Abstract. Hunayn ibn Ishāq’s Arabic translation of Galen’s commentary on the Hippocratic Epidemics is an invaluable source for our knowledge of Galenic medicine and its transmission history, not least because much of it is extant only in Arabic. Its importance for the Arabic medical tradition is amply attested in the later medical literature. It also tells us much about the methods and self-image of contemporary translators. Throughout the translation, we find remarks by Hunayn discussing the quality of his source text, his own interpretation and also his attempts to reconstruct problematic or damaged passages. Based on an edition of these notes, their analysis and comparison to similar texts and Galen’s own thought on editing and interpreting difficult medical texts, this article aims to situate Hunayn’s methods in the context of the Greek-Arabic translation movement. It argues that his approach differs in important respects from that of preceding Greek-Arabic and Greek-Syriac translators and that he was indebted to Galen not just as a physician, but also as a translator and exegete.

Résumé. La traduction arabe de Hunayn ibn Ishāq du commentaire de Galien sur les Épidémies d’Hippocrate est une source d’importance capitale pour notre connaissance de la médecine galénique et de son histoire de transmission, notamment parce que la majeure partie n’est conservée qu’en arabe. Son importance pour la tradition médicale arabe est amplement attestée dans la littérature médicale postérieure. En plus, elle nous apprend beaucoup sur les méthodes et l’image de soi des traducteurs contemporains. Tout au long de la traduction, nous trouvons des annotations de Hunayn dans lesquels il parle de la qualité de son texte, de sa propre interprétation et de ses tentatives de reconstituer des passages problématiques ou endommagés. En s’appuyant sur une édition de ces notes, sur leur analyse et en les comparant à des textes similaires et à la pensée de Galien sur l’édition et l’interprétation des textes médicaux difficiles, cet article vise à situer les méthodes de Hunayn dans le contexte de l’histoire des traductions gréco-arabes. Il fait valoir que son approche est différente à bien des égards de celle des traducteurs gréco-arabes et gréco-syriaques précédents et qu’il était redevable à Galien non seulement en tant que médecin, mais aussi en tant que traducteur et exégète.

INTRODUCTION

Scholars of classical Islamic civilisation, especially the history of science and philosophy, routinely acknowledge the fundamental and
transformative role played by translation from Syriac and Greek into Arabic. We now have a fairly good idea about the range and contents of the philosophical, scientific and medical literature appropriated by Muslim scholars through summaries, excerpts and translations. Also, we become more and more aware of the complex interactions between exponents and supporters of the so-called Greek-Arabic “translation movement”, i.e. between translators on the one hand and their readers and sponsors on the other.2

Along with establishing basic external data about the translation movement – who translated what and when – modern scholarship has collected an impressive amount of information about methodological aspects of Greek-Arabic translation. Understanding the (always fluid) methodological standards of translation in a given period is an essential prerequisite for the appreciation of the translators’ achievement and the success or failure of their efforts. The history of translation, irrespective of the languages involved, is always also a history of the idea of translation: where do different cultures at different times draw the line between the (overlapping) genres of translation, paraphrase, commentary and summary? What are their criteria for a successful translation?3

The sources for this crucial methodological information fall into two basic categories. The first are the products of the translation movement, the translations themselves. Although the study of Graeco-Arabic translations still awaits the systematisation and application of analytical methods that have become standard in related fields,4 careful examinations of individual translations illustrate the wealth of information that can be gleaned even from a relatively small amount of textual material.5

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4 Translation Studies, a branch of linguistics, has developed a set of analytical tools to classify and compare source texts, translations and related texts. The compilation of digital textual corpora and the widespread availability of computing resources has put the study of translations on an entirely new methodological footing; at this point, entire corpora of texts can be compared and scanned for terminological, phraseological and stylistic data.

5 Excellent examples of thorough translation analyses of individual texts are (among many others) Khalil Georr, Les Catégories d'Aristote dans leurs versions syro-arabes (Beirut, 1948); Hans Daiber, Aetius Arabus. Die Vorsokratiker in arabischer Überlieferung, Akademie der Wissenschaften und der Literatur. Veröffentlichungen der orientalischen Kommission 33 (Wiesbaden, 1980); Gerhard Endress, Die arabischen Übersetzungen von Aristoteles’ Schrift De Caelo, Ph.D. dissertation (Frankfurt/Main, 1966) and id., Proclus Arabus: Zwanzig Abschnitte aus der Institutio Theologica in arabischer Übersetzung.
The second category of sources consists of a relatively small number of extant comments by translators and their audience. They range from terse notes in the margins of manuscripts to testimonia transmitted by fellow scholars and historians. The most comprehensive such witness is the celebrated Risāla (“Epistle”) by Hunayn ibn Ishāq (d. c. 870), the most prominent and prolific of the translators we know of. As we will see below, the contents of the Risāla, a survey of Syriac and Arabic translations of the works of Galen (d. 217), are more valuable for the reconstruction of translation history than for a study of translation methods.

Given the relative scarcity of methodological data, each new source that helps us improve our understanding of translations and translators and put their approach into perspective is highly welcome. One such new source is a set of texts which purports to transmit in his own words the comments of Hunayn ibn Ishāq on a specific translation: his notes on Galen’s commentary on Hippocrates’ Epidemics. The translation of this commentary is of particular relevance for two reasons: firstly, Hunayn’s notes on the text preserved in the manuscripts deal with a variety of philological, methodological and scientific issues and give us a particularly informative insight into his approach and the problems he had to deal with. Secondly, for reasons that are not yet clear, the notes are transmitted not as marginalia to the respective manuscripts, but as part of the text body: they have become “domesticated”, i.e. they are (or have become) textual “lemmata” in their own right.

In what follows, I would like to introduce the notes incorporated into the Arabic version of Galen’s commentary on the Hippocratic Epidemics and compare them to those contained in the pseudo-

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7 These are not the only texts transmitted together with notes by Ḥunayn ibn Ishāq. What sets the Epidemics apart, however, is the number, size and thematic variety of the notes. In a future publication, I intend to compile and analyse in detail these and other such notes from a wider range of translations.

8 A small number of these notes have previously appeared in print, e.g. in Rainer Degen, ‘Wer übersetzte das 6. Buch der Epidemienkommentare Galens ins Arabische? Zugleich ein Beitrag zur Textgeschichte der “Risāla” des Ḥunain b. Ishāq’, Die Welt des Orients, 10 (1979): 73–92, on pp. 81–2 and 90.
Aristotelian Physiognomics⁹ and additional relevant sources. My primary concern is methodological: what do the notes and other texts tell us about Hunayn's methods and attitudes as a translator and a physician? In a second step, I would like to speculate on possible sources and models for Hunayn's methods. While conclusions can only be tentative given the scarcity of relevant sources, I hope at least to have plausibility on my side.¹⁰

HUNAYN ON TRANSLATION AND MEDICINE

Among Galen's many commentaries on Hippocratic works, his commentary on the Epidemics (henceforth: Epidemics) occupies a prominent position. Its importance rests both on its size – it is the most substantial Galenic commentary on any Hippocratic text – and, through the medium of translation, its impact on the history of medicine, both in the Islamic world and beyond.¹¹ In his extensive remarks, Galen speaks not only as a practising physician, but also an accomplished philologist.

One of Galen's main concerns as a commentator was the authenticity of the allegedly Hippocratic writings he commented on.¹² Of the seven books of the Epidemics transmitted under Hippocrates' name, Galen only commented on four: Books 1, 2, 3 and 6. Of these, he seemed to have regarded only the first and third as authentically Hippocratic without, however, justifying his conclusion in detail.¹³ Books 2 and 6, Galen maintained, consist of disparate Hippocratic notes collected by his son Thessalus and, at least in the case of Book 2, supplemented with material of his own.¹⁴

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¹⁰ Many of Hunayn's medical translations, extant in a number of manuscripts, remain uneedited. Given the fact that a number of edited translations contain notes and remarks, I expect more relevant material to come to light.


¹² This was an issue close to the hearts of many of Galen’s predecessors and contemporaries, especially regarding the Hippocratic corpus. Galen frequently discussed this issue and also instrumentalised concerns over authenticity to weed out such texts that did not support his idealised concept of Hippocratic teachings; hence, discussions about authenticity were a very important exegetical instrument for him. Cf. Jaap Mansfeld, Prolegomena. Questions to be Settled before the Study of an Author, or a Text, Philosophia Antiqua 61 (Leiden, New York, Köln, 1994), p. 176 with n. 312.


By the time Renaissance scholars collated the extant manuscripts, the Greek text of Galen’s commentary had shrunk considerably: almost all of Book 2 and parts of Book 6 were lost. Still extant, however, is an almost complete Arabic translation of the commentary produced by Ḥunayn ibn Ishāq. In the course of his remarkably productive career as a translator, Ḥunayn, himself a medical expert and practising physician, almost single-handedly made most of the Galenic corpus available in Arabic. The importance of his translation of the *Epidemics* does not only rest in the fact that it is our only witness for the parts lost in Greek. In addition, Ḥunayn’s translation was based on sources that were substantially older than any of the Greek manuscripts available to us and often preserved better readings.

The Arabic translation of Galen’s *Epidemics*, i.e. his commentary on Books 1–3 and 6 of Hippocrates’ *Epidemics*, contains seventeen notes, ranging in length from three lines to a full manuscript page. These notes, distinguished from the surrounding text by the introductory formula *qāla Hunayn* (“Ḥunayn said”), were transmitted together with the Arabic text, not as marginalia, but as part of the text body. The translation of the *Epidemics* is one of a small number of texts that contain such an impressive number of notes by Ḥunayn. Toward the end of Book 6, one of the manuscripts signals an additional, eighteenth note, but the lemma following the introductory *qāla Hunayn* (“Ḥunayn said”) is clearly a comment by Galen himself rather than Ḥunayn. In addition, in a lengthy colophon appended

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15 For Ḥunayn’s own account of the manuscript material at his disposal and the complicated translation process, see Gotthelf Bergsträsser, ‘Ḥayn ibn Iṣḥāq über die syrischen und arabischen Galen-Übersetzungen’, *Abhandlungen für die Kunde des Morgenlandes*, 17 (1925): 1–49, on pp. 41–2 (Arabic) and 34–5 (German).

16 A research group at the University of Warwick under the supervision of Simon Swain and Peter E. Pormann is currently preparing an edition and translation of Books 1 and 2 of Ḥunayn’s Arabic version. Pormann, ‘Case notes’, pp. 263–7 discusses the manuscript situation in detail. In this article and the appendix at the end, I am going to follow Pormann’s nomenclature. His E1 (Madrid, Escorial, MS árabe 804) contains Books 1–3, E2 (Madrid, Escorial, MS árabe 805) Book 6 and M (Milan, Ambrosiana, MS B 135 sup.) Book 2 and the last two and a half parts of Book 6. In addition, we have a late and partial copy of M: P (Paris, Bibliothèque Nationale, MS arabe 2846). Marginal annotations and corrections written in different hands in these manuscripts are distinguished by superscript numbers: E12, E13 etc.

17 The seventeen notes, edited and translated in the Appendix to this article, are numbered in the order of their occurrence in the *Epidemics*.

18 While a number of his other translations also contain notes, they are usually few in number and relatively short. The only other example of an extensively annotated text I am aware of is Ḥunayn’s aforementioned translation of the pseudo-Aristotelian *Physiognomics*, edited by Antonella Ghersetti, *Il Kitāb Aristātallīs al-faylasūf fi l-fīrāsā nella traduzione di Hunayn b. Iṣḥāq*, Quaderni di Studi Arabi. Studi e testi 4 (Rome, 1999). We will discuss the notes in this text, also transmitted as part of the text body, below.


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at the end of Book 6, Hunayn explained the problems he encountered in establishing his (incomplete) source text.\textsuperscript{20} The notes are distributed as follows: one in Book 1; seven in Book 2; two in Book 3; and seven in Book 6. Their distribution roughly corresponds to the differences in length between the respective books.

With some overlap, Hunayn’s notes fall into five general categories. Before we analyse them more closely and compare them to other such notes, let us outline their contents.\textsuperscript{21}

Of the seventeen notes, six present amplifications of and comments on Galen’s commentary.\textsuperscript{22} Hunayn sometimes added medical information while explaining a difficult medical term, several times by expanding Galen’s commentary where he regarded it as insufficient.\textsuperscript{23} In one place, Hunayn found Galen’s explanation too garbled and provided his own, more lucid and detailed explanation.\textsuperscript{24} On one occasion, Galen rejected a Hippocratic lemma as spurious. Hunayn quoted the missing lemma from another source and claimed that Galen’s decision to exclude it may have been a result of a misunderstanding on Galen’s part.\textsuperscript{25} On another occasion, Hunayn pointed out an ambiguity in the Greek text, something that Galen occasionally does for the Hippocratic text.\textsuperscript{26}

In a second group of five notes, Hunayn offered terminological explanations, sometimes referring to the original Greek word.\textsuperscript{27} None of his explanations remain on the level of mere glosses; some provide cultural background information\textsuperscript{28} or attempt to clarify the etymology of transliterated Greek terms.\textsuperscript{29} In a remarkable example of linguistic “accommodation” for the benefit of his Arabic-speaking audience, Hunayn remarked on a statement of Galen to the effect that certain terms in the preceding Hippocratic lemma did not need explanation because his (Greek) audience could be expected to know them. Hunayn observed that the linguistic differences between

\begin{itemize}
\item The colophon in question can be found in E2, fol. 195b1–17 and M, fol. 177b14–ult.; for translations and comments, see Degen, ‘Wer übersetzte’, pp. 81–6 and Pormann, ‘Case notes’, pp. 252–7. Both discuss the relationship between this colophon and the entry on the \textit{Epidemics} in Hunayn’s \textit{Risāla}, from which it is quoted. As Degen shows, it is not unusual for compilers of Arabic Galenica to supply the relevant entries from the \textit{Risāla} in manuscript colophons.
\item This and the following notes refer to the Arabic texts and my English translations of Hunayn’s statements assembled in the Appendix.
\item 4, 11–14 and 17 (E1, fol. 53a12–18 and E2, fol. 16b7–12, 24b6–18, 55a16–b16, 132a7–21 and 176a22–25).
\item 4 and 11–12 (E1, fol. 53a12–18 and E2, fol. 16b7–12 and 24b6–18).
\item 13 (E2, fol. 55a16–b16).
\item 14 (E2, fol. 132a7–21).
\item 17 (E2, fol. 176a22–25).
\item 4, 9–10 and 16–17 (E1, fol. 53a12–18, 135a29–b2 and 136b18–24 and E2, fol. 168a5–13 and 176a22–25).
\item 4, 10 and 16–17 (E1, fol. 53a12–18 and 136b18–24 and E2, fol. 168a5–13 and 176a22–25).
\item 9–10 (E1, fol. 135a29–b2 and 136b18–24).
\end{itemize}
Greek and Arabic required him to supply the missing explanation and proceeded to clarify the meaning of the term.  

A further five notes represent attempts to fill gaps Hunayn found in his manuscripts. In two of them, he added missing Hippocratic lemmata from other sources (without, unfortunately, explaining what these sources were). More interestingly, in four of these notes, he lacked textual support to fill lacunae or found it necessary to add his own “in the spirit” of Galen. He boldly stepped into the shoes of the commentator and attempted to complete Galen’s comments with the help of similar, parallel texts from the Galenic corpus or his sense of what Galen would have written. Tantalisingly, in one of these notes, he alluded to “the principles I took from his writings” as the inspiration for his creative foray. We will discuss the potential significance of this statement below.

Two notes and the colophon at the end of Book 6 mentioned above contain information about philological aspects of Hunayn’s work. In a longer remark inside Book 2, Hunayn explained why his translation of Book 2 is incomplete. Suitably qualified readers, he added, should fill this conspicuous gap as soon as better, more complete manuscript sources become available. Hunayn’s reaction to another textual problem he encountered in Book 2 illustrates his occasional lack of trust in his manuscripts. He pointed out an apparent contradiction between different parts of Galen’s commentary and corrected his source text by offering an alternative explanation on the basis of a parallel text drawn from Galen’s Ars parva.

Finally, two further notes mark passages Hunayn omitted or thought about omitting from the Arabic translation. On one occasion, he wrote that he considered leaving out a particularly difficult passage he thought could not be replicated in Arabic. In the end, he decided to attempt a translation anyhow and noted that those readers able to understand his rendering may profit from it while the others could safely ignore it. On another occasion, Hunayn admitted that he ignored a number of quotations from Homer, Plato and others

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30 16 (E2, fol. 168a5–13).
31 2–3, 5, 14 and 16 (E1, fols. 51a22–b12, 53a6–9 and 104b9–12 and E2, fols. 132a7–21 and 168a5–13).
32 3 and 14 (E1, fol. 53a6–9 and E2, fol. 132a7–21).
33 2–3, 5 and 16 (E1, fols. 51a22–b12, 53a6–9 and 104b9–12 and E2, fol. 168a5–13).
34 3 (E1, fol. 53a6–9). Hunayn wrote: “ādāftu ilayhi min a-tafsīr mā žānantu an yuṣākila maḏḥaba Gālīnūs fi a-tafsīrihi lahu wa-mā yaqṣīdū bihi” ([I] added comments I thought corresponded to Galen’s procedure in his commentary and what he meant with it).
35 6–7 (E1, fols. 105a19–b4 and 108a26–b12).
36 6 (E1, fol. 105a19–b4).
37 7 (E1, fol. 108a26–b12).
38 8 and 15 (E1, fol. 119a23–30 and E2, fol. 145a17–23).
39 8 (E1, fol. 119a23–30).
Galen had inserted to make a theoretical point. According to Hunayn, translating them would be pointless because there were no Arabic equivalents for the concepts discussed in this passage.\footnote{15 (E2, fol. 145a17–20).}

Hunayn also translated a number of other, non-Galenic medical or quasi-medical texts. One of them was the Physiognomics falsely attributed to Aristotle, a treatise on the correlation between facial features and expressions on the one hand and character traits on the other. While not directly medical in nature, the text frequently touches on medical matters.

The Arabic translation of the Physiognomics contains fifteen notes by Hunayn,\footnote{In the following references, the fifteen notes are numbered in the order they appear in the text. I will give page and line numbers according to the Arabic edition by Gheretti, Il Kitāb Aristātāllīs. Cf. also the discussion of these notes in Mario Grignaschi, ‘La “Physiognomie” traduite par Hunayn ibn Ishāq’, Arabica, 21 (1974): 285–91, here: pp. 288–91.} almost all of which occur toward the beginning of the text. Their contents and purpose often parallel those in the Epidemics, but there are also some interesting differences.


Overall, the notes contained in the Physiognomics differ somewhat in tone and purpose from those in the Epidemics, but in some respects, they reflect the same critical attitude to the text and, in the case of the Physiognomics, its (real or alleged) author. The severity of his judgements and the exasperation that seems to emerge from his remarks
suggest that Hunayn already had his doubts about the text’s authorship.\footnote{Cf. Grignaschi, ‘La “Physiognomie”’, pp. 290–1.} The concentration of notes at the beginning of the \textit{Physiognomics} may have been caused by any number of factors, but invites the hypothesis that Hunayn simply lost his patience with a text that seemed unconvincing. Be that as it may, the notes indicate that Hunayn regarded Galen and Hippocrates (and his own experience and common sense) as his main authorities in matters physiognomical, not the author of the \textit{Physiognomics}.

The length and content of his notes on Galen’s \textit{Epidemics} commentary and the \textit{Physiognomics} clearly illustrate that Hunayn saw his role as more than just a translator. In parts, the notes represent a “super-commentary”; in others, he invited his audience to reflect on his translation choices; in others again, he explained or illustrated his philological approach. Hunayn’s notes enable the reader to observe him at his workplace, collecting and collating manuscripts, mending the damaged text and translating it. But he did not stop there: commenting on difficult textual and medical details, he slipped into the role of a commentator or, where the text of Galen’s commentary remained incomplete, channelled the voice of Galen, reconstructing it from his own knowledge of the Galenic corpus or even his intuition into what Galen would have said. These notes, particularly those in which he discussed expanding his source text, are highly significant: they show how much more comprehensive Hunayn’s self-image as a translator and his concept of translation was compared to modern standards of philological accuracy and faithfulness to the source text.

In addition to notes transmitted alongside his translations, Hunayn ibn Ishāq left another important document about his translation activities, the \textit{Risāla} mentioned above.\footnote{Edited by Bergsträsser, ‘Hunain ibn Ishāq’, with additions and corrections in \textit{idem}, ‘Neue Materialien zu Hunain ibn Ishāq’s Galen-Bibliographie’, \textit{Abhandlungen für die Kunde des Morgenlandes}, 19 (1932): 1–108. See also the remarks by Max Meyerhof, ‘New light on Hunain Ibn Ishāq and his period’, \textit{Isis}, 8 (1926): 685–724.} In this treatise in letter form addressed to one of his sponsors, Hunayn surveyed the translation history of the Galenic corpus as it was known to him. For most of the titles listed in the \textit{Risāla}, Hunayn provided information about previous translations into Syriac or Arabic, details about the manuscript situation and the contribution of his own group of translators, either in the form of translations or revisions of existing translations.

Together with the outline of (Galenic) translation history that emerges from the pages of the \textit{Risāla}, the reader also gains valuable insights into Hunayn’s understanding of the task of translation and
his assessment of the merits and flaws of translations produced by himself, his contemporaries and predecessors. While frequently faulting previous translators (especially those translating from Greek into Syriac) for their allegedly insufficient command of the Greek language and lack of medical knowledge, he also freely admitted to problems with his own translations or those written under his supervision.

One of the more important aspects of his translation “ethos” is his thoroughly pragmatic attitude. Numerous entries in the Risāla illustrate that Ḥunayn regarded the transmission of information as his main task, not the unconditional preservation of structural and terminological features of his source texts. We hear of excerpts or summaries of texts instead of full translations; sometimes, he merely revised and corrected existing translations. In extreme cases, e.g. where he had to work with exceptionally flawed or damaged manuscripts, he either put off translation or occasionally — as we saw in the Epidemics — attempted to fill gaps with the help of parallel sources or his thorough knowledge of Galenic medicine.

An integral element of his approach was to take the needs and expectations of his customers and sponsors into consideration and to accommodate the language of a translation to their level of expertise and understanding. As we know from a statement transmitted in Ibn Abi Usaybi’a’s ‘Uyun al-anbā’ fi ṭabaqāt al-ʿatibbā’ (“The Sources of Reports on the Generations of Physicians”), Ḥunayn put great store in his ability to translate complex medical texts into a language even the uninitiated were able to understand.

ḤUNAYN’S SOURCES AND MODELS

The pragmatic attitude Hunayn emphasised in many of his statements constitutes only one aspect of his approach as a philologist

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51 Cf. e.g. Bergsträsser, ‘Ḥunain ibn Ishāq’, nos. 11, 37, 53 and 84.
52 Cf. e.g. Bergsträsser, ‘Ḥunain ibn Ishāq’, nos. 16 (on his nephew Ḥubayy), 17, 43 and 108 (on his own translations).
53 Cf. Gutas, Greek Thought, pp. 140–1.
55 Cf. e.g. Bergsträsser, ‘Ḥunain ibn Ishāq’, nos. 13, 15, 18–19, 37, 53.
57 Cf. e.g. Bergsträsser, ‘Ḥunain ibn Ishāq’, nos. 5, 16, 37 and 56; Gutas, Greek Thought, p. 140.
and translator. Also important and, thanks to its frequent discussion in the secondary literature, somewhat more prominent is the claim that his translation methods represented a decisive improvement over his predecessors in terms of philological precision and textual fidelity. The sometimes arduous process of collection, comparison and collation of Greek manuscripts and, where applicable, pre-existing Syriac and Arabic translations Ḥunayn described in the Risāla, together with his pronouncements about the superior quality of his translations, suggest that he adhered to very high standards of philological and translational exactitude. An examination of his extant translations confirms most of his claims, however transparently self-promoting they often read.

Where, then, do we find his models? What are the sources for his methodological standards? There are three obvious candidates: firstly, Ḥunayn’s education and training as a translator and physician. Secondly, he could have drawn on the work of his predecessors, i.e. available translations or literature about translation, should it have existed. Thirdly, he may have been inspired in part by the contents of some of the Greek texts he worked with, at least as far as they dealt with issues relevant for translators. On the following pages, I would like to suggest that, while all of them played a role, two factors may have been particularly significant: his medical background and training; and the influence of Galen, the philologist.

The Syriac translation tradition, of which Ḥunayn was still an (albeit late) exponent, furnished much of the attitudes, methods and even the manpower for the Arabic translation movement between the eighth and eleventh century, with which it partly overlapped. The Syriac translation movement, however, stretching from the fifth to the ninth century, lacked the widespread sponsorship and systematic character of the Greek-Arabic translation movement.

The bulk of the output of Syriac translators consisted of Christian theological writings and related texts. Owing to the sensitivity of this material, the Syriac translation tradition displayed a growing tendency toward the imitation of terminological and structural features of Greek source texts, especially from the seventh century onward. More often than not, the Christological conflicts then raging between local churches in Syria and the ecclesiastical authorities in Byzantium were fought through the medium of texts.

For a translator, this meant that a lack of precision or an unfortunate choice of words could put him and his unwitting audience on the wrong side of a doctrinal debate, imperilling not only their personal safety but their very afterlife.\(^{62}\)

The reasoning behind the methodological shift toward a text-centred translation style did obviously not apply to the same degree to the small but steady flow of translations of secular texts into Syriac, e.g. Aristotelian logic. Many of the translators producing these Syriac versions of secular texts, however, were the same individuals who worked on theological texts. Unsurprisingly, they often applied their customary translation style to each text they worked on, irrespective of its actual contents. In conjunction with this methodological bias arising from theological considerations, translation styles from Greek into Syriac were probably also influenced by the respect accorded to what translators and their audience regarded as a superior culture. The authority of the Greek language was rooted not only in the prestige of the cultural achievements it represented and transported, it may also have rested in part on the fact that Greek was the language of the foundational text of the religious communities that were playing such a prominent role in the Greek-Syriac translation movement: the New Testament.\(^{63}\)

These factors, among others, likely converged to foster a reverential attitude to the source text. Translators strove to imitate their Greek sources down to their syntactic structure and even word order. Whenever they found themselves unable to understand a text, rather than pointing out inconsistencies and problems in the text or the source manuscripts or even the reasoning of the original author, translators often resorted to extremely literal renderings. Some of the resulting translations are almost impossible to read without the help of the corresponding Greek sources.\(^ {64}\) Examples for translations that illustrate this reverential attitude can also be found among early Greek-Arabic translations. In fact, some of the more remarkable cases, e.g. the translations of Aristotle’s *Poetics* and *Posterior Analytics* produced in the first half of the tenth century by the

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\(^{62}\) Cf. Sebastian Brock, ‘Aspects of translation technique in Antiquity’, *Greek, Roman and Byzantine Studies*, 20 (1979): 69–87, on p. 78 and also the interesting appendix to a probably late sixth century Syriac translation, in which the author asserted that “[t]his [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”, quoted by Brock, ‘Towards a history’, pp. 9–10.


Nestorian Abū Bišr Mattā (d. 940), one of the teachers of al-Fārābī (d. 950), postdate Hunayn’s activities.

Either directly or indirectly, this background must have exerted a strong influence on Greek-Arabic translators. With few exceptions, they were Christians belonging to one of the various denominations based in Syria and Iraq. For all we know, many or even all of them received their education at the same church-based schools and convents that took an active interest in translation from Greek into Syriac. Ḥunayn, who may have traveled all the way to Byzantium to improve his Greek, seems to have been an exception insofar as he possibly received at least part of his training outside these structures. What is more, a substantial number of translations into Arabic were based not on Greek source texts but pre-existing Syriac translations. Ḥunayn himself reports in his Risāla that for almost all of the Galenic works he or his collaborators translated into Arabic, they first created a Syriac intermediary or revised an existing Syriac version on which the Arabic translation was ultimately based. Whether through their training or the Syriac translations they consulted, Arabic translators before and after Ḥunayn were bound to assimilate elements of the translation methodology of the Greek-Syriac translation movement.

As far as we know, none of Ḥunayn’s predecessors left us with the kind of extensive notes, let alone a whole treatise, discussing translation. Besides a small number of remarks attached to translations


or scattered across the bio-bibliographical literature, our only evidence for the translation methods and “ethos” applied before Hunayn are the extant Arabic translations themselves. As many studies have shown, they often display a certain methodological and terminological unevenness, ranging from paraphrases to mirror images of the Greek source text. One constant appears to be the recourse to extremely literal renderings whenever problems of understanding arose.

Unlike Hunayn, many translators we know of were not trained experts in the fields they were translating in; often enough, they were not even native speakers of Arabic, but Christians whose mother tongue was Syriac. Contemporary observers, including Hunayn, occasionally remarked on their unidiomatic, often tortured language and their lack of credentials. More importantly, there are few, if any, indications for the kind of critical attitude to texts (let alone source authors) characteristic for Hunayn’s writings. This may have been a consequence of the respect for texts and authors engendered by the Syriac translation movement. While the philological and translation methods employed by Hunayn (and described in his writings) are most likely the outcome of an evolutionary rather than revolutionary development, his most significant innovation, I suspect, lies elsewhere: his attitude to his textual sources.

While still highly respectful of Galen as a physician, Hunayn drops the reverence for the text itself. It is not an immutable artefact to be uncritically accepted by translator and audience, but rather a linguistic vehicle for ideas and theories that may have been subject to alterations and damage in the course of transmission. As a translator and physician, Hunayn’s aim was to transmit information, not just texts (with all their potential flaws). Throughout the Risāla, his concern with philological diligence and translational fidelity was tempered by his desire to provide the most accurate medical information possible for his own use and that of other practising physicians.

The graphical form of his interventions in the manuscripts of the Epidemics – assuming that their prominent placement in the text body and their lemma-like shape were not just the invention of the individuals who copied our manuscripts – contrasts strongly with the much more modest traces of preceding translators, which were

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68 Problems with their Arabic seems to have been a frequent complaint, cf. Zimmermann, *Al-Farabi’s Commentary*, p. lxxvi on Abū Bišr. Zimmermann explains that the latter, like other early teachers of Aristotelian philosophy in Baghdad, “are likely to have come […] from convents and the least Arabicized section of the Christian community”.

69 In note 7 (E1, fol. 108a26–b12), Hunayn explained that a contradiction he noticed in a Galenic comment must have been introduced by an incompetent scribe and made a point of stating that, whole correcting the text, “lam arad […] al-i’tirāda ‘alā Ġālinūs” (I did not intend to oppose Galen).
normally strictly distinguished from the translation itself and took
the form of marginal notes or were relegated to a colophon.
Together with their number and relative length, Hunayn’s notes on
the *Epidemics* and also the *Physiognomics* illustrate a novel willingness to trust in his own expertise and to privilege the audience of
his translations over the text.

Although I am confident that there is strong evidence for the kind of
innovation Hunayn’s approach represents, I also need to sound a note of caution. As I said before, a number of Arabic translations were not
produced directly from Greek sources, but based on Syriac texts. Often
enough, it is extremely difficult to determine whether a given translation
was made from one or the other language. Any perceived flaws and inconsistencies of an Arabic version may already have
been present in the Syriac intermediary. Also, little is known about
the transmission histories of individual texts. Our sources indicate
that revisions by later translators, scholars and scribes were a regular occurrence. Again, most of the time, it is impossible to detect, let alone peel away layers of later interventions.\(^70\) This is particularly regrettable since virtually our only source of evidence about the methods of translators before and even after Hunayn accessible to us are the translations themselves. Hunayn, remarkable in so many respects, is the only translator whose own writings have survived in sufficient quantity to reconstruct his methods with any degree of confidence.

The role of the translator that emerges from many Syriac and early
Arabic translations seems to be that of a silent, slightly passive trans-
mitter: the personal opinions and attitudes and sometimes even the
identity of individual translators were of little concern. This understand-
ing of their task was the natural outcome of a concept of trans-
lation that regarded a translated text as little more than a mirrored
version of the source in another linguistic medium.

In the final analysis, it seems at the very least highly unlikely that Hunayn’s novel understanding of the task of the translator, his prag-
matism and self-confidence derived exclusively from his education in
the schools of his native Nestorian community or his exposure to expo-
nents and products of the Greek-Syriac and Greek-Arabic translation
movement. As a prominent scholar and physician in ninth-century
Baghdad, attending to a succession of ʿAbbāsid caliphs,\(^71\) Hunayn
was an active participant in the flowering of scholarship that took place all around him, not just in fields directly affected by


Greek-Arabic translations such as philosophy and the sciences. Even though his own writings give us little indication of any sustained interaction with any of the myriad Muslim philologists and theological scholars of all stripes converging on Baghdad during his lifetime, it would be very surprising for him to have been completely unaware of their activities and methods. It is therefore not inconceivable that the intellectual ferment of ninth century Baghdad contributed to the development of his philological and translation methods.

At the same time, we find his name mentioned relatively rarely in the writings of contemporary observers and scholars, an astonishing omission in view of his importance as a translator. It is less astonishing given the fact that medical practice at the court and in the upper echelons of ‘Abbāsid society was firmly in the hands of Syrian Christians. Not only that, their relative isolation from potentially dangerous religious and political factions in the Muslim community made them welcome guests in the salons of the caliphs. It was fellow Christians Ḥunayn studied with in Baghdad, who purchased his services as a translator and competed with him for caliphal favours. The circles Ḥunayn moved in and worked for were in all probability largely Christian. Whatever the concrete influence contemporary Muslim scholars had on Ḥunayn’s work, it may in the end have been slight.

As a translator and follower of Galen, the writings of this greatest physician of antiquity were in many respects probably “closer to home” for Ḥunayn. While not speaking to the concerns of a translator as such, Galen left numerous remarks on his procedure as a commentator. Especially in the introductions to his commentaries on Hippocratic texts, he frequently explained his approach and illustrated his philological methods. According to the Risāla, Ḥunayn translated each of the commentaries in which Galen elaborated on these issues. They may have been instrumental in forming Ḥunayn’s attitudes and understanding of the translator’s task which, as we can see from his notes, sometimes crossed the line between translating and commenting.

Galen’s first (and obvious) aim, as stated in his Difficulties in Breathing and a short programmatic note at the beginning of Book 3 of his commentary on Hippocrates’ Aphorisms (possibly, but not

72 Cf. e.g. Cooperson, The purported autobiography of Ḥunayn’, p. 242.
74 Unfortunately, the potentially most important source for his methods, an independent work entitled On Exegesis (Περὶ ἐκφύσεως), is lost. Galen summarised some of its central tenets in the introduction to his commentary on Hippocrates’ On Fractures, discussed below. Cf. Mansfeld, Prolegomena, p. 135 and 148, n. 269.
75 The following remarks rely heavily on Jaap Mansfeld’s brilliant and insightful analyses of Galen’s statements about reading and commenting on Hippocratic texts in ch. 5 of his Prolegomena (pp. 148–76).
likely a later addition), was “to make clear what is unclear”. In his commentary on Hippocrates’ *On Fractures*, he added that he accorded explanation much more importance than other concerns emphasised by his predecessors, e.g. evaluating the contents of a text or defending its theories and tenets against detractors. In the same commentary, he maintained that clarification and explanation become necessary whenever the Hippocratic text is obscure or the reader lacks the requisite knowledge or discernment to understand it. Hippocrates’ works allegedly contain many expressions and passages that are unclear “in themselves”. The reason, Galen held, was not their obscurity *per se*, but (among others) the complexity and difficulty of the subject matter. In addition, those of Hippocrates’ works circulated during his lifetime were addressed to the *cognoscenti* while those compiled after his death consisted of “cryptic personal notes” that underwent an “editing” process. Only scholars with sufficient medical knowledge, Galen foremost among them, were qualified to understand and explain what Hippocrates “really meant”. By arrogating to himself the authority to determine Hippocrates’ “real” intentions and distinguish between passages that need explaining and those that do not, Galen gave himself great leeway to “modernise” Hippocrates in his own image. Unsurprisingly, he often ended up with a creative, quasi-Galenic reading of Hippocratic doctrines.

Perhaps even more than Hunayn, Galen was interested in the practical usefulness of Hippocratic doctrines he found (or sometimes read into) his texts. Commenting on his source, he often switched from interpreting a lemma to explaining medical, philosophical or scientific issues and back. The apparent arbitrariness of this approach is,
however, limited by another principle Galen insisted on, e.g. in *Diagnosis by Pulses*: Hippocratic (and other) writings should be read and explained with reference to other works by the same author so as “not to indulge in foolishness through empty assumptions and unproven assertions”.83

The same kind of pragmatic ambiguity apparently pervaded Galen’s philological practice. In Book 6 of his commentary on Hippocrates’ *Epidemics*, Galen included a fascinating note in which he accused other interpreters of damaging the text and introducing changes that were neither useful nor in accordance with Hippocrates’ views.84 He, on the other hand, faithfully adhered to the “ancient reading” (τὴν ἄρχοιαν γραφήν) and limited himself to “plausible conjectures” (πιθανὴν τὴν ἐπανόρθωσιν) – unlike, among others, the editors of a widely used collection of the Hippocratic corpus at the time, Artemidorus Capito and Dioscurides.85 Like the exegetical work following it, the philological operation of establishing reliable Hippocratic source texts was also in part subject to the dictates of “usefulness”, tempered by the requirement of agreeing with Hippocrates’ (admittedly malleable) views.

In addition to Galen’s professed intention accurately to reconstruct the wording of Hippocrates’ writings, the very form of the lemmatic commentary itself emphasises his claim to textual faithfulness. The format suggests that the reader can draw a clear line between authentic Hippocratic utterances on the one hand and Galen’s interpretation on the other. The lemmata from Hippocrates’ *Epidemics* Galen expounded on, however, did not cover the entire text and were already the result of a selection process. His motivation comes out most clearly in a passage in which he posited that a commentary has to preserve the “thought” (τὴν γνώμην) of a text and convey the “useful material” (τὰ χρήσιμα … τὰ ύπομνήματα) it contains.86

83 “καὶ γὰρ μοι καὶ νόμος οὗτος ἐξηγήσεως, ἑκατὸν τῶν ἁνδρῶν εξ ἔαυτοῦ σαφηνίζοντα καὶ μὴ κενοὶς ὑπονοιαῖς καὶ φασιν ἀναποδείκτως αποληρεῖν, ὁ τις βούλεται’ (Galeni Opera, ed. Kühn, vol. 8, p. 958, ll. 6–8), cf. Mansfeld, Prolegomena, p. 148 with n. 270. As much as he professed its exegetical value, Galen was not always consistent in the application of the *Homerum-ex-Homero* principle he advocated in this passage; cf. ibid., p. 152, n. 278.

84 “εἰ μὲν οὖν μετὰ τὸ διηλώσα τὴν παλαιὰν γραφὴν ἔλεγον ἡμαρτήσατα τὴν | λέξιν εἰκός εἶναι καὶ διὰ τοῦτο ὑπονοεῖν αὐτοῖ τὴν Ἰπποκράτειος γραφὴν εἶναι τὴν ἔτι τνα, κὰν ἀπεδεξέμενα αὐτοῖς, εἰ γε μετὰ τὴν ἐπανορθῶσαν ἐόροιν διὰδοκοῦντας τὴ χρήσιμην τε ἀμα καὶ τῆς γνώμης ἐξίμισον τοῦ παλαιοῦ’ (Galeni in Hippocratis Epidemiarum librum VI, ed. Wenkebach, p. 3, l. 11–p. 4, l. 4), cf. Mansfeld, Prolegomena, p. 139.

85 “πάντων δὲ τῶν ὑπαλλαξῶτον τὰς παλαιὰς γραφὰς τολμηρότατα τοῖς περὶ Καπίτωνα καὶ Διοσκουρίδην εὑρίσκη τρέξαστας τοῦτο’ (Galeni in Hippocratis Epidemiarum librum VI, ed. Wenkebach, p. 4, ll. 15–17), cf. Mansfeld, Prolegomena, p. 140.

86 “ἀρεταὶ μὲν γὰρ εἰσιν ἐξηγητῶν δύο αὑτα, τὸ τῆν γνώμην φυλάσσειν τὸν συγγραμμάτου καὶ τὸ τὰ χρήσιμα διδάσκειν τοὺς ἀναγνωσομένους αὑτοῦ τὰ ύπομνήματα’ (Galeni in Hippocratis Epidemiarum libros I et II, ed. Wenkebach, p. 6, ll. 16–18).
It is precisely this complicated balancing act between textual faithfulness to their respective sources on the one hand and pragmatic considerations such as intelligibility and medical usefulness on the other where, I think, Galen and Hunayn meet. Objective proof that Hunayn explicitly drew on Galen’s opinions about philology and exegesis in formulating his own position on translation is probably hard to come by, with the possible exception of Hunayn’s allusion to “the principles I took from his writings” in the *Epidemics*. As tempting as it is to read this phrase (َاُصْلُ اَلْلَايَمِيْتِ أَحْدَثُهَا أَنْحَا مِنْ كُتُبِهِ)⁸⁷ as a direct reference to his methodological debt to Galen, it could just as plausibly be an allusion to medical doctrines.

There are, however, a number of highly suggestive parallels in the thinking of these two authors. By referring to the same and other Galenic and Hippocratic texts while reading and interpreting Galen’s commentary on the *Epidemics*, especially when he encountered lacunae, Hunayn displayed a marked awareness of the *Homerum-ex-Homero* principle Galen so forcefully advocated. Galen’s insistence on using commonly known words in his interpretation of seemingly obscure Hippocratic passages finds its correlate in Hunayn’s proud assertion that his translations were formulated in a way that allowed even the uninitiated to understand difficult medical issues.

On a more general level, Galen and Hunayn equally emphasised “explanation” as their core concern, *i.e.* the transmission and clarification of the ideas of a text, sometimes at the expense of its exact wording – be it by subtly altering the wording in the process of translation or by carefully selecting and embedding lemmata in a commentary. It required a certain independence of mind to develop as critical an attitude as Galen and Hunayn while also professing the utmost respect for their sources – unless, as in the case of the *Physiognomics*, they turned out to be so obviously defective.

**CONCLUSION**

On the basis of the argument outlined above, I believe we have grounds to place Galen among the formative influences on Hunayn not only in his capacity as a physician, but also as a philologist, translator and exegete. Thanks to his decades-long effort to make the Galenic corpus available in Arabic, Hunayn was intimately familiar with Galen’s thought on all matters medical and beyond. Scattered throughout Galen’s writings, he found a developed methodology of

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⁸⁷ In note 2 (E1, fol. 51a25).
reconstructing, reading and interpreting (medical) texts. As we have seen, Hunayn shared many of Galen’s ideas about philology and textual interpretation. Whereas his predecessors and even some of his contemporaries and successors faithfully upheld their inherited, virtually unconditional respect for the texts they were translating, Hunayn shifted his attention away from the text toward its reader. In spite of his undoubted respect, perhaps even veneration for Galen, he retained enough independence to criticise his textual sources and even Galen himself where required. If there was a translation “programme” or “strategy” Hunayn followed, it was centered on the transfer of knowledge rather than unwavering philological precision. In this as in the field of medicine, he proved to be a worthy student of his master Galen.

APPENDIX: HUNAYN “LEMMATA” IN BOOKS 1-3 AND 6 OF GALEN’S EPIDEMICS

1. Book 1:1, E1 9a3-6

To supplement an apparently incomplete explanation by Galen, Hunayn refers to and explains a similar passage in which Galen proposes the cause for the different conditions of diarrhoea listed in this lemma.

قَالَ حنْيْنُ: كَانَ وَقِفَ جَالِيْنَوْسَ السَّبَبَ فِي جَمِيعِ أَحَوَالِ ذِلْكَ الْخَالِفَ فَلَمْ أَتْمِمَهُ ذِكْرُهُ أُوْلَى ثُمَّ وَقِفَ وَقِفَةً إِنَّهُ بَعْدَ اِمْتِمَاعِهَا أَنْ يَكُونَ وَهْمًا مِّنْهُ إِلَّا أَنْ يَكُونَ سُقَطٌ مِّنَ النُّسُخَةِ الَّتِيَ تُرُجمَتْ مِنْهَا أَوْ مِّنَ النُّسُخَةِ الأَصِلَةِ وَالسَّبَبُ عِنْدِيَ فِي قَلْتِهِ كَانَ تَوَارَتُ الْقِيَامُ كَأَنَّهُ قَالَ: «إِنَّهُ كَانَ يَجِيِّدُ قَليَّاً قَليَّاً»، وَذَلِكَ جَاتَ أَنْ يَكُونَ مَعِينٌ قُوْلُهُ «قَليَّاً» فِي لِغَةِ الْيَوْنَانِيِّينَ.

Hunayn said: Galen described the reason for all the conditions of this diarrhoea except for what he [sc. Hippocrates] described about the small quantity. I have not found him mention it and think that he left it out either by mistake or because it was missing from the manuscript I translated from or the original manuscript. The reason for its small quantity is, I think, the frequency of the bowel movements, as if he had said: “it emerged little by little”. This is indeed one of the possible meanings of “little” in Greek.

88 For a list of the sigla used in the Appendix, cf. above, n. 16.
Hunayn identifies a lacuna in his manuscript covering Galen’s explanation to a lemma and the one following it and fills it according to Galen’s method for explaining similar lemmata.

هـل ترجمة إينجنيين: إن وجدت النسخة اليونانية التي ترجمتها منها هذا الكتاب ينقص بافي تفسير كلام أبقراط هذا الذي وضع قبل وتفسير قول آخر بعده لأبقراط فتكلفت استتمام ما ينقص من عند نفسه بحسب ما رأيت جالينوس ينحو نحوه في تفسير

أشبه هذا الكلام وعلى الأصول التي أخذتها عنه من كتبه.

Hunayn said: I found that the Greek manuscript I translated this book from lacked the rest of the commentary on the Hippocratic lemma he presented before and the commentary on another Hippocratic lemma following it. I took it upon myself to fill the gap in accordance with what I though was Galen’s method in commenting on similar lemmata and according to the principles I took from his writings.

As in the preceding note, Hunayn fills a gap by adding a missing Hippocratic lemma and providing a commentary according to Galen’s method.

Hunayn said: Also in this place of the Greek manuscript I translated from, I found that one of the Hippocratic lemmata following his

preceding lemma was missing together with part of Galen’s commentary on it. I supplied this missing Hippocratic lemma and added comments I thought corresponded to Galen’s procedure in his commentary and what belongs to it.

4. Book 2:1, E1 53a12-18, M 11b21-30\(^90\)

Hunayn’s comments are inserted between the Hippocratic lemma and the following Galenic explanation, parts of which seem to have dropped out: the remaining comments only refer to the end of the lemma. Hunayn explains a technical term and comments clause by clause on the first part of the lemma not covered by Galen.

قال حسين: إن أبقراط يعني بالمرأق في هذا الموضوع الغشاء الممتد على البطن
كله الذي يسميه اليونانيون بارطيوناون\(^a\) وما كان من الفتوق العارضة في هذا
الحجاب “فوق السرة قليلاً” “فإنه لم بورث كرباً وقبي الرجع” وذلك
واجب\(^b\) من قبل أن الأمعاء الدقيقة في ذلك الموضوع وتلع الأمعاء أضيق ومن
قبل ذلك هي أخرى ان تتحسس فصول الطعام إن بدرت من فتق ذلك الغشاء
وذلك إذا كان عرضت الأوجاع والكرب وقبي الرجع. وقال إن ذلك خاصة
يعرض\(^c\) من كن الفتق “في الجانب الأيمن” لأن هناك موضوع المعاء المعروف
بالأخور وجزء أيضاً من المعاء الذي يقال له “قولون”. فأما الفتق\(^d\) الذي يكون
من أسفل “ نحو العانة” في موضوع الأمعاء الغلاط التي هي أوعسع فهى أقل
ضرراً في أول الأمر وإنما استنثت فقال “في أول الأمر” لأنها باخبرة تصر أرداً
ولا تزال دائماً في تزيد من الاتباع.

\(^{a}\) فاطرون: E1 در [بارطيوناون] M \\
\(^{b}\) واجب [E1, in marg. add. E1]

\(^{c}\) أن E1: om. M \\
\(^{d}\) يعرض خاصة [E1, trsp.

\(^{e}\) في الجانب الأيمن ... فأما الفتق [E1, in marg. add. E1]

\(^{f}\) من [M: om. E1]

\(^{g}\) scripsi: E1, M \\
\(^{h}\) أقل [E1: om. M]

\(^{90}\) Cf. Galeni in Hippocratis Epidemiarum libros I et II, ed. Wenkebach, p. 188.
Hunayn said: By “peritoneum”, Hippocrates here means the membrane covering the entire stomach area the Greeks call “peritoneum”. Ruptures occurring in this membrane “slightly above the navel” “are painful and cause nausea and vomiting of excrement”. This is inevitable because the small intestine is located in this area and this intestine is very narrow. Because of this, it is more likely to obstruct food wastes if it [sc. the small intestine] escapes through a rupture in that membrane. When this happened, pain, nausea and vomiting of excrement occurred. He said that this happens especially when the rupture is located “on the right hand side”, because this is the location of the intestine known as the “blind gut” and also part of the intestine called “colon”. A lower rupture “around the pubic region” in the area of the large intestine (which is wider) is at first less harmful. He specifically noted this and said “at first”, because later on, it grows worse and continues to expand.

5. Book 2:4, E1 104b9-12, M 66b marg.\textsuperscript{91}

Hunayn reconstructs several lines of text based on his understanding of the preceding Galenic comment and then observes that in addition to the gap he attempted to fill, more text was lost at the end of the preceding Galenic comment. The “tags” he claims to have used in his own manuscript to distinguish between extant text and his reconstruction have not been preserved in our manuscripts.

قال حنين: إن هذه الأسطر المعلَّمة كانت ساقطة من النسخة اليونانية التي منها تُرجمت وألختها أنا من عندي نفسي على نحو ما ذُلِب عليه معنى الكلام وأظن أنه قد سقط من آخر تفسير القول الأول ومن تفسير القول الثاني أشياء أخرى.

\textsuperscript{a} حنين: M:\textsuperscript{1} in marg. corr. ex
\textsuperscript{b} ذُلِب: E1\textsuperscript{1a}
\textsuperscript{d} ومن تفسير: E1\textsuperscript{1}
\textsuperscript{c} E1: M\textsuperscript{1}
\textsuperscript{e} E1: om. M, in marg. add. M\textsuperscript{1}

Hunayn said: These tagged lines have dropped from the Greek manuscript I translated from. I added them myself in accordance with what the meaning of the passage indicated to me and I think that

\textsuperscript{91} Cf. Galeni in Hippocratis Epidemiarum libros I et II, ed. Wenkebach, p. 351.
additional material was dropped from the end of the commentary on the first lemma and the commentary on the second lemma.

6. Book 2:5, E1 105a19-105b4, M 67a2-15

Hunayn explains why Part 5 of Book 2 is missing in its entirety from his translation, describes the quality of the two manuscripts he worked from and encourages his reader to add the missing material, should it become available.

Hunayn said: We have not found a Greek manuscript of the fifth part of Galen’s commentary on this second book of Hippocrates’ work. What we have found of the commentary on this part are two manuscripts, one of which follows the manner of books in which the complete text is written in an uninterrupted sequence, the other in the manner of a collection of short excerpts. Its author said that he concentrated on useful lemmata from this part and their explanations. In the first of the two manuscripts, we found not a trace of the fifth part. The excerpt manuscript, on the other hand, clearly proved to us not to have been copied from that allegedly complete one, because we found in the excerpt manuscript many complete lemmata together with their interpretations which had been entirely omitted from the allegedly complete manuscript. I am surprised that the scribe of this manuscript did not leave out the kind of errors that people already knew; not only that, he included them and then introduced other, new mistakes of his own – if they happened in error and were not corrupted on purpose, because he not only added and subtracted [material] but wrote one thing instead of another so that the result was something entirely bizarre: in [some] places of the book, he began to compile around ten folios and then wrote from the place he
jumped to two or three folios, then moved back around ten folios from where he had stopped copying. He sometimes moved backward and sometimes forward in the most confusing manner until he was finished. Therefore, recovering what I saved from this book was extremely tiring for me. I described this so that, in the event that someone comes after me who is interested in the science and finds a complete, correct Greek manuscript of this book, my description encourages him to collate this book, correct it, supply what is missing and, God willing, save me from blame.

7. Book 2:6, E1 108a26-108b12, M 69b19-70a393

Hunayn notes an apparent contradiction between Galen’s comments on the previous lemma and a similar remark he made in his Ars parva. He then tries to explain the Hippocratic lemma in detail and states that his flawed manuscripts must be the source of the misunderstandings and that he does not intend to contradict Galen.

 قال حينئن: إن وجدت جالينوس قد تأول على أبتراع أنه إما أراد بعظم الرأس أن يجعله دليلاً على قوة النفس الناطقة. وقد بين جالينوس في كتابه المعروف بالصناعة الصغيرة أن عظم الرأس إما يدل على قوة النفس الفكرية من كنت الرقة مشاكلة له أي غليظة قوية. فاما من كنت الرقة ضعيفة دقيقة والرأس عظيمًا فذلك عنده دليل على كثرة المادة وضعف القوة. فقد يجب بحسب هذا أن يكون مع عظم الرأس في صاحب هذه الحال غلوظ من الرقبة حتى يكون [E1 108b] عظم الرأس دليلاً على القوة التي فيه وهذا مناقض لما تقدم من قول جالينوس إن أبتراع إما أراد بالرقبة القصيرة الرقبة الدقيقة أو الصغيرة وقد تبين أن الأولى أن يكون عن بالرقبة القصيرة القصيرة الغليظة وواجب من كنت الرقبة كذلك أن يكون فثار الصلب ناقصاً في قطر الطول وإن كان تاماً أو فاضلاً في قطر الدور. وإذا كان ذلك فواجب أن يكون الصدر أيضاً ناقصاً في قطر الطول فيكون سعته بسبب ذلك ناقصة. فإذا كان الدماغ يوجب أن يكون الصدر بهذه الحالة وكان القلب بخوارته يوجب أن

Hunayn said: I found Galen explain that Hippocrates only meant to make the size of the head an indicator for the power of the rational soul. In his book known as Ars parva Galen clarified that the size of the head only indicates the power of the rational soul when the neck resembles it, *i.e.* is thick and strong. When the neck is thin and weak while the head is large, this indicates in my opinion that the matter is plentiful and the power weak. Hence, according to this, the size of the head of someone in this condition has to be accompanied by a thick neck so that if [E1 108b] the size of the head becomes an indicator for its power. This contradicts Galen’s previous claim that by “short neck”, Hippocrates only meant a thin or small neck. It is clear that it would be more appropriate for him to mean by “short neck” a short, thick one. When the neck is like this, the vertebrae of the backbone necessarily have a reduced vertical diameter, even though their circumference is normal or above. When this is the
case, the chest also has to be shorter. Through its heat, the heart makes it necessary for the chest to be more spacious. Because it cannot increase in height, the chest must increase in width, so that the additional increase in width makes up for the loss of volume caused by the decreased height. When this is the case, the breastbone needs to be wide without its width being proportional to its height. This, I reckon, is what Hippocrates meant when he failed to mention the volume of the chest while mentioning the width of the breastbone in order to indicate that the width of the breastbone increases in comparison to its length.

I only described all of this because I did not trust the manuscript I translated from, since it is, as I mentioned before, full of mistakes and I feared that it deviates from Galen’s thought. By doing this, I did not intend to oppose Galen.


Hunayn found himself unable to reproduce the ambiguity of a Greek remark in Arabic and considered to drop it but reconsidered, because its contents could potentially still be useful to some readers.

قال حينئذ: إن هذا الكلام في اللسان اليوناني يحمل أن يقطع ويقرأ على أخاء شئ من التقطيع والقراءة فيدل بحسب كل واحد من أنواع تقطيعه وقراءته على واحد واحد من هذه المعاني التي أشار إليها جاليينوس وليس ذلك في العربية. ولهذا قد كنت هممت بإسقاط هذا الكلام إذا كان لا يطيب اللغة العربية ويفهم فيها على حقوقيا إلا أنني لما وجدت معاني قد مرت في هذا الكلام نافعة من تدبرها رأيت تترجمه على حال إذا كانت ليس تضر ترجمته فهي إلى المنعفة أقرب ومن قرأه فقد أن يصل إلى الانتفع به فهو منه على ربح ومن لم يقرأ على ذلك.

فهو قادر أن يتركه فلا يضره مكانه شيئاً إذ تراه الله.

\[\text{Cf. Galeni in Hippocratis Epidemiarum libros I et II, ed. Wenkebach, p. 394.}\]
Hunayn said: In Greek, this lemma can be split up and read in various ways. Each of the ways of dividing and reading it indicates one of the meanings Galen pointed out. This is not possible in Arabic. Because this lemma does not suit the Arabic language and could not be understood completely in it [sc. Arabic], I had considered to drop it, but decided to translate it anyhow when I found ideas in this lemma that benefit those who study them, because translating it does not hurt but may be beneficial. Those who read it and are able to draw a benefit from it profit from it; those who cannot can ignore it without suffering any harm, God willing.

9. Book 3:1, E1 135a29-135b2

In the comments immediately preceding Hunayn’s remark, Galen discussed the opinion of another commentator on the case of Silenos (described in Book 1) who claimed that there was a link between the patient’s sleeplessness and his name. Hunayn gives an etymological explanation of the name and dismisses the reasoning of the commentator Galen quoted.95

Hunayn said: The name Silenos is derived from Selene, i.e. the moon. Many Greeks customarily use a term derived from one of the words for the moon for epileptics to convey that epilepsy mostly follows the lunar cycles. This, I think, is the meaning this feeble interpreter pointed out in this commentary: he calls it obscure (?) and claims (?)

95 Hunayn’s note refers to the following anecdote reported by Galen: ἀλλʼ ἐνοί γε τῶν ἐξηγούμενον τὰ βιβλία κατεγράφουσαν εἰς τοιούτον τῶν ἄκρωτων, ἀστʼ ἐγὼ ποτε ἐν Ἀλεξανδρείᾳ καὶ τοιούτῳ ἐξηγήσας ἠκούσα περὶ τινος ἐν τῷ πρῶτῳ τῶν Ἐπιδημίων ἄρρωτου γεγραμμένου κατὰ τὴν πρώτην. ἦσαν ἡ ἀρχή. Σιλήνος ὄντι ἐπὶ τῶν πλαταμώνων, ἐν γὰρ τῷ ἀπηγήσασθαι τὰ συμβάντα τοῦτο καὶ τοιούτων πινὰ ῥήσαν ἐγραφεῖν ὦ Ἰπποκράτης· 'νυκτὸς ὡδὲν ἐκοιμήθη, λόγοι ποιλοί, γέλως, φοβότα, τούτοις οὖν ἐπεφώνησαν ἵνα οἱ ἐξηγούμενος τὸ σύγγραμμα, Σιλήνος γὰρ ἦν ὢν. οἱ μονομαχήται δ’ ἀναπηρίαντες ἐκεκράγασθαν ἐπεθυμάζοντες.’” (Galeni in Hippocratis Epidemiarum librum III, ed. Ernst Wenkebach, Corpus Medicorum Graecorum V, 10, 2.1 [Leipzig, Berlin, 1936], p. 12, ll. 15–23.)
that it is very appropriate to comment on, so that I am required to give this explanation.

10. Book 3:1, E1 136b18-24
To expand Galen’s brief comments, Hunayn attempts to supply cultural background information.96

Hunayn said: The Greeks have poetry containing tales of the ancients which they report on the authority of numerous people among who reports circulated. When they wanted to encourage people to imitate the ancients in avoiding indolence and despicable conduct and aspiring to bravery and courage or to turn them (?) from evil to self-abandonment (?), then people assembled who recounted those among which the reports (?) circulated in this poetry. Not everyone of them is the image of this man whose poetry he wanted to declaim which tells his story, but each of them creates the impression that his recitation of the story is the former (...?) so that he tells it and it is as if he himself is the former. This is the meaning Galen indicates in this passage.

96 Hunayn attempts to explain the following passage: “εἰς τοὺς γοῦν τὰς ἁρχὰς καὶ οἱ πρὸ Δούκου καὶ Κοῖνου τῶν Ἰπποκράτους ἐξηγησάμενοι τι βιβλίον ἐμπειρικοὶ πάντες ἀνάγχον πειρώντα, καθάπερ ἐν δρᾶματι φιλάντοντος ἔνοικον τὴν οὐκείαν ὑπόκρισιν τοῦ περιπεμένου προσώπου.” (Galeni in Hippocratis Epidemiarum librum III, ed. Wenkebach, p. 16:23–p. 17:3.)
In his short remark, Hunayn adds his own observation and extends Galen’s explanation of the Hippocratic lemma.

Hunayn said: Galen understood Hippocrates’ lemma on dust covering especially the eyes of those in this condition. We sometimes see this dust cover the entire face of people with this condition. When Galen talks about the eyes in eye inflammations, he may have imagined it all over the face in sweating (؟), something that can be read into Hippocrates’ statement “what dries out and covers, as if it was dust”, i.e. the secretion you find about the eyes and the sweat on the face cover the eyes and the skin of the entire face.

Hunayn claims that Galen missed one of two possible interpretations of Hippocrates’ lemma and adds an explanation of the second interpretation.

Cf. Galeni in Hippocratis Epidemiarum librum VI, ed. Wenkebach, p. 42, ll. 1–2 (lemma I 23) and Galen’s commentary.
Cf. Galeni in Hippocratis Epidemiarum librum VI, ed. Wenkebach, p. 65, ll. 4–5 (lemma II 8) and Galen’s commentary.
The asthmatic cannot escape, but he often has a fit of asthma, and if you look closely at the words, you will see that he does not mention the word "asthmatic" but only "fit of asthma." Therefore, it is clear that the word "asthmatic" is not necessary. However, I think that Galen meant two things: firstly, its spontaneous occurrence, and secondly, that the elimination does not take place continuously and without interruption, but intermittently. In my opinion, Galen explained the meaning of his lemma with respect to its spontaneous occurrence, even though he did not put it in its place (?), but did not explain his lemma with respect to the other meaning. I decided to supplement what he said with what he inadvertently left out, i.e. when the elimination is continuous and without interruption, not everything that is eliminated comes from the body part the humour settled in and took hold of. Rather, it comes from another, close-by body part. When the elimination intermitted, a [certain] amount of the humour that settled in and took hold of this suffering body part emerges during each episode of elimination. During the intermissions, each of the body parts that eliminate more, i.e. the ones close by, draw out something from the body parts that eliminate less, i.e. the ones further away, until the humours in the veins return to a quantitative balance. Therefore, the humours that remain in a body part and those that persist in this manner inevitably emerge gradually until they are eliminated.
Hunayn considers Galen’s explanation of the preceding Hippocratic lemma disjointed and incomplete and supplies his own detailed take on how Galen’s apparently incoherent comments can be read in order to make sense of them.

13. Book 6:2, E2 55a16-55b16

كل واحد من الأعضاء إذا يتولد فيه من الفضل ويندفع إليه ما يندفع إذا ضعف
بسبب طباعته التي تخصه، وخص الدماغ أنه بارد رطب وأنه في أعلى موضع من
البدن حيث يجب أن يقلل بخارات البدن مثلما يقبل سقاط الحمام بخاراته، وأن
يكون الفضل المتولد منه إذا كان بارداً رطباً مشاكلاً لطبيعته، وقد وجب من ذلك
أن يكون ما يتولد فيه وما يقبله في أكثر الحالات رطوبة مائية وبلغمية. ويخص
الطحال أنه آلة لتتبقي عكر الدم من الكبد ولذلك خلق وهبه يعني،
وإذا اعتدى منه فهو أخر أن يزيد ما يبقى من غذائه غلطاً وميلاً إلى المرة
السوداء. ومنه كان يتولد هذا العكر في الدم كثيراً، فواجب أن يحدث في
الطحال ضعف لكره ما يميل إليه منه، فيجمع ضعف الطحال وكرة تلك
الفضول الغليظة السوداوية فيكون صاحب تلك الحال أولى بأن يكون من
طحاله ملقى بالأورام بأكثر مما يكون من رأسه ملقى بالترك إذا كان الرأس إذا
يائم في أكثر الحالات من الرطوبة البلغمية والمائية. وعلى هذا المان يجري
القياس في سائر جميع الأعضاء وعلى هذا المعنى أحسب جالينوس ذكر ما
ذكره من اختلاف الأعضاء في القوة والضعف.

Hunayn said: In this explanation, Galen started with something
and then switched to something else as if he had not ordered things
properly. Specifically, he began to describe that the cause affecting
those who suffered from a head cold rarely produces swellings in the
spleen, because one rarely finds in the same body two body parts in
the same weak condition. What one finds in most cases is that one
of the body parts in the whole body is the weakest of them. If this is
the case, it is inevitable that this body part suffers from the diseases
in this body rather than the others. He then said at the end of his
explanation that those with a head cold only suffer from diseases
from watery and phlegmy liquids and those with swollen spleens
only suffer from swellings from thick, melancholic wastes. It hardly
ever happens that the same body suffers from both a swollen spleen
and a head cold. The first statement only refers to the differences of
body parts in terms of weakness and that in most cases, one of
them is the weakest. For this reason, this body part suffers from
the diseases. The second statement refers to the difference between the humours generated in the bodies and that the regions which the humours prevailing in this body dominate are most likely to suffer from the diseases, so that those dominated by phlegmy and watery liquids are more prone to suffer from head colds, because this liquid is predominant in the brain rather than the other body parts. Those dominated by thick, melancholic humours are more prone to suffer from swellings in the spleen because these wastes tend toward the spleen. It is also possible to combine the two statements after clarifying that each of them is correct in itself and that they agree with each other. We then say that only those wastes are generated in and pushed toward each body part when it is weak according to its characteristic nature. Coldness and wetness are characteristic for the brain, as is its position at the highest point of the body. Therefore, it receives bodily vapours much like the ceiling of a bathhouse [receives] its vapours. When it is cold and wet, the waste it generates resembles its nature. It is therefore necessary that the matter generated in and received by it consists mostly of watery and phlegmy liquids. [On the other hand,] it is characteristic for the spleen that it is an organ for purging the dregs of the blood from the liver. This is what it was created and designed for and what it derives nourishment from. When it is nourished by it, it is only appropriate that the leftovers of its nourishment increase in thickness and tend toward black bile. When these dregs form in the blood in large quantity, the spleen is necessarily weakened by the large amount of it tending toward it. The weakness of the spleen and the quantity of these thick, melancholic wastes combine to make someone in this condition prone to suffering swellings of his spleen more often than he suffers a head cold, because his head only hurts in most cases from phlegmy and watery liquids. The same pattern applies to all the other body parts. I think this is the meaning of what Galen said about the difference of the body parts in terms of strength and weakness.


 Hunayn explains that Galen considered a Hippocratic lemma inauthentic and claims that Galen probably misunderstood Hippocrates. He then quotes the lemma in question and explains it.

قال حنين: إنني قد وجدت هذا الكلام المنسوب إلى أبقراط مع الكلام الذي تقدمه وهما القولان اللذان أنكر جالينوس أن يكونا لأبقراط وقد يجوز أن تكون ترجمته

Hunayn said: Together with the previous lemma, I found this lemma ascribed to Hippocrates. These are lemmata of which Galen denied that they were Hippocratic. It is conceivable that its interpretation in Arabic is, in some way which departs from the Greek lemma, other than that I found Galen aim at in his explanation. In my opinion, it is appropriate that Hippocrates did not intend the meanings Galen thinks of, but the meaning I will discuss after presenting the Hippocratic lemma in an interpretation I find satisfactory, i.e. the following:
Hippocrates said: Bile: as I said in the case of birds, they generate bile where it is warm.

Hunayn said: I think what Hippocrates meant to say with this lemma is that, because bile is, as I described, generated from fatty, sweet matter, bird meat putrefies in the stomach and turns into bile. When people eat coarse meat such as beef, they digest it because coarse foods do not putrefy as quickly as delicate, soft foods, such as poultry. Hippocrates' failure to mention the preceding and his account of the generation of bile reliably [indicates] that what he mentioned about birds and their production of bile is a reminder for himself for the first lemma in which he gives separate evidence of its correctness. Hence, the fatty, sweetish matter only turns into bile quickly through the power of the heat [affecting] it so that it [sc. the heat] disturbs its balance. This happens to bird meat due to its lightness when it encounters from the body warmth that exceeds the natural measure.

15. Book 6:7, E2 145a17-20, M 93b32-34

Hunayn notes that he left out a number of quotations from Homer, Plato and others Galen had inserted to illustrate expressions that do not match grammatically; the Arabic language does not allow such expressions and their inclusion would be pointless.

\[\text{قال حنين: ثم اقتصر جالينوس أقوال من أقوال أوميروس وأفلاطون و} \text{غيرهما من القدماء قد يدل النسق فيها}^a \text{ونسق الشيء على غير ما هو ملائم له ليس له}^c \text{في العربية نظام تحسن}^d \text{فتركت ترجمتها لأنها لا ينتفع بها}^e \text{في العربية}^f \text{إذ}^g \text{كانت لا تفهم فضلاً عن أن يستحسن}^h \text{أو ينتفع بها.}
\]

\[\text{Hunayn said: Then, Galen related dicta by Homer, Platon and others of the ancients in which he indicates that the [grammatical] congruence between them is inappropriate. In Arabic, there are no suitable equivalents for it. I have therefore not translated them into Arabic;}
\]

\[^{101}\text{Cf. Degen, } '\text{Wer übersetzte}', \text{ p. 90 (3) and } Galeni in Hippocratis Epidemiarum librum VI, ed. Wenkebach, p. 389.}\]
they have no useful purpose in Arabic, because they are incomprehensible, let alone pleasant or useful.

16. Book 6:8, E2 168a5-13, M 105a26-30

According to Hunayn, Galen did not explain some parts of the preceding lemma because they are clear for a Greek-speaking audience (“culture-specific”); Hunayn then attempts to fill the gap by providing an explanation according to his understanding of what Greeks meant by the terms in question.

قال حنين: إن جالينوس ترك شرح ما ذكره أبقراط في هذا القول عن الأرواح والأجسام لأن أمرهما عند اليونانيين بين وليس أمرهما كذلك عند أهل العربية. فرأيت أن أشرح المعنى فيما على حسب ما بمر متعارف عند اليونانيين. وهو أنهم يستعملون كثيراً اسم الأرواح وهم يريدون به كل اسم هوائي. ويخصون باسم الأجسام الأحبس الباقية الأرضية منها والمائية. فأبقراط يعني هذا القول بالأرواح ما ورد على البدن من الدم والجلد من الهواء وما يخلطه من الرياح والبحارات. ويعني بالأجسام ما ورد على البدن من الدم مما يكثك ويشرب وما ينصب إليه من الجلد بجذب العروق الضواهر من الماء عند الاستحمام به والاستئفاخ فيه ومن الدهن عند التمرش به ومن غير ذلك مما أشبهه.

Hunayn said: Galen failed to explain what Hippocrates said in this lemma about “breaths” and “bodies” because this issue is obvious for Greeks. It is not for Arabs. I decided to explain their meaning according to what passes as generally accepted among the Greeks. They often use the term “breaths” when they mean airy things. With the term “bodies”, they denote the remaining bodies, be they earthen or watery. In this lemma, Hippocrates therefore means by “breaths” the air that enters the body through mouth and skin and the winds and vapours it is mixed with. By “matter”, he means foods and drinks that enter the body through the mouth, the water

that enters it through the skin due to the attraction of the arteries while bathing and soaking in it, the fat while rubbing the skin with oil and other, similar things.

17. Book 6:8, E2 176a22-25, M 109a6-7\textsuperscript{103}

Hunayn points out an ambiguity in the text.

\textit{Post scr. et del.} [104] 

Hunayn said: In the Greek, this lemma in this phrasing means the same as this other phrasing: “for each of these things – the emergence of the teeth and the growing of hair and semen – one needs to examine whether the age during which it happens is either earlier or later than necessary”. Colophon (after the end of Book 6) of MS E2 195a1-17, M 117b17-28\textsuperscript{104}

Hunayn explains the problems he had in establishing a reliable text of the \textit{Epidemics}. At the end, this passage (which is in fact a quotation from Hunayn’s \textit{Risāla}) is contaminated with fragments from the following entry of the \textit{Risāla} on Galen’s \textit{On humours}\textsuperscript{105}


\textsuperscript{105} Cf. Degen, \textit{Wer übersetzte}, pp. 87–8 and Bergsträsser, \textit{Huain ibn Ishāq}, nos. 95, 96.
حدث من أمر كتب فيفعالٍ في استخدامه. وأما القصيدة السادسة من كتاب إفيداميا
فسرها جالينوس في ثماني مقالات قد نقلها أيوب إلى السريانية. ونسخة هذه
المقالات كلها لفسر كتاب إفيداميا موجودة في كيمي. ولم يفسر جالينوس من
كتاب إفيداميا إلا هذه الأربعة. وأما الثلاث الباقية وهي الرابعة والخامسة
والسابعة فلم يفسرها لأنه زعم أنها مفتولة على لسان أبقراط والمفتول لها غير
سديد. وقد أضيفت إلى ترجمة ما ترجمت من تفسير جالينوس للمقالة الثانية من
كتاب إفيداميا ترجمة كلام أبقراط في تلك المقالة إلى السريانية، وإلى العربية
بمرادبٌٍ على حدته من تفسيره لكتاب الأخلاط ولا أعلم أن غيري ترجمه وقد
وضع جالينوس مقالات أخرى منها ما نص فيها قول أبقراط ومنها ما بين فيها
عمره. ولم أجد منها إلا عددًا قليلاً وأنا ذاكرها.

المصادر: 
a. إفيداميا M, P، السريانية E2, P 
b. السريانية corr. ex Degen, 'Wer übersetzte', p. 81

c. السريانية E2 diagnosticienne، السريانية M، P، السريانية E2

d. السريانية M، P، السريانية E2، السريانية E2، السريانية M 
e. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M
f. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M

g. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M
h. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M
i. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M
j. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M
k. السريانية "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M

ملاحظات 1. "السريانية M، P، السريانية E2، السريانية E2، السريانية M، P، السريانية "السريانية M، P، السريانية E2، السريانية M