibn Isḥāq. Lameer's solution allows

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his text on the basis of an autograph by none other than Yaḥyā ibn ʿAdī, supplemented with his own additions and corrections.[60]

The indications given by the Paris manuscript and the information contained in Ibn al-Nadīm's *Fihrist* point to the existence of several other Arabic translations of the *Prior Analytics* in addition to Taḏārī/Theodore's text. Two are categorised as "old", one anonymous and the other made directly from Greek by the Melkite translator Yuḥannā or Yaḥyā ibn al-Biṭrīq (d. ca. 835), who was associated with the circle of translators working with/for the philosopher Abū Yūsuf Yaʿqūb ibn Isḥāq al-Kindī (d. 873).[61] The varying and uneven translation procedures employed by this early generation of translators, ranging from the literal to the periphrastic,[62] were duly

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for the production of the Arabic text on the basis of the Syriac translation prepared by Ḥunayn and his son. Also, it fits together with a remark by Ibn al-Nadīm, *Kitāb al-fihrist*, 1: 249 to the effect that Theodore submitted his translation to Ḥunayn for "correction" (cf. A. Badawī, *La transmission de la Philosophie grecque au monde arabe* (Paris, 1968), 26).

[60] Walzer, *New Light*, 68, 77.

[61] Peters, *Aristoteles Arabus*, 15; Lameer, *al-Fārābī*, 5. On Yuḥannā or Yaḥyā ibn al-Biṭrīq and his father al-Biṭrīq, who also worked as a translator and with who he is often confused, see D. M. Dunlop, 'The Translations of al-Biṭrīq and Yaḥyā (Yuḥannā) b. al-Biṭrīq', *Journal of the Royal Asiatic Society* 3 (1959), 140-50; he maintains that the said translation of the *Prior Analytics* was "superseded so effectually that it is only by chance that we know anything about it" (145), perhaps because of Ibn al-Biṭrīq's insufficient command of Arabic and/or Greek and his alleged lack of philosophical training alluded to in the secondary sources (140f).

[62] These "old" versions were (incorrectly) characterised by Rescher, *The Development*, 27 as "a slavish, word-for-word translation from Syriac into Arabic", an assessment G. Endress, *Proclus Arabus: Zwanzig Abschnitte aus der Institutio Theologica in arabischer Übersetzung* (Beirut, 1973), 154, thoroughly refutes.

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criticised by Ḥunayn in his *Risālah*. The old texts that were deemed inadequate were replaced or, like Ibn Nāʿimah al-Ḥimṣī's (d. ca. 840) translation of the *Sophistical Refutations*, revised by members of the Ḥunayn school.[63]

Even before the first translations of the "Four Books" (ca. 810-20), the famous *littérateur* Ibn al-Muqaffaʿ (d. 756) was the probable author of a short exposition of the contents of the "Four Books" mentioned above.[64] This work antedates indigenous works on logic by a whole generation. It also throws some light on the early translation history of the *Prior Analytics*: in a note appended after the end of Ibn al-Muqaffaʿ's expositions, the collator of the manuscript informs us that the first three books of the *Organon*, i.e. the *Categories*, *On Interpretation* and *Prior Analytics*, were later translated by Abū Nūḥ, collaborator of the Nestorian patriarch Timothy I

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[63] There are numerous examples of translations, even those produced by his own collaborators, which Ḥunayn revised; e.g. Bergsträsser, *'Ḥunayn ibn Isḥāq'*, nos. 20, 49, 118. The practice of revision was—as any translator will readily admit—fraught with problems: in several cases, Ḥunayn persuaded a client of his to commission a re-translation of a text instead of trying to salvage an existing version (Bergsträsser, *Ḥunayn ibn Isḥāq*, nos. 15, 20). Cf. U. Vagelpohl, 'The Abbasid translation movement in context. Contemporary voices on translation', in *Abbasid Studies II. Occasional Papers of the School of Abbasid Studies. Leuven, 28 June-1 July, 2004*, ed. J. Nawas (Leuven, forthcoming), at 3f.

[64] For a long time, this text was ascribed to the son of Ibn al-Muqaffaʿ, Muḥammad ibn ʿAbd Allāh ibn al-Muqaffaʿ; but see now C. Hein, *Definition und Einteilung der Philosophie: von der spätantiken Einleitungsliteratur zur arabischen Enzyklopädie* (Frankfurt and New York, 1985), 41-6 and Lameer, *al-Fārābī*, 11f. Badawī, *La transmission*, 75 mentions an unedited manuscript of Ibn al-Muqaffaʿ's "translations" of the *Isagoge* and several Aristotelian logical works including the *Prior Analytics* (ms. no. 338 of the library of the Université Saint-Joseph/Beirut); Kraus, *Zu Ibn al-Muqaffaʿ*, 5 describes them as short epitomes of commentaries of the works in question. The text of the short exposition was edited by Dānēš-Pāžūh, *Manṭiq li-bn al-Muqaffaʿ*.

(d. 823) in another translation venture, the Arabic version of Aristotle's *Topics* mentioned above;[65] and by Salm of Ḥarrān, the director of the *bayt al-ḥikmah*.[66]

Only around the beginning of the ninth century, haphazard and unsystematic translation activities gave way to what we now call a "translation movement".[67] By about 835-40, six of the "Seven Books" were available in translation (apparently

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[65] On p. 35f and in n. 56. See Goulet, *Dictionnaire*, 1: 525 and Gutas, *Greek Thought*, 61-9.

[66] Kraus, 'Zu Ibn al-Muqaffaʿ', 10ff; Lameer, *al-Fārābī*, 11f. The character and activities of the *bayt al-ḥikmah* are still the subject of heated discussion. According to G. Endress, *Die arabischen Übersetzungen von Aristoteles' Schrift De Caelo* (Frankfurt, 1966), 92 and 94f, the so-called *bayt al-ḥikmah* ("House of Wisdom") was allegedly founded by the caliph al-Maʾmūn and based on similar structures in the preexisting caliphal library in Baghdad. The connection that Endress and other authors draw between the institution and the translation movement, however, seems to be tenuous at best: the case for the importance of the *bayt al-ḥikmah* rests almost entirely on the testimonies in bibliographical sources such as Ibn al-Nadīm, al-Qifṭī and Ibn Abī Uṣaybiʿah. Their value is roundly dismissed by John Mattock in 'The early translations from Greek into Arabic: an experiment in comparative assessment', in *Symposium Graeco-Arabicum II*, ed. G. Endress and M. Schmeink (Amsterdam, 1989), 73-102, at 73f. Gutas, *Greek Thought*, 53-60 gives a more cautious interpretation of its structure and purpose. A survey of the relevant sources on the institution can be found M.-G. Balty-Guesdon, 'Le Bayt al-ḥikma de Baghdad', *Arabica* 39 (1992), 131-50. The author maintains that it served as a library under the caliph Hārūn al-Rašīd (r. 786-809); under al-Maʾmūn, it allegedly gained prominence as a meeting-place for religious and philosophical scholars (132f, 148f). In addition, she expresses reservations about any connection between translators and the *bayt al-ḥikmah*: after the accession of al-Maʾmūn, translation activities were less and less centred on one institution due to the growing influence of private patronage (137); cf. on this point also Gutas, *Greek Thought*, 59.

[67] Hugonnard-Roche, 'Les traductions du Grec', 139. The scope and influence of this "movement" is most clearly expressed in Gutas, *Greek Thought*, 1-4.

excluding the *Posterior Analytics*). The translation of Aristotle's *Rhetoric* we find in the Paris manuscript was also produced during this period.[68]

Of most of the translators involved in this early effort, we know little more than their names. Apparently, unlike their Syriac counterparts, they were translators first and foremost and did not produce any independent scholarly works. If they did write such texts, we have no evidence for their existence. In addition, the early translators of Aristotelian logical texts, e.g. Ibn al-Biṭrīq or Ibn Nāʿimah al-Ḥimṣī, working with and for al-Kindī, were not trained logicians;[69] it is therefore not surprising that Ibn Nāʿimah's extant translation of the *Sophistical Refutations* suffers from an uneven terminology and numerous misunderstandings.

The marginal notes to this and the other texts in the Paris manuscript mark the point at which the translation tradition blends into commentary and secondary

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[68] Cf. Lyons, *Aristotle's Ars Rhetorica*, 1: iv-vi, whose early dating was criticised by Wolfhart Heinrichs in his review of M. C. Lyons, Aristotle's Ars Rhetorica', *Zeitschrift für Geschichte der Arabisch-Islamischen Wissenschaften* 1 (1984), 312-6, at 313; and U. Vagelpohl, *Aristotle's Rhetoric in the East. The Syriac and Arabic Commentary Tradition* (Leiden and Boston, 2008), 39-61, 207f. In addition to the *Organon* and texts associated with it, non-logical Aristotelian works began to attract the interest of translators at around this time; cf. Kraus, 'Zu Ibn al-Muqaffaʿ', 13. At this final stage as we know it from the Paris manuscript, the Arabic *Organon* comprised products by the following translators: Isḥāq ibn Ḥunayn (*Categories* and *Hermeneutics*), Abū Bišr Mattā (*Posterior Analytics* and *Poetics*), Abū ʿUṯmān al-Dimašqī (Porphyry's *Isagoge* and the *Topics*), Theodore/Taḏārī's translation of the *Prior Analytics* and three different versions of the *Sophistical Refutations* by Ibn Nāʿimah al-Ḥimṣī, Yaḥyā ibn ʿAdī and Ibn Zurʿah (cf. Georr, *Les Catégories d'Aristote*, 183-200). The anonymous translation of the *Rhetoric* has not yet been assigned to a specific translator, but was probably produced in the circle of translators working for and with al-Kindī (cf. Vagelpohl, *Aristotle's Rhetoric*, 150, 180).
[69] Hugonnard-Roche, 'L'intermédiaire syriaque', 204.

literature: the scholars who translated the Greek and Syriac texts included in the manuscript were more often than not competent philosophical and logical scholars in their own right and wrote commentaries or other secondary works, sometimes on texts they had translated themselves, sometimes on the work of their colleagues. The activities of the more prominent exponents of the Baghdad peripatetics are amply documented in the margins of the manuscript: Yaḥyā ibn ʿAdī, Abū Bišr Mattā, Ibn Zurʿah and others appear in different roles throughout.

Greek and Arabic commentaries

In writing their commentaries, Muslim scholars made use of the widest possible range of sources. Apart from Aristotle's works themselves, a number of commentaries used in the late antique school traditions found their way into the Islamic world. Of those on the *Prior Analytics*, several were translated into Arabic. Ibn al-Nadīm mentions two versions of the commentary by Alexander of Aphrodisias, one of which was incomplete: it stopped after the "predicative figures" (*al-aškāl al-ǧumlīyah*)—exactly where, allegedly, Christian authorities drew the line. This was also the limit for Prōbā's Syriac commentary (mentioned above). Its translation is no longer extant.[70] A commentary by Themistius,[71] allegedly in three books (*maqālah*s), is also mentioned; according to Ibn al-Nadīm, Abū Bišr himself translated parts of it from Syriac. Such a commentary is actually quoted in the Paris manuscript.[72] We also know of excerpts of

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[70] Badawī, 'La transmission', 98 and Peters, *Aristoteles Arabus*, 15.

[71] Lameer, *al-Fārābī*, 6, n. 6 points out that Themistius was only known to have written *paraphrases* of Aristotelian works.

[72] As remarkable as the breadth of material that was available to the compiler and annotator of the Paris manuscript are his omissions; whether due to coincidence or choice, he does not mention most of

a Themistius commentary in an Arabic version produced by the translator Abū ʿUṯmān al-Dimašqī which formed the basis for a fifteenth-century Hebrew translation.[73] It is not clear whether it was actually translated in its entirety. The same applies to an incomplete commentary by John Philoponus, also mentioned by Ibn al-Nadīm.[74] Apart from these texts, Muslim scholars also knew a commentary by the mysterious (and hitherto unidentified) "Allinus" (*allīnūs*).[75] The shortness of some of the other commentaries, abridgements and paraphrases the *Fihrist* mentions could again have been caused by the "traditional" Syriac restriction to the first part of the book.[76]

Commenting on the works of the ancients was not the monopoly of translators and their circles. Soon after (in some cases even before) the material basis for the study and discussion of the Aristotelian *Organon* became available to them in the form of translations, Islamic philosophers took the lead in establishing an independent Islamic logical tradition based on translated Greek texts.

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the Syriac *commentaries* on different Aristotelian logical works produced by the likes of Sergius of Rēšʿaynā, Paul the Persian, Prōbā or Severus Sēbōḫt; cf. Hugonnard-Roche, 'L'intermédiaire syriaque', 191.

[73] Lameer, *al-Fārābī*, 6f.

[74] Badawī, *La transmission*, 102, Walzer, 'New Light', 78.

[75] Ibid., 69f, 75f dates him to the late Alexandrian period and rejects his identification with the commentator Elias (fl. during the second half of the sixth century; other suggested readings of the name are Aelianus and Albinus). The prominence of his commentary of the *Categories* leads him to conclude that he was Ibn Suwār's main authority in his lecture course on this text. Zimmermann, *al-Farabi's commentary*, cvi-xcviii discusses the idea that the name refers to a book rather than a person; cf. also Lameer, *al-Fārābī*, 7.

[76] Peters, *Aristoteles Arabus*, 16 and Ibn al-Nadīm, *Kitāb al-fihrist*, 1: 249.

In spite of the vitality of logical studies and their undeniable relevance for the wider field of philosophy, al-Kindī's interest seems to have been slight.[77] The *Fihrist* credits him with a short treatise on a technical question related to the *Prior Analytics* and another short tract dealing with a statement in Ptolemy's *Almagest* that refers to the *Prior Analytics*. His student Aḥmad ibn Muḥammad ibn aṭ-Ṭayyib al-Saraḫsī (d. 899) abridged the work; there is also mention of a commentary by the semi-legendary Ǧābir ibn Ḥayyān.[78]

The *Organon* manuscript of the Baghdad peripatetics (discussed above) marks the first climax of logical studies in the Islamic world. Its marginal notes exemplify the results of their immense philological and philosophical acumen: it bears the imprint of continuous teaching and explanation lasting for several generations.[79] Apart from corrections, (not always correct) grammatical equivalents and adaptations to later philosophical terminology, the notes on the *Prior Analytics* give explanations, comments and textual variants, drawn mainly from the Syriac translations known to

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[77] Rescher, *The Development*, 25ff; apparently, the only trace of his logical works we find in the Paris *Organon* manuscript is the technical term *al-ǧāmiʿah* for *syllogism*. It appears in some of the marginal glosses (Badawī, *La transmission*, 31). Cf. Peters, *Aristoteles Arabus*, 16.

[78] Ibid., 16f; Ibn al-Nadīm, *Kitāb al-fihrist*, 1: 249.

[79] In this context, Gutas, *Greek Thought*, 147 talks about the manuscript as a "complex of translations". Walzer, 'New Light', 80 writes: "we are entitled to take this kind of commentary as a pattern, I mean that this was the way in which Greek philosophy was taught in the golden age of Islamic civilization, in 9th and 10th and 11th century Baghdad. The Paris MS and the many references in Averroes' larger commentaries are the only remnants of this remarkably high standard of philosophy reading in this time."

Ibn Suwār and his predecessors.[80] In all, there are 56 notes referring to Syriac versions; twice, "old" Arabic translations are consulted. 18 times, the editor compared different versions of Theodore's text. Finally, 23 notes do not mention the source of the variant. As a result of Ibn Suwār's and his predecessors' work, Theodore's text is markedly improved: they deleted additions and brought the Arabic reading closer to the Greek. The Paris text gives no indication of the nature and stages of the gradual modernisations of Theodore's version during its study by generations of scholars, but it is clear that it did undergo such a process of improvement and refinement.[81]

In addition, the notes draw heavily on secondary material that emerged inside this circle, e.g. a (lost) commentary by Abū Bišr Mattā[82] that was used by Yaḥyā ibn ʿAdī and is quoted several times. Yaḥyā's notes, written in Syriac, were translated

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[80] Ibid., 80; H. Hugonnard-Roche, 'Remarques sur la tradition arabe de l'Organon d'après le manuscrit Paris, Bibliothèque nationale, ar. 2346' in Burnett, *Glosses and Commentaries*, 19-28, at 19. The text of the *Prior Analytics* contained in the Istanbul manuscript has much fewer annotations, most of which belong to the genre of commentary rather than textual criticism; cf. Hugonnard-Roche, 'La traduction arabe des Premiers Analytiques', 400.

[81] Walzer, *New Light*, 94-7 illustrates Theodore's own terminology with his translations of the words δόξα and ἔνδοξον, for which he used terms not found in any other translation in the manuscript. According to Hugonnard-Roche, *Remarques sur la tradition arabe*, 20f, 23, Walzer put too much emphasis on the philological nature of the research embodied in the notes and their role in the preparation of the texts. In his opinion, they were "le fruit d'une élaboration savante touchant la langue technique de la logique et, par suite, l'interprétation même de certaines notions logiques."

[82] According to the terse account in the *Fihrist*, he was the first to comment on the entire *Prior Analytics*. His teacher, Abū Isḥāq Ibrāhīm Quwayrī, apparently only commented on the truncated version (chapters 1-7 of the first book, as far as *al-ṯalāṯah al-aškāl*); cf. Walzer, 'New Light', 77f, Goulet, *Dictionnaire*, I: 519f and Lameer, *al-Fārābī*, 9.

into Arabic by Ibn Suwār and also used in the preparation of the manuscript. Their contents suggest that Yaḥyā consulted other texts and commentaries to improve Theodore's translation.[83]

With the philosopher al-Fārābī, the reception of Aristotelian logic enters a whole new stage. Based on the philological and commentary work of his teachers, most prominently Abū Bišr Mattā,[84] al-Fārābī not only explains, but adapts and improves Aristotelian logic and moves it into the mainstream of Islamic thought.[85] The key position assigned to the *Organon* by the Baghdad Aristotelians is reflected in the massive philosophical output al-Fārābī created in the field of logic.[86] Of his numerous commentaries and logical treatises, only the *Epitome*[87] and remnants of the

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[83] Peters, *Aristoteles Arabus*, 16; Walzer, 'New Light', 79. According to Hugonnard-Roche, 'La traduction arabe', 407 some of the glosses found in the Istanbul version of the *Prior Analytics* might contain traces of a commentary by none other than the translator Taḏārī/Theodore himself.

[84] Compared to the other translations collected in the Paris manuscript, both of Abū Bišr's contributions (the *Posterior Analytics* and the *Poetics*) are surprisingly obscure: Zimmermann (Alfârâbî, *Commentary*, lxxvi) calls the former "uncommonly tortuous" and the latter "uncommonly inarticulate". A deficient command of Arabic was one of the charges brought against the logicians; according to Zimmermann, the reason could have been their education in convents and other places that belonged to "the least Arabicized sections of the Christian community."

[85] T. Street, 'Logic', in *The Cambridge Companion to Arabic Philosophy*, ed. P. Adamson and R. Taylor (Cambridge, New York, 2005), 247-65, at 253.

[86] D. C. Reisman, 'Al-Fārābī and the philosophical curriculum' in Adamson and Taylor, *Cambridge Companion,* 52-71, at 65.

[87] Lameer, *al-Fārābī*, 13-19 has shown that there are two different summaries extant, one of them entitled *Kitāb al-qiyās al-ṣaġīr* and the other *Kitāb al-mudḫal ilā l-qiyās*, and that they are most likely two different versions of the same text. The *Kitāb al-qiyās al-ṣaġīr* is edited by M. Türker Küyel, 'Abū

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Short Commentary on the *Prior Analytics* have reached us. This work is in fact the only extant Arabic commentary on the *Prior Analytics*, the surviving fragment covers *Prior Analytics* II, 11 61b7-II, 27 70a22. It takes the form of a running commentary, based on a text that closely resembles the tradition embodied in the Paris manuscript.[88] The more substantial *Middle Commentary* is lost. The *Great*

Naṣr al-Fārābī: Kitāb al-qiyās al-ṣaġīr', *Ankara Üniversitesi: Dil ve Tarih-Cografya Fakultesi Dergisi* 16 (1958), 244-286; and in *al-Manṭiq ʿind al-Fārābī*, ed. R. al-ʿAğam (ed.), 3 vols. (Beirut, 1985-1986), 2: 65-93 and (uncritically) in *al-Manṭiqīyāt li-l-Fārābī*, ed. M. T. Dānēš-Pāžūh 3 vols. (Qum, 1988-1990), 1: 152-194. It was translated into English by Nicholas Rescher in *Al-Fārābī's Short Commentary on Aristotle's Prior Analytics* (Pittsburgh, 1963); the numerous shortcomings of this translation have been thoroughly criticised by A. I. Sabra in his review, *Journal of the American Oriental Society* 85 (1965), 241-243). *Kitāb al-mudḫal ilā l-qiyās* is edited by al-ʿAğam, *al-Manṭiq ʿind al-Fārābī*, 2: 11-64 and (again uncritically) Dānēš-Pāžūh, *al-Manṭiqīyāt li-l-Fārābī*, 1: 115-151.

[88] The text was published by Dānēš-Pāžūh, *al-Manṭiqīyāt li-l-Fārābī*, 2: 263-553. Information about and a quote from the commentary can be found in *Ibn Rušd: Talḫīṣ Kitāb al-qiyās*, ed. M. Qāsim, C. Butterworth and A. Haridi (Cairo, 1983) 152, l. 8f (= G. Jéhamy (ed.), *Ibn Rushd: Talḫīṣ Manṭiq Arisṭū (Averroès: Paraphrase de la logique d'Aristote)* (Beirut, 1982), 202, l. 21f). Further references to the commentary and to al-Fārābī in Ibn Rušd's text: Qāsim et al., *Talḫīṣ Kitāb al-qiyās*, 163, l. 7, 170, l. 17f, 382 (= Jéhamy, *Talḫīṣ Manṭiq Arisṭū*, 209, l. 24, 213, l. 20, 849); cf. Lameer, *al-Fārābī*, 8f. More quotations from al-Fārābī's commentary, particularly those on the (lost) part dealing with modal logic, have been incorporated in other treatises by Ibn Rušd, cf. the *Maqālāt fī l-manṭiq wa-l-ʿilm al-ṭabīʿī* (Ğ. al-ʿAlawī (ed.), *Rasāʾil falsafīyah. Maqālāt fī l-manṭiq wa-l-ʿilm al-ṭabīʿī li-Abī l-Walīd ibn Rušd* (Casablanca, 1983), 271): 97, l. 12-98, l. 8, 102, l. 13-6, 127, l. 19-128, l. 7 and 11-7, 129, l. 3-17, 130, l. 3-7 and 11-20, 146, l. 5-11, 174, l. 3-5, 179, l. 8-18, 197, l. 22-198, l. 2. The Jewish philosopher Moses Maimonides (d. 1204) is another witness for the commentary. In his treatise *Against Galen, on Philosophy and Cosmogony*, he quotes al-Fārābī twice: first on *Prior Analytics* I.13 and a little later on I.15 (M. Meyerhof and J. Schacht, 'Maimonides against Galen, on Philosophy and Cosmogony',

Commentary on the *Prior Analytics*, his most comprehensive treatment of the text, is also lost, but was frequently quoted by Moses Maimonides in his *On Medical Aphorisms*.[89] In addition, al-Fārābī wrote two further logical treatises dealing with the subject matter of the *Prior Analytics*: his *Kitāb al-qiyās al-ṣaġīr* and *Kitāb al-madḫal ilā l-qiyās*.[90] We also have a series of notes by the Andalusian philosopher Ibn Bāǧǧah (d. 1139) based on al-Fārābī's previous work; they cover not only the *Prior Analytics*, but also the *Categories*, *On Interpretation* and the *Posterior Analytics* as well as two other short logical texts by al-Fārābī.[91]

The activities of al-Fārābī mark the end of a crucial phase in the reception of Aristotelian logic in the Muslim world. Translators and commentators had made the entire corpus of Aristotelian logic available in the form of source texts, epitomes and translations of antique commentaries. In addition, they had created an indigenous body of Arabic literature to explain the sometimes obscure primary texts to an Arabic- and Syriac-speaking audience. The result was a vast body of logical learning al-Fārābī could access. In one important respect, he still belonged to the previous generation of translators/commentators: his aim was, firstly, to "translate" logical knowledge, to bring it into a form that would allow any reasonably educated person to get a grasp of the subject. But he also strove to revise it in the light of his understanding of logic—

Bulletin of the Faculty of Arts of the University of Egypt 5 (1937), 63-88 [arab. section]; Arabic: 80, l. 12-81, l. 5 and 81, l. 5-12; English: 67f and 68). Cf. Lameer, *al-Fārābī*, 9.

[89] The text was translated and edited by Meyerhof and Schacht, *Maimonides against Galen*.

[90] Cf. Lameer, *al-Fārābī*, 13-9.

[91] Peters, *Aristoteles Arabus*, 16; J. Puig Montada, 'Philosophy in Andalusia: Ibn Bāǧǧa and Ibn Ṭufayl', in Adamson and Taylor, *Cambridge Companion*, 155-79, at 157.

given the often tortuous and obscure language of a number of logical translations and commentaries, al-Fārābī's efforts were sorely needed.[92]

In addition to clarifying and revising the logical teachings that had been made accessible through successive waves of translation and commentary, al-Fārābī changed the focus of logical studies: during the translation movement, Galenic works (medical as well as logical) had attracted a very large share of attention, especially by Ḥunayn ibn Isḥāq, an expert in medical literature, and his collaborators.[93] Al-Fārābī, who had studied Galen in detail, clearly preferred Aristotle as his authority and pointedly downplayed the importance of medical studies and the logical competence of Galen.[94]

Al-Fārābī's logical writings mark the end not only of Arabic "translation" activities proper, whether from Greek or Syriac into Arabic or from the sometimes obscure and stylistically deficient Arabic of the translators to the more consistent and polished idiom of the subsequent philosophers, they also mark the final stage in the process of appropriation of Aristotelian logic in the Islamic world. The next phase of logical study consisted in construing an "Islamic" logical system based on but revising and transcending Aristotelian logic, a process that had already been

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[92] Cf. Zimmermann in the introduction to Al-Fârâbî, *Commentary,* lxxv-lxxviii; Street, 'Arabic Logic', 533f; and Reisman, 'al-Fārābī and the philosophical curriculum', 65.

[93] In his account of the history of logical teaching outlined above, al-Fārābī (surprisingly) fails to mention the activities of Ḥunayn and his circle. For Rescher, *The Development*, 131, his silence is evidence that he thought of logical instruction as a living, oral tradition transmitted to him through his teachers, not a matter exclusively of written documents; his insistence on a "genealogical" link between his teachers and himself and the Alexandrian tradition points in the same direction.

[94] Al-Fârâbî, *Commentary*, lxxxi.

foreshadowed by al-Fārābī's systematising and synthesising approach.[95] In spite of the genuine respect successive generations of philosophers and logicians professed for Aristotle and his writings, logical "practice" developed from loyal adherence to careful criticism to full-scale revision. The philosopher Ibn Sīnā (d. 1037) represents this last stage. His impact was sufficient to make him instead of Aristotle the final authority in matters logical for an Arabic-speaking audience.[96] One of the consequences of Ibn Sīnā's work was a fundamental change of focus away from a comprehensive treatment of all logical issues raised by the entire *Organon* to a more narrowly conceived idea of logic. His approach—which also affected the understanding of the *Prior Analytics*—defined the set of logical questions the later logical tradition concentrated on.[97]

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[95] Reisman, 'al-Fārābī and the philosophical curriculum', 52.

[96] Cf. Street, 'Logic', 248.

[97] Ibid., 251f.