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Article Title: CASE NOTES AND CLINICIANS: GALEN'S COMMENTARY ON THE HIPPOCRATIC EPIDEMICS IN THE ARABIC TRADITION

Year of publication: 2008

Link to published article:

<http://dx.doi.org/10.1017/S0957423908000568>

Publisher statement: © Cambridge University Press 2008

**CASE NOTES AND CLINICIANS: GALEN'S  
COMMENTARY ON THE HIPPOCRATIC *EPIDEMICS*  
IN THE ARABIC TRADITION\***

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**Abstract:** Galen's *Commentaries* on the Hippocratic *Epidemics* constitute one of the most detailed studies of Hippocratic medicine from Antiquity. The Arabic translation of the *Commentaries* by Ḥunayn ibn Isḥāq (d. c. 873) is of crucial importance because it preserves large sections now lost in Greek, and because it helped to establish an Arabic clinical literature. The present contribution investigate the translation of this seminal work into Syriac and Arabic. It provides a first survey of the manuscript tradition, and explores how physicians in the medieval Muslim world drew on it both to teach medicine to students, and to develop a framework for their own clinical research.

**Résumé:** Les Commentaires de Galien des *Épidémies* d'Hippocrate représentent l'une des études les plus détaillées de la médecine hippocratique qui nous soit parvenue de l'Antiquité. La traduction de Ḥunayn ibn Isḥāq (m. c. 873) est d'une importance majeure, non seulement parce qu'elle préserve de grandes parties de l'original grec, aujourd'hui perdues, mais encore parce qu'elle contribua à établir une littérature clinique en terre d'Islam. Cet article fournit un premier examen de la tradition manuscrite et étudie la manière dont les médecins du Moyen-Âge arabe s'inspirèrent de ce texte et pour enseigner la médecine aux étudiants et pour développer un cadre théorique destiné à leurs propres recherches cliniques.

Case histories, the records of how diseases develop in individual patients, have occupied a prominent place in clinical practice and research from antiquity until today. One of the oldest and most seminal texts belonging to this genre of medical literature, the

\*The idea to tackle this subject stems from conversations with Simon Swain; he has been supportive of my research in more than one way. Apart from the libraries which hold the manuscripts discussed here, I am indebted to the Corpus Medicorum Graecorum, Berlin-Brandenburgische Akademie der Wissenschaften, Berlin, and its director, Christian Brockmann, for giving me access to their collection of manuscript facsimiles. Moreover, Philip J. van der Eijk made it possible for me to present my findings at the *Approaches to Ancient Medicine* meeting in Newcastle in August 2007. Finally, a number of colleagues as well as the anonymous referee read earlier drafts of this paper, or helped with questions of detail; they include Tom Burman, Charles Burnett, Oliver Overwien, and Uwe Vagelpohl. I am tremendously grateful to all of the above. The Wellcome Trust graciously funded the research which led to this paper (grant number 077558); I wish to thank the Trustees for their generous support.

Hippocratic *Epidemics*, has fascinated generations of physicians, philosophers, and philologists, who endeavoured to elicit its meaning and to interpret it in view of their own ideas. Galen (d. c. 216 / 17), pursuing his various interests, wrote a massive commentary on those parts of the *Epidemics* which he considered genuine. Hippocrates' work and Galen's commentary proved to be particularly popular in the medieval Islamic world. Not only did Ḥunayn ibn Ishāq (d. c. 873) translate the latter into Syriac and Arabic, but he also abridged it a number of times for educational ends. The greatest clinician of the Middle Ages, Abū Bakr Muḥammad ibn Zakariyā al-Rāzī (d. c. 925, known as Rhazes in Latin), followed in the footsteps of Hippocrates and had many of his patients' case histories recorded by his students. Moreover, Galen's commentary served as the theoretical framework for some of his most innovative medical research. Other luminaries such as Ibn Riḍwān (d. 1068) and Ibn al-Nafīs (d. 1288) also engaged with the Greek tradition and wrote commentaries of their own.

The present contribution aims at investigating how the Hippocratic *Epidemics* and Galen's commentary were transmitted into Syriac and Arabic. It shall also briefly consider how these texts in their Arabic guise then inspired various authors in their theoretical writings, and influenced clinicians in their practical work. After a short section on the Greek background to later developments, I shall discuss Ḥunayn ibn Ishāq and his Syriac and Arabic translation of Galen's commentary.<sup>1</sup> The conflicting evidence contained in his *Epistle (Risāla)* and the manuscripts, as well as Ḥunayn's remarks about the difficulties caused by the bad condition of the Greek manuscripts to which he had access will come under scrutiny. After briefly looking at the abridgments which Ḥunayn produced for pedagogical purposes, I shall review the extant manuscripts of the Arabic versions, and finally turn to al-Rāzī's case notes and clinical trials, and Ibn al-Nafīs' commentary; they illustrate the great impact which the *Epidemics* had on the development of both clinical and theoretical medicine.

### THE GREEK TRADITION

The Hippocratic *Epidemics*, as they have come down to us, constitute a heterogeneous collection of case notes, surrounded by much mystery.<sup>2</sup> To begin with, even the meaning of their title, ἐπιδημῖαι, is

<sup>1</sup> Gotthelf Bergsträsser, *Ḥunain ibn Ishāq über die syrischen und arabischen Galen-Übersetzungen*, Abhandlungen für die Kunde des Morgenlandes 17.2 (Leipzig, 1925); Bergsträsser, *Neue Materialien zu Ḥunain ibn Ishāq's Galen-Bibliographie*, Abhandlungen für die Kunde des Morgenlandes 19.2 (Leipzig, 1932).

<sup>2</sup> The secondary literature on the Hippocratic *Epidemics* is massive. This text was the focus of a *Colloque Hippocratique* in the mid-eighties; see Gerhard Baader, and Rolf Winau

elusive. It literally means ‘coming to (*epí*) a community (*dêmos*)’, that is to say ‘visits’ or ‘visitations’. Could it refer to physicians visiting different cities in ancient Greece? or diseases ‘visiting’ different localities? On the basis of the available evidence, we are unlikely ever to determine with certainty how fifth-century-BC readers understood the title; by the time of Galen, however, it was generally taken to mean ‘diseases which visit (*ἐπιδημέω*) a community’.<sup>3</sup> Furthermore, the *Epidemics* are a prime example for the problems posed by the so-called Hippocratic question: which of the works – or parts of works – attributed to Hippocrates go back to the historical Hippocrates (fl. c. 420s BC)? Today we have seven books of *Epidemics* within the Hippocratic Corpus, but they differ considerably in scope and style. In the past, scholars often regarded books One and Three as written by the historical Hippocrates, whilst dismissing the remaining ones as being much inferior both in content and language. W. H. S. Jones, for instance, extolled books One and Three as the ‘most remarkable product of Greek science’;<sup>4</sup> it was only in 1994, however, that W. D. Smith produced an English translation of the remaining books for the Loeb series.<sup>5</sup>

Debates about the Hippocratic question did not begin in the last century, but already occupied the minds of critics in classical times. Galen, too, did not believe that Hippocrates wrote all the seven books of the *Epidemics*. He dismissed books Four, Five, and Seven as spurious. Yet he did consider books One, Two, Three, and Six as genuine enough to merit extensive examination and explanation. Consequently he composed a substantial commentary on them, by far his largest work of this type – some 350,000 words long. Because of its enormous size, this work (henceforth Gal. *in Hipp. Epid.*) needed to be cut into smaller pieces. The commentary on each Hippocratic book is further, and somewhat confusingly, divided into books: there are 3 books of commentary on Book One of the *Epidemics*; 6 books on Book Two; 3 books on Book Three; and 8 books on Book Six. Neither in Greek nor in Arabic is there a terminological difference between the Hippocratic and the Galenic books. They are simply called βιβλίον or *maqāla* respectively, the latter sometimes being replaced

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(eds.), *Die hippokratischen Epidemien: Theorie, Praxis, Tradition. Verhandlungen des Ve Colloque International Hippocratique*, Sudhoffs Archiv. Beihefte 27 (Stuttgart, 1989). For a recent study, see Florian Steger, ‘Patientengeschichte – eine Perspektive für Quellen der Antiken Medizin? Überlegungen zu den Krankengeschichten der Epidemienbücher des Corpus Hippocraticum’, *Sudhoffs Archiv*, 91 (2007): 230–8.

<sup>3</sup> Volker Langholf, *Medical Theories in Hippocrates: Early Texts and the ‘Epidemics’*, *Untersuchungen zur antiken Literatur und Geschichte* 34 (Berlin, 1990), p. 78.

<sup>4</sup> W. H. S. Jones, *Hippocrates. Works*, vol. 1: *Ancient Medicine; Airs, Waters, Places; Epidemics 1 & 3; The Oath; Precepts; Nutriment*, Loeb Classical Library 147 (Harvard, London, 1923), p. 141.

<sup>5</sup> Wesley D. Smith, *Hippocrates. Works*, vol. 7: *Epidemics 2, 4–7*, Loeb Classical Library 477 (Harvard, London, 1994).

by its synonym *kitāb* without any semantic difference. For the sake of clarity, however, I shall refer to the former as books and the latter as parts, indicating the underlying Arabic only where this is required for clarity's sake.

Galen's *Commentary* on the Hippocratic *Epidemics* mirrors the idiosyncratic nature of the original.<sup>6</sup> He composed his commentaries to books One, Two, Three, and Six successively in the latter part of his life. In the preface to Book One (lost in Greek), as well as in various other places of this commentary, Galen outlines the reasons for engaging with the *Epidemics*: other authors, especially empiricists, have misunderstood or misrepresented Hippocrates, claiming him to be one of theirs; now Galen wants to set the record straight. Yet, the anti-empirical stance is only one – albeit a major – motive. At times, the Hippocratic text is extremely obscure, especially in book Six, and Galen struggled to make it comprehensible. For the most part, Galen provides a lemmatic commentary, which is to say that he quotes portions of the Hippocratic original, and explains them on different levels. Sometimes he focuses on questions of textual criticism and variant readings, or the meaning of an obscure term; and sometimes, he is more concerned with medical matters. The reader unfamiliar with the *Epidemics* and Gal. *in Hipp. Epid.* can gain a first impression of the character of both the original and the commentary from Appendix One; it contains the first case history from book Two together with Galen's commentary. Occasionally, Galen embarks on sometimes quite lengthy digressions, such as the one on 'How to test those who simulate to be ill (Πῶς χρῆ ἐξελέγχειν τοὺς προσποιουμένους νοσεῖν)'.<sup>7</sup> It is also important to note that Galen used his commentaries in general, and that on the Hippocratic *Epidemics* in particular, to mould Hippocratic texts into a theory with which he is comfortable and familiar. For instance, a recent study has shown that Galen interpreted passages about fever in book Six of the *Epidemics* in a way that allowed him to make the Hippocratic text (as explained by himself) the basis for his elaborate theory of fevers; or, to put it differently: 'it was Galen's theory-laden eyes that forged *Epidemics* VI into being the foundation of his fever theory.'<sup>8</sup>

<sup>6</sup> D. Manetti and A. Roselli, 'Galeno commentatore di Ippocrate', *Aufstieg und Niedergang der römischen Welt*, 2 pt, vol. 37.2 (1994), pp. 1529–635, 2071–80, provide an excellent overview of Galen's commentaries on Hippocratic works. For the following remarks, I draw heavily on the work of these scholars. See also Armelle Debru, 'Galien commentateur d'Hippocrate: le canon hippocratique', in *Hippocrate et son héritage: Colloque franco-hellénique d'histoire de la médecine* (Lyon, 1987), pp. 51–6.

<sup>7</sup> See *CMG*, V, 10.2.4, pp. 113–16; this digression is the only substantial part of Galen's *Commentary* on Book Two of the *Epidemics* which is preserved in Greek.

<sup>8</sup> In-Sok Yeo, 'Hippocrates in the context of Galen: Galen's Commentary on the classification of fevers in *Epidemics* VI', in Philip J. van der Eijk (ed.), *Hippocrates in Context. Papers read at the XIth International Hippocrates Colloquium. University of Newcastle upon Tyne, 27–31 August 2002*, *Studies in Ancient Medicine* 31 (Leiden, 2005), pp. 433–43, on p. 442.

As in the case of many other Hippocratic texts, the *Epidemics* together with Galen's commentary proved extremely popular in the medieval Arabic world.<sup>9</sup> This rich engagement with the classical past was made possible by Ḥunayn ibn Ishāq's Arabic version of Gal. *in Hipp. Epid.*, to be discussed next.

#### ḤUNAYN IBN ISHĀQ

Among the hundreds of Greek medical texts which Ḥunayn ibn Ishāq and his team translated also figures Gal. *in Hipp. Epid.* We know chiefly from three main sources how Gal. *in Hipp. Epid.* was rendered into Arabic. First, in an *Epistle* (*Risāla*) to his patron called 'Alī ibn Yaḥyā (d. 888/9),<sup>10</sup> Ḥunayn recounted how his predecessor, he himself, and his colleagues produced the various Syriac and Arabic versions of Galenic texts; the entry on Gal. *in Hipp. Epid.* is number 95.<sup>11</sup> This *Epistle* survives in two manuscripts, Istanbul, Süleymaniye Kütüphanesi, MS Aya Sofya 3590 (henceforth MS **B**, following Bergsträsser's terminology), and Istanbul, Süleymaniye Kütüphanesi, MS Aya Sofya 3631 (henceforth MS **A**). The textual relationship between the two manuscripts is not straightforward. MS **B** represents an older recension, and MS **A** a younger one, but the picture is further complicated by the fact that they both are contaminated, that is to say that they contain additional information from other sources which got copied into the manuscripts.<sup>12</sup> Fortunately, these general difficulties are somewhat alleviated in the case of the entry on Gal. *in Hipp. Epid.*: here the two manuscripts do not differ greatly.

The second source for our knowledge of how Gal. *in Hipp. Epid.* was rendered into Arabic is the extant manuscripts of Ḥunayn's translation. I shall discuss them in greater detail below. For now, suffice it to say that Madrid, Escorial, MS árabe 804 contains the commentaries on books One to Three (henceforth MS **E1**); Madrid, Escorial, MS árabe 805 contains the commentaries on book Six (henceforth MS **E2**); and Milan, Ambrosiana, MS B 135 sup., contains the commentaries on book Two, and the last two and a half parts of book Six – that is to say, those parts no longer extant in Greek – as well as Ḥunayn's *Summaries* in question-and-answer

<sup>9</sup> Some twenty years ago, Ursula Weisser has explored the general impact of the Hippocratic tradition on medieval Arabic medicine in her seminal article 'Das Corpus Hippocraticum in der arabischen Medizin', in Baader and Winau, *Die hippokratischen Epidemien*, pp. 377–408; see also Gotthard Strohmaier, 'Der arabische Hippokrates: Bemerkungen zu einem Aufsatz von Dieter Irmer', *Sudhoffs Archiv*, 64 (1980): 234–49.

<sup>10</sup> David Pingree, art. 'Banū Monāḡgem', *Encyclopaedia Iranica*, vol. 3, p. 716a–b.

<sup>11</sup> Bergsträsser, *Ḥunayn ibn Ishāq*, p. 21, line 18–p. 22, line 19 (text), pp. 34–5 (tr.); cf. Bergsträsser, *Neue Materialien*, pp. 28–9.

<sup>12</sup> Bergsträsser, *Neue Materialien*, p. 52, summarised his findings in a stemma.

format regarding the same parts (henceforth MS **M**). Finally, Paris, Bibliothèque nationale de France, MS 2846 fonds arabe is a late and partial copy of MS **M**, containing the commentaries on book Two and Six also preserved in MS **M**, but not Ḥunayn's *Summaries* (henceforth MS **P**). These manuscripts contain precious material on how Ḥunayn produced his translation. First of all, they obviously preserve its text, but they also comprise many comments by Ḥunayn about the difficulties which he faced when translating it.

The third set of sources is the entries in the bio-bibliographical authors such as Ibn al-Nadīm, al-Qifṭī, and Ibn Abī Uṣaybi'a. Since they are often derived either from Ḥunayn's *Epistle* or the manuscripts of the Arabic versions, they will only be discussed here insofar as they offer additional information or corroborative evidence.

### EPISTLE AND COLOPHON

As already said, Ḥunayn's *Epistle* contains an account of how Gal. *in Hipp. Epid.* was rendered into Syriac and Arabic. MSS **E2**, **M** (and its copy **P**) preserve a different, and, as I shall argue, earlier, version of this account. It runs as follows:<sup>13</sup>

قال حنين بن إسحق: [1] وأما المقالة الأولى من كتاب إفيذيميا ففسرها جالينوس في ثلاث مقالات [2] نقلها أيوب إلى السريانية [3] ونقلتها إلى العربية لأبي جعفر محمد بن موسى [4] وأما المقالة الثانية ففسرها جالينوس في ست مقالات [5] وقد كنت وقعت على هذا الكتاب باليونانية [6] إلا أنه كان ينقص مقالة واحدة وكان مع هذا كثير الخطأ منقطعا مخلطا [7] فلخصته<sup>14</sup> حتى نسخته باليونانية [8] ثم ترجمته إلى السريانية ثم إلى العربية لأبي جعفر محمد بن موسى [9] إلا أن كانت قد بقيت منه بقية يسيرة [10] ثم حدث ما حدث من أمر كتبي فعاقني عن استعماله [11] وأما المقالة السادسة من كتاب إفيذيميا ففسرها جالينوس في ثماني مقالات [12] قد نقلها أيوب إلى سريانية [13] ونسخة هذه المقالات كلها لتفسير كتاب إفيذيميا موجودة في كتبي [14] ولم يفسر جالينوس من كتاب إفيذيميا إلا هذه الأربع [15] وأما الثلاث الباقية وهي الرابعة

<sup>13</sup> MS **E2**, fol. 195b1–17; MS **M**, fol. 177b–14–ult.; the paragraph numbers are added here the sake of discussion. Pfaff (*CMG*, V, 10.2.2, pp. xxix–xxx) has previously translated this colophon into German, but he misunderstood the difficult §§18–20.

<sup>14</sup> *Wörterbuch der klassischen arabischen Sprache*, ed. Manfred Ullmann (Wiesbaden, 1955–), vol. 2, p. 428a7–14; there is a parallel passage in Bergstr. 22, 6. It seems that Ḥunayn uses *lahḥaṣa* as a technical term in the sense of 'reconstructing, restoring [a corrupt work]' here.

والخامسة والسابعة فلم يفسرها [16] لأنه زعم أنها مفتعلة على لسان أبقرراط [17] والمفتعل لها غير شديد [18] وقد أضفت إلى ترجمة ما ترجمت من تفسير جالينوس للمقالة الثانية من كتاب إفيذيميا ترجمة كلام أبقرراط في تلك المقالة إلى السريانية وإلى العربية مجرداً<sup>15</sup> على حدته

[19] من تفسيره لكتاب الأخلاط [20] ولا أعلم أن غيري ترجمه [21] وقد وضع جالينوس مقالات أخرَ منها ما نص فيها قول أبقرراط ومنها ما بين فيها غرضه [22] ولم أجد منها إلا عدداً قليلاً [23] وأنا ذاكرهما.

Hunayn ibn Ishāq said: [1] ‘On the first book of Hippocrates’ *Epidemics* Galen wrote a commentary in three parts, [2] which Ayyūb [*i.e.*, Job of Edessa, d. c. 835] translated into Syriac [3] and I into Arabic for Abū Ġa’far Muḥammad ibn Mūsā (d. 873). [4] On the second book Galen wrote a commentary in six parts. [5] I came across this book [*i.e.* the second] in Greek, [6] but it lacked one part [*maqāla wāḥida*],<sup>16</sup> and was, in addition to this, full of mistakes, lacunae, and confusions.<sup>17</sup> [7] I restored it [this faulty Greek manuscript] until I [was able to] produce a [better] copy in Greek. [8] Then I translated it into Syriac, and then into Arabic for Abū Ġa’far Muḥammad ibn Mūsā, [9] except for a small part which remained untranslated. [10] Then my books suffered the fate they suffered,<sup>18</sup> and I was prevented from using it [this amended Greek copy]. [11] On the sixth book of the *Epidemics* Galen wrote a commentary in eight parts, [12] which Ayyūb had [previously] translated into Syriac. [13] Among my books, I have a copy [*nusha*] of all the parts of the commentary on the book of the *Epidemics*. [14] Galen only commented on these four books of the work the *Epidemics*. [15] On the remaining three, that is books four, five, and seven, Galen did not write a commentary, [16] because he thought that someone had forged them in Hippocrates’ language, [17] and that he was not a great forger at that. [18] To my translation of Galen’s commentary on the second book of the *Epidemics*, I added a translation into Syriac and Arabic of Hippocrates’ text in this book [*i.e.* the second], just the text on its own.

[19] . . . from Galen’s commentary on the work *On Humours*. [20] I do not know whether anyone else apart from myself translated it. [21] Galen composed other treatises [*maqālas*] in some of which he quotes Hippocrates verbatim, and in others he explains his [Hippocrates’] intention [*ḡarad*]; [22] however, I only found a small number of them [the latter]. [23] I am going to mention both of them.

This version of the account can roughly be divided into three parts. Paragraphs 1–12 provide information regarding the commentaries on

<sup>15</sup> مجرداً ] E2; M (P1): تحركا; in margine: vel شكرا; Bergst.: مجرداً.

<sup>16</sup> In the *Epistle*, Hunayn is more precise, saying: ‘the fifth part of the commentary (*al-maqāla al-ḥāmisā min al-tafsīr*)’ [Bergsträsser, *Hunayn ibn Ishāq*, p. 42, lines 2–3 (text)].

<sup>17</sup> This is how Bergsträsser took it (p. 34: ‘fehlerhaft, lückenhaft und verworren’); the implications of *munqaṭi’an muḥallaṭan* may well be more specific, namely that it was bound erroneously, the folios having been ‘cut up and mixed’.

<sup>18</sup> *I.e.* Hunayn lost his library.



the different Hippocratic books: §§1–3 deal with book One; §§4–10 with Two; and §§11–12 with Six. Then Ḥunayn makes some more general remarks about Gal. *in Hipp. Epid.*, ending with a more specific comment about book Two (in §18). The third part apparently consists of remarks regarding Ḥunayn’s translation of a different commentary by Galen, namely on Hippocrates’ *On Humours*; comparison with Ḥunayn’s *Epistle*, however, shows that §§19–23 are a pastiche of quotations taken from it.

From the first two parts, we learn the following. Job of Edessa, called ‘the freckled (*al-abraš*)’, had translated the three parts of the commentary on Book One into Syriac. This Job was originally a Melkite Christian who later converted to Nestorianism. He translated numerous other works by Galen into Syriac, some of which for Ġibrā’īl ibn Buḥtīšū’ (d. 827). Not much is known about his life, but he must have flourished in the 810s and ’20s. His *Book of Treasures* (ܟܬܒܬܘܪܗܝܢܐ ܟܘܨܘܨܝܢܐ), an encyclopaedia of natural history, has come down to us.<sup>19</sup> After Job, Ḥunayn translated the commentary on the first book into Arabic for Abū Ġa’far Muḥammad ibn Mūsā. The latter was one of the three sons of Mūsā ibn Šākir, a highwayman turned plutocrat. His sons belonged to the ‘Abbāsīd elite and were intimately linked to the translation movement, which they often sponsored.<sup>20</sup>

The information about the second book in §§4–10 is both more detailed and more problematic. The difficulty stems from the fact that we have the first significant diversion between the earlier account in MSS **E2**, **M** (and **P**) and the version in Ḥunayn’s *Epistle* (contained in MSS **B** and **A**). According to the former, Galen’s commentary on Book Two contained *six* parts (§4), but Ḥunayn only had access to a Greek manuscript which ‘lacked one part’ and moreover was very corrupt (§6). Ḥunayn restored this manuscript as best he could and subsequently translated its emended text into Syriac and Arabic (§§7–8). The Arabic version was, as in the case of book One, commissioned by Abū Ġa’far Muḥammad ibn Mūsā (§§3, 8). A small part of this book Two, however, remained untranslated (§9). When Ḥunayn lost his library, this emended manuscript which Ḥunayn had painstakingly produced, also perished.

In the *Epistle*, however, §§4–6 run slightly differently, and between §§4 and 5, additional information about the translation of book Three is added:<sup>21</sup>

<sup>19</sup> A. Mingana, *Encyclopædia of Philosophical and Natural Sciences as Taught in Baghdad about A.D. 817 or Book of Treasures by Job of Edessa* (Cambridge, 1935).

<sup>20</sup> David Pingree, art. ‘Banū Mūsā’, *Encyclopaedia Iranica*, vol. 3, pp. 716b–17b; Dimitri Gutas, *Greek Thought, Arab Culture: The Graeco-Arabic Translation Movement in Baghdad and Early ‘Abbāsīd Society (2nd–4th / 8th–10th centuries)* (London, 1998), pp. 133–4.

<sup>21</sup> Bergsträsser, *Ḥunayn ibn Ishāq*, p. 21, line 20 – p. 22, line 3 (text).

[4] أما المقالة الثانية ففسرها أيضا في ثلث مقالات [4a] وترجمها أيوب إلى السريانية [4b] وترجمتها أنا إلى العربية [4c] وأما المقالة الثالثة ففسرها في ست مقالات. [5] وقد كان وقع إلي هذا الكتاب باليونانية [6] إلا أنه كان ينقص المقالة الخامسة من التفسير

[4] On the second book Galen wrote a commentary in *three* parts [*talāt maqālāt*] [4a] which Ayyūb translated into Syriac [4b] and I into Arabic. [4c] On the third book, Galen wrote a commentary in six parts [*sitt maqālāt*]. [5] This book [*i.e.* the third] in Greek came into my possession, [6] but it lacked the fifth part [*al-maqāla al-ḥāmisa*] of the commentary.

As the text stands here, Galen's commentary on Book Two contains *three*, and that on Book Three *six* parts. Paragraphs 4a and 4b contain basically the same information as §§2 and 3, only now regarding book Two rather than One. Moreover §§5 and 6 now concern the commentary on the book Three rather than book Two. Whilst MSS **E2**, **M** (and **P**) only talk about 'one part' lacking, the *Epistle* specifies that 'the fifth part' was missing in the Greek manuscript. Now, Ḥunayn could not have written this version as it stands, because he knew (a) that book Two contained six, and book Three three parts, and not the other way round; and (b) because in his translation the fifth part of book Two, not book Three, is lacking – he even takes this lacuna as an opportunity to reflect on the difficult state of the Greek text, as we shall see shortly. It is easy to guess what happened: because the original account does not provide any information about Book Three, someone enlarged the entry by extrapolating from the information about book One. The additional fact that part five of book Two was the one which was missing in Ḥunayn's Greek manuscript must have been added before this extrapolation occurred. In addition to this, this short extract from the *Epistle* illustrates another point, already observed by Bergsträsser, the fluidity of this text. Although the content – apart from the exceptions discussed above – is roughly the same in the MSS **B**, **A**, **E2** and **M** (together with **P**), there is variation in expression, for instance between *tarḡama* and *naqala* (to translate) or in the way the beginning of §6 is put.

In §§11–12, Ḥunayn only mentions the Syriac version by Job of Edessa, who also rendered the commentary on the book One into Syriac. Then Ḥunayn states that he has all these parts in his library, explaining that books One, Two, Three and Six are the only ones on which Galen commented, because he regarded the remaining as spurious (§§13–17). Paragraph 18 implies that, for book Two, Ḥunayn filled in the gaps in his manuscript by quoting directly from the

Hippocratic text. And, indeed, Ḥunayn himself does so as we can see from MSS **E1** and **M** (and **P**):<sup>22</sup>

وقال حنين إنني وجدت في هذا الموضوع أيضا من الكتاب اليوناني الذي ترجمت منه نقصان قول من أقاويل أبقرات يتلو قوله المتقدم وبعض تفسير جالينوس فيه فوصفت ذلك القول الناقص من كلام أبقرات وأضفت إليه من التفسير ما ظننت أنه يشاكل مذهب جالينوس في تفسيره له وما يتضد به.

Ḥunayn said: I have noticed that, at this point in the text of the Greek book from which I translated, a certain passage from Hippocrates which followed the preceding one [just discussed] was missing, as was some of Galen's commentary on it. I have written down this missing passage from Hippocrates' discussion [*kalām*] and added to it a commentary which I thought would be similar to that of Galen in doctrine, as well as in what he would oppose.

This confirms both that a small part of book Two remained untranslated (§9); and that Ḥunayn filled these gaps as best he could. In doing so, he must have had access to the text of Hippocrates not through the lemmas extracted from the commentary (since they were missing), but from an independent text. He thought it so important to explain the Hippocratic text that he even wrote a commentary himself, where none by Galen was extant.

Let us now briefly consider §§19–23. They appear to concern Galen's commentary on Hippocrates' *On Humours*. The text in the manuscripts is continuous, but these paragraphs originally come from Ḥunayn's *Epistle*: §19 corresponds to p. 42, line 20; §20 to p. 44, line 8; and §§21–3 to p. 44, lines 12–14. What Ḥunayn says in §20, for instance, – that he knows of no other translation of Galen's *Commentary* on the Hippocratic *On Humours* except his own – is in stark contrast to the information contained in the *Epistle*. There he states that 'Īsā ibn Yaḥyā translated it into Arabic.<sup>23</sup> Moreover, §§21–23 only make sense in the context of the *Epistle* where they occur. Therefore the whole of §§19–23 is clearly a pastiche, and it is difficult to know why it occurs here in its present form.

Instead of this confused ending in MSS **E2** and **M** (with **P**), the *Epistle* concludes in the following way:<sup>24</sup>

<sup>22</sup> MS **E1** fol. 53a[129b], lines 7–9; MS **M** fol. 12b, lines 13–16; MS **P** fol. 25b second line from the bottom–fol. 26a, line 2; corresponding to *CMG*, V, 10.1, p. 187, line 39–p. 188, line 4.

<sup>23</sup> Bergsträsser, *Ḥunayn ibn Ishāq*, p. 42, lines 18–19 (text).

<sup>24</sup> *Ibid.*, p. 42, lines 13–19 (text).

[24] ثم ترجمت من بعد الثماني المقالات التي فسر فيها جالينوس المقالة السادسة من كتاب أبيذيما إلى العربية [25] فلما حصل من تفسير الأربع المقالات من كتاب بقراط المعروف بأبيذيما وهي المقالة الأولى والثانية والثالثة والسادسة لجالينوس تسع عشر مقالة [26] اختصرت معانيها على جهة السؤال والجواب بالسريانية [27] وترجمه عيسى بن يحيى إلى العربية

[24] Then afterwards I translated the eight parts in which Galen commented on the book Six of the *Epidemics* into Arabic. [25] After the commentaries on the four books of the work by Hippocrates known as the *Epidemics* – namely of books One, Two, Three, and Six – resulted in 19 parts [in the Arabic translation], [26] I abridged their content by way of question and answer in Syriac. [27] ‘Īsā ibn Yaḥyā translated it [this abridgment] into Arabic.

Thus Ḥunayn explains that he translated ‘afterwards (*min ba‘du*)’ the commentary on Book Six (§24), and that the total number of parts is nineteen, *i.e.*  $3 + (6 - 1) + 3 + 8 = 19$ . Finally, he ends by saying that he produced a Syriac abridgment of the commentary ‘by way of question and answer (*‘alā ḡihati al-su‘āli wa-al-ḡawābi*)’, which ‘Īsā ibn Yaḥyā (fl. c. 850s) subsequently rendered into Arabic. We know very little about this ‘Īsā ibn Yaḥyā.<sup>25</sup> A younger contemporary and pupil of Ḥunayn’s, he translated a great number of texts from Syriac into Arabic; it would appear that he knew little or no Greek. His Arabic translation of the *Questions on the Epidemics* (*Masā’il al-Abīḏīmiyā*) – as Ḥunayn’s abridgment was known – is actually preserved in MS M; I shall discuss this text below.

#### DIFFICULTIES IN THE GREEK MANUSCRIPT TRADITION

Not only in the *Epistle*, but also in the translation itself does Ḥunayn make comments and remarks about the difficulties which he had to surmount in order to produce a reliable translation.<sup>26</sup> One such remark is particularly illuminating and deserves further discussion:<sup>27</sup>

قال حنين [1] إن المقالة الخامسة من تفسير جالينوس لهذه المقالة الثانية من كتاب أبقراط لم نجد لها نسخة باليونانية [2] والذي وجدناه من تفسير هذه المقالة نسختان [3] إحداهما<sup>28</sup> على طريق الكتب التي نسخ جميع ما فيها على الولاء [4] والأخرى على

<sup>25</sup> See Gotthard Strohmaier, *Galen über die Verschiedenheit der homoiomeren Körperteile*, *Corpus Medicorum Graecorum. Supplementum orientale* 3 (Berlin, 1970), pp. 23–6.

<sup>26</sup> Cf. Peter E. Pormann, *The Oriental Tradition of Paul of Aegina’s Pragmateia*, *Studies in Ancient Medicine* 29 (Leiden, 2004), pp. 114–15.

<sup>27</sup> MS M, fol. 67a2 sqq.; [MS P, fols. 147a7–147b12]; MS E1, fols. 105a[78b], line 12 from the bottom–105b[78a], line 4; corresponding to *CMG*, V, 10.1, p. 353, lines 9–39.

<sup>28</sup> أحدهما M, E1 إحداهما.

طريق ما يلتقط به منه<sup>29</sup> نتف [5] وقال صاحبها فيها أنه قصد للأقاويل النافعة من هذه المقالة وتفاسيرها [6] ولم نجد في واحدة من النسختين المقالة الخامسة ولا شيئاً منها أصلاً [7] على أن النسخة الملتقطة قد دللتنا دلالة بينة أنها لم تنسخ من تلك التي هي في الحساب تامة [8] من قبل أنا وجدنا >في النسخة الملتقطة أقاويل كثيرة بأسرها مع تفاسيرها قد سقطت أصلاً من النسخة التي هي في الحساب تامة<<sup>30</sup> [9] وإني لأعجب من كاتب تلك النسخة لم يدع نوعاً من أنواع الخطأ التي قد عرفها الناس إلا وقد استعمله [10] ثم أبدع هو أنواعاً أخرى من <أنواع><sup>31</sup> الخطأ غريبة إن كان ذلك منه خطأ [11] وليس هو إفساداً لتعمد<sup>32</sup> [12] وذلك أنه لم يقتصر على أن زاد ونقص وكتب بدل الشيء <غيره><sup>33</sup> حتى جاء شيء آخر يبدع<sup>34</sup> [13] وهو أنه في مواضع من الكتاب جعل يؤلف<sup>35</sup> عشر ورقات أو نحوها ثم يكتب من الموضوع الذي طفد؟ إليه ورقتين أو ثلاث ثم ترجع إلى وراء عشر ورقات من حيث قطع الكتاب أو نحوها [14] ولم يزل يترجح هذا الترجيح فمرة تمر إلى خلف ومرة إلى قدام بغاية الاضطراب إلى أن فزع [15] ولذلك وقعت من تخلص ما تخلصت من هذا الكتاب في تعب شديد ووصف ما وصفت من هذا [16] كيما إن جاء بعدي من يعنى بالعلم فوجد نسخة لهذا الكتاب باليونانية تامة صحيحة [17] يحثه ما وصفت له من هذا على المقابلة بهذا الكتاب وبصحيحه واستتمام ما نقص منه [18] ويخرجني من اللائمة إن شاء الله

[1] Ḥunayn said: 'Of the fifth part of Galen's commentary on this, the second, book of Hippocrates' work we have not found any manuscript in Greek. [2] Of the commentary on this book [*i.e.* the second] which we did find, there are two manuscripts: [3] the first in the manner of books in which all the text in them is copied continuously; [4] and the second in the manner of something which has been examined superficially [*'alā ṭarīqi mā yultaqaṭu bihi minhu natfun*]. [5] Its [the extract's] author said about it that he concentrated on the useful quotations [by Hippocrates] and explanations [by Galen] from this book [*i.e.* the second]. [6] In neither of the two manuscripts did we find the fifth part, not even anything at all. [7] The extract manuscript, however, does show us clearly that it was not produced from the one which was complete according to the calculation [? '*alā al-ḥisāb*], [8] since we found in the extract manuscript many entire quotations together with their explanation [*aqāwīl kaṭīra bi-asrihā ma'a tafā-sīrihā*] which had fallen out from the manuscript which was complete according to the calculation [? '*alā al-ḥisāb*]. [9] I am surprised that the

<sup>29</sup> منه] E1, om. M.

<sup>30</sup> [...] في النسخة [...] هي في الحساب تامة] M, om. E1.

<sup>31</sup> [أنواع] M, om. E1.

<sup>32</sup> [إفساداً لتعمد] M, E1: فساد بالتعمد.

<sup>33</sup> [غيره] M, om. E1.

<sup>34</sup> [جاءني أحد يدفع] M, E1: [جاء شيء آخر يبدع]

<sup>35</sup> [يؤلف] E1; M: يشبث.

scribe of this manuscript did not stop to make a certain type of error long recognised by people without [first] committing it. [10] Then he invented other strange kinds of mistakes all by himself. [11] If, indeed, these errors were committed by him – and the corruption is certainly not ours – , then he made them intentionally. [12] For he does not limit himself to adding, subtracting, and writing something else instead of the [original] thing, so that something else came . . . [13] In places of the book, he began to compile ten folios or so, then he wrote from the place to which he jumped two or three folios, then he goes back ten folios or so from where he cut the book. [14] He continued to jump back and forth in this way, sometimes going back and sometimes going forward in the most crazy fashion, so that one gets frightened. [15] I took enormous trouble to save of this book what I could, and I describe this [process], [16] in order that when someone interested in science comes after me, he finds a manuscript of this book in Greek which is complete and correct. [17] My description should stimulate him to collate and emend this book and to complete the things which are missing here, [18] so as to save me from blame, God willing.

This remark occurs between the end of the fourth and the beginning of the sixth parts of Galen's commentary to book Two. Ḥunayn first states that the fifth part is missing in his manuscripts of book Two (§§1, 6). For his translation of the remainder of this book, he relies on two manuscripts: (1) a 'normal' one in which the text is copied continuously; and (2) an extract (§§2–4). The latter, according to its author, aims at providing the reader with what is 'useful (*nāfi'*)' (§5). This extract was not produced from the other manuscript in Ḥunayn's possession, and therefore is an independent witness for the production of a correct text, especially where the other manuscript contains lacunae (§8). This said, the extract is replete with mistakes and often confuses the order of the text (§§9–14). Ḥunayn made every effort to amend and emend his text, in order to produce a good working copy (§15). He does, however, recognise that because of the pitiful state of his sources, further work is needed to restore the text (§§16–18).

Ḥunayn does not provide us with similar details for the other books of Gal. *in Hipp. Epid.*, but we can assume that he had considerable difficulties to surmount in order to reconstruct the Greek text, and to translate it into Syriac and Arabic. This process took considerable time, and Ḥunayn drew on all sources available to him. That he did devote so much effort to this text shows how important he thought it to be. Yet, he did not stop at merely reconstructing and translating it.

#### ḤUNAYN'S SUMMARY (ĠAWĀMI') IN QUESTION-AND-ANSWER FORMAT

From the entry no. 95 on Gal. *in Hipp. Epid.* (§§26–7, see above p. 12), we have learnt that Ḥunayn wrote a Syriac abridgment in question-and-answer format which 'Īsā ibn Yaḥyā later translated into Arabic.

Of this abridgment, we still have some fragments in MS **M**, notably concerning those parts not extant in Greek. The question-and-answer format represented a popular didactic device not only in Late Antiquity, but also in the medieval Muslim world.<sup>36</sup> Hunayn also wrote an *Introduction to Medicine* (*Mudḥal fī al-ṭibb*), which he later reworked into a sort of medical catechism, called *Questions on Medicine* (*Masā'il fī al-ṭibb*), in which he adopted this format. The fact that Hunayn decided to abridge the *Epidemics* and thus make them accessible to students shows that he attached great importance to this text. In Appendix Two, I have edited and translated the beginning of the questions and answers from book Two, corresponding to the text of Gal. *in Hipp. Epid.* included in Appendix One. By looking at this short passage and comparing it to Galen's commentary, we shall be able to gauge the character of Hunayn's abridgment and its relationship with both the Hippocratic *Epidemics* and Galen's *Commentary* on them. I shall also suggest why Hunayn attached so much importance to these texts.

Before turning to the content of Hunayn's abridgment, it is necessary to say something about its title. In the *Epistle*, he does not give a precise title, but merely says 'iḥṭaṣartu ma'āniyahā 'alā ḡihati al-su'ālī wa-al-ḡawābi bi-al-suryānīyati (I abridged their content by way of question and answer in Syriac)'. In MS **M**, two titles occur. At the beginning, the following somewhat cumbersome heading appears: 'Ḡawāmi' ma'ānī al-maqāla al-ūlā min tafṣīr al-maqāla al-tāniya min kitāb Abīdīmiyā 'alā sabīl al-mas'ala wa-al-ḡawāb (Summary of the content of the first part of the commentary on the second book of the *Epidemics* in the form of question and answer)'. Yet the colophon of Book Two refers to the work as 'al-Masā'il 'alā al-maqālati al-tāniyati min kitābi Abuqrāṭa fī al-amrāḍi al-wāfidati (Questions on the second book of Hippocrates' work *On the Epidemic Diseases*)'.<sup>37</sup> Moreover al-Rāzī quotes this work under the generic title 'Masā'il Abīdīmiyā (*Questions on the Epidemics*)'.<sup>38</sup> A certain fluidity in the titles of work is not uncommon; the *Alexandrian Summaries*, for instance, were referred to in five different ways within two manuscripts.<sup>39</sup>

<sup>36</sup> See Anna A. Akasoy, *Philosophie und Mystik in der späten Almohadenzeit: die Sizilianischen Fragen des Ibn-Sab'īn*, *Islamic Philosophy, Theology and Science* 59 (Leiden, 2006), pp. 113–18.

<sup>37</sup> MS **M**, fol. 131b ult.

<sup>38</sup> See Manfred Ullmann, *Die Medizin im Islam*, *Handbuch der Orientalistik i. Erg.* vi.1 (Leiden, Cologne, 1970), p. 30; and Jennifer Bryson, 'The *Kitāb al-Ḥāwī* of Rāzī (c. AD 900), Book One of the *Ḥāwī* on brain, nerve, and mental disorders: Studies in the transmission of medical texts from Greek into Arabic into Latin', Ph.D. diss. (Yale University, 2000), pp. 35–7. Bryson compared the quotations from al-Rāzī's *Comprehensive Book* (*al-Kitāb al-Ḥāwī*) with their original on the basis of MS **M**.

<sup>39</sup> Peter E. Pormann, 'The Alexandrian Summary (*Jawāmi'*) of Galen's *On the Sects for Beginners*: Commentary or abridgment?', in Peter Adamson *et al.* (eds.), *Philosophy, Science*

When reading the *Questions on the Epidemics*, to use this convenient title, one is immediately struck by the fact that Ḥunayn often takes his answers directly from his own translation of Galen's *Commentary*. Yet, the great difference between the two is that in the *Questions*, the essential information is arranged in a very logical and easy-to-remember fashion. He starts out by giving a definition of the disease, in this case carbuncle (Appendix Two, §3), and lists the symptoms which generally accompany it (§§4–7). Then he explains what was specific about the carbuncles in Cranon (§§10). Thus far, Ḥunayn was concerned with nosology and, indirectly, diagnosis – how to define and recognise a disease. Then he turns to aetiology, enumerating the various causes which led to the prevalence of the condition under those specific circumstances (§§12–22). In the same vein, Ḥunayn provides the causes of other accompanying symptoms such as itching (§24) and blisters (§§26–31). He ends by affirming that blisters are general symptoms of carbuncles (§§33–5), and giving the two causes for their generation (§§38–40).

This short overview illustrates the logical structure and pedagogical purpose of the *Questions*. Ḥunayn proceeds from the general to the specific, and endeavours to arrange the material in the form of lists. This approach is in stark contrast to that of Galen, who only provides a definition and description of the disease in §§32–4 (corresponding very closely to Ḥunayn's *Questions* §§2–7). Again, the information about the specific symptoms in Ḥunayn's *Questions*, §10, comes nearly verbatim from Galen's *Commentary* §69. When Ḥunayn provides aetiological information (§§12–22), he lists six causes provoking excessive putrefaction, which, in turn, caused the carbuncles. They are all mentioned at different points of Galen's discussion. Yet, Ḥunayn states that 'you can add to these causes a seventh'; this seventh cause is not found in Galen, but rather inferred by Ḥunayn himself. He makes this plain in the way he introduces it.

Although Ḥunayn produced his *Questions on the Epidemics* in Syriac, and 'Īsā ibn Yaḥyā translated them into Arabic, there is a close textual connection between 'Īsā's version of the *Questions* (henceforth tr. 'Ī.) and that by Ḥunayn of Gal. *in Hipp. Epid.* (henceforth tr. Ḥ.). There is abundant evidence that 'Īsā must have had Ḥunayn's translation in front of him when preparing his own. For instance, the definition of carbuncles in tr. Ḥ. runs as follows (§32):

*wa-al-ḡamratu hiya qarḥatun takūna min tilqā'i nafsihā wa-'alayhā ḥaška-rīṣatun fī aktari al-amri sawdā'u wa-rubbamā kānat bi-lawni al-ramādi.*

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*and Exegesis in Greek, Arabic and Latin Commentaries*, Bulletin of the Institute of Classical Studies. Supplement 83, 2 vols. (London, 2004), vol. 2, pp. 11–33, on pp. 24–5.



A carbuncle is an ulcer which occurs by itself; on it there is scab, mostly black, although it sometimes has the colour of ashes [*i.e.* grey].

Tr. ‘Ī. is nearly an exact copy:

*Mā hiya al-ḡamratu? hiya qarḥatun min tilqā’i nafsihā fīhā ḥaškarīšatun mitla al-ḥaškarīšati allatī yakūnu lawnuhā fī aḡtari al-amri aswada warubbamā kānat bi-lawni al-ramādi.*

What is a carbuncle? It is an ulcer occurring by itself in which there is scab resembling the scab the colour of which is mostly black, although it sometimes has the colour of ashes [*i.e.* grey].

Because of this close proximity, it is at times possible to improve the text of tr. Ḥ. by collating tr. ‘Ī. Suffice it to give just one example. The second symptom accompanying carbuncle mentioned in tr. ‘Ī. (§6) after the definition is ‘*al-ḥumra allatī laysat bi-al-ḥāliṣati ka-ḥumrati al-warami al-damawīyi* (the redness which is not total as the redness of a bloody swelling)’. This item in a list of three is based on tr. Ḥ. §34: ‘*wa-al-mawāḍi’u ayḍani allatī ḥawla al-ḥaškarīšati laysat bi-šādiqati al-ḥumrati ka-mā yakūnu fī al-warami al-ḥārri alladī yusammā balḡamūnī* (The places, too, around the scab are not truly red, as in the case of an inflammation called ‘*phlegmonē*’). The major difficulty in the source text, tr. Ḥ. is the word ‘*šādiq* (true)’; tr. ‘Ī. offers the solution, reading ‘*ḥāliṣ* (total, absolute)’. Given that the two variants are very close from a palaeographical point of view (خالص، صادق), especially in a maḡribī hand, we are justified to consider *ḥāliṣ* at least as an attractive variant; it might even be the correct reading. This example illustrates another feature of tr. Ḥ.: it simplifies. Whilst Ḥunayn rendered the Greek φλεγμονή (*phlegmonē*) in a somewhat cumbersome manner as ‘*al-waram al-ḥārr alladī yusammā balḡamūnī* (lit.: warm swelling called ‘*phlegmonē*’), tr. ‘Ī. simply has ‘bloody swelling (*al-waram al-damawī*)’. And indeed, in Bar Bahlūl’s glossary, largely based on Ḥunayn’s own notes, we find the following entry which supports this shift:<sup>40</sup> **علم حمة الورم الذي يحدث عن الدم** (*Phlegmonē*: the swelling (*waram*) which occurs because of blood (*dam*)). Thus ‘Īsā resorted to an easier diction, more appropriate for educational purposes.

This brings us to the final point about Ḥunayn’s interest in the *Epidemics*. Why did he attach so much importance to Hippocrates’ work and Galen’s commentary that he not only translated it, but also rendered it accessible for medical students? A thirteenth-century source even reports that Ḥunayn wrote a ‘sum extracted from the nineteen extant parts of Galen’s *Commentary* on Hippocrates’ book of *Epidemics*, in the form of questions and answers’, which may well

<sup>40</sup> René Duval (ed.), *Lexicon Syriacum auctore Hassano Bar Bahlule*, 3 vols. (Paris, 1901), col. 1566, line 10.

be a further abridgment of the *Questions on the Epidemics*, which has not come down to us.<sup>41</sup> Be that as it may, the *Epidemics* were important for Ḥunayn, largely, I think, because of their clinical character. They exemplified how the great physicians of the past treated individual cases. And, importantly, they could be used to illustrate some of the principles of clinical teaching. The student, after all, needs to learn how to recognise and distinguish between different diseases. What better then to transform the Hippocratic text together with Galen's explanations into some sort of question catalogue to which the student could turn when taking a patient's history. By establishing whether the same environmental factors are present, or the same symptoms, he can come to a competent diagnosis of the disease. The *Epidemics* did not, however, serve teaching purposes only, but also constituted an important framework for medical research. Yet, before turning to this point, it is necessary briefly to discuss the textual tradition as presented in the manuscripts of Ḥunayn's and 'Īsā's versions.

#### THE MANUSCRIPTS AND TEXTUAL TRADITION

Gal. *in Hipp. Epid.* is preserved in four manuscripts: **E1**, **E2**, **M**, and **P**; Ḥunayn's *Questions on the Epidemics*, only survive in **M**. Of the former, **E1** contains books One, Two, and Three; **E2** book Six; **M** and **P** book Two and the last two and a half parts of book Six. Franz Pfaff described the relation between **E1**, **E2**, and **P** (he had no knowledge of **M**, from which **P** was copied) in the following terms:<sup>42</sup>

Those two manuscripts [**E2** – and by implication **E1** – and **P**] are in complete agreement with each other, so that substantial variants (*sachliche Varianten*) do not occur at all. The marginal notes [in **P**] are only concerned with words which are difficult to read.

In the following, I shall argue that the picture is much more complicated, and that **M** and its copy **P** do offer many interesting variant readings which do not derive from **E1**, both in the text and in the margins. My discussion will be based on the provisional collation of **E1**, **M** and **P** for the beginning of book Two reproduced in Appendix One below.

The relationship of the four manuscripts is particularly fascinating.<sup>43</sup> Both **E1** and **E2** are written on paper in a maḡribī hand, but not

<sup>41</sup> Ibn Abī Uṣaybi'a, '*Uyūn al-anbā' fī ṭabaqāt al-aṭibbā'* (*The Sources of Information about the Classes of Physicians*), ed. August Müller, 2 vols. (Cairo and Königsberg, 1889; repr. Farnborough, 1972), vol. 1, p. 199, lines 11–12.

<sup>42</sup> *CMG*, V, 10.1, p. xxxii.

<sup>43</sup> They all have previously been described in various catalogues. **E1** in Henri Paul J. Renaud, *Les manuscrits arabes de l'Escorial, décrits par H. Derenbourg ... revues et complétées par H. P. J. Renaud*, vol. 2.2 (Paris, 1941), pp. 18–19, no. 804; **E2** *ibid.*, pp. 19–20, no. 805; **M** in Oscar Löfgren and Renato Traini, *Catalogue of the Arabic manuscripts in the*

by the same hand; nor do they come originally form a single set, as Pfaff assumed. The colophon of the latter gives the date of its production as AH 609, corresponding to AD 1210 / 11.<sup>44</sup> We can only speculate when **E1** was produced, although it probably dates from a similar period as **E2**. Interestingly, in **E1** there are, throughout the manuscript, notes in Hebrew and Judaeo-Arabic, perhaps dating from the fourteenth century. This suggests that the manuscript came, at least for some time, into the possession of a Jewish owner.<sup>45</sup>

The Escorial Library, in which **E1** and **E2** are kept today, suffered severely when a fire consumed many of its treasures in 1671. Since **E1**, comprising books 1–3, and **E2**, comprising book 6, did not originally form a set, it seems likely that counterpart volumes containing the other parts once existed, which subsequently perished in the flames of this fatal blast. This assumption is confirmed by two pieces of evidence. A catalogue of the Escorial holdings compiled under the supervision of Benedictus Arias Montanus (d. 1598) in 1577 lists the following items:<sup>46</sup>

33 ابقراط من كتابه الذي سماه افيديوميا [sic] من المقالة الاولى الى كمال المقالة الثالثة  
 بشرح جالينوس في فن الطب I. ٦. 11  
 [...]

35 ابقراط بشرح جالينوس من المقالة الاولى إلى كمال المقالة الثالثة من كتاب افيديوميا  
 في الطب I. ٦. 18

36 ابقراط مقالة [sic] التي سماها افيديوميا بشرح جالينوس في ثمانية مقالات II. ٦. 17

33 Hippocrates, from his work called *Epidemics*, from the beginning of the first to the end of the third book, in the commentary of Galen on the craft [*fann*] of medicine. I.6.17

35 Hippocrates, in the commentary of Galen, from the first to the end of the third book of the work the *Epidemics* on medicine. I.6.18

36 Hippocrates, the work called *Epidemics* in the commentary of Galen, in eight parts. II.6.17

33 Hypocrates Las Epidemias segundo y 3º Con comento de Galeno.

[. . .]

*Biblioteca Ambrosiana*, 3 vols. (Vicenza, 1975–95), vol. 1, pp. 66–7, no. 105; and P, in William MacGuckin baron de Slane, *Catalogue des manuscrits arabes* (Paris, 1883–95), p. 513, no. 2846.

<sup>44</sup> **E2**, fol. 196a.

<sup>45</sup> e.g. fol. 1b, line 4: **מָה מְעוּנֵי אִסְם אֶפִּיִדִימִיָּא** (What is the meaning of the term ‘*Epidemics*’).

<sup>46</sup> Nemesio Morata, ‘Un catálogo de los fondos árabes primitivos de El Escorial’, *Al-Andalus*, 2 (1934): 87–181.

35 Hypocrates p<sup>o</sup> 2 y 3<sup>o</sup> tratado de las Epidemias con comento de Galeno, traducido por Unei hijo de Isaac

36 Ipcrates de Epidemia con comento de Galleno en 8<sup>o</sup> tratados.

Because of the shelf marks mentioned in this list and in the manuscripts **E1** and **E2**, we know that item number 35 in the list corresponds to **E1**, and number 36 to **E2**. Therefore at least item 33, a manuscript containing the first three books of Gal. *in Hipp. Epid.*, is missing from the present collection and probably perished during the 1671 blaze.

More than half a century before this fire, in the year 1617 to be exact, a Scottish scholar by the name of David Colville (Colvillus) came to the Escorial.<sup>47</sup> He had previously studied in St. Andrews from 1597 to 1601, where he took an MA. At some stage before his arrival in the Escorial, perhaps in 1605 in Paris under the influence of his uncle John, David Colville converted to Catholicism and became a monk. During his ten year sojourn in the Escorial, he taught himself Arabic and copied a number of manuscripts.<sup>48</sup> One of

<sup>47</sup> For some general information about this Scottish scholar, see D. M. Dunlop, 'David Colville: a successor of Michael Scot', *Bulletin of Hispanic Studies*, 28 (1951): 38–42. Thomas Burman, 'Cambridge University Library MS Mm. v. 26 and the history of the study of the Qur'ān in medieval and early modern Europe', in Burman, Meyerson, and Shopkow (eds.), *Religion, Text, and Society in Medieval Spain and Northern Europe: Essays in Honor of J. N. Hillgarth* (Toronto, 2002), pp. 335–63 at pp. 344–6, shows that Colville copied an archetype of a Qur'ān in four columns (Arabic, transliterated in Latin characters, translated into Latin, commentary) at the Escorial; this copy is now preserved in Milan, Biblioteca Ambrosiana, MS D 100 inf. [see Löfgren and Traini, vol. 1, pp. 41–3]; see also Burman, *Reading the Qur'ān in Latin Christendom, 1140–1560* (Pennsylvania, 2007); and Marie-Thérèse Urvoy (ed.), *Le Psautier mozarabe de Hafs le Goth* (Toulouse, 1994), pp. iii–iv (another work that Colville copied at the Escorial).

<sup>48</sup> In the colophon of one of these manuscripts, Milan, Biblioteca Ambrosiana, MS D 141 inf., copied by Colville and containing al-Frūzābādī's (d. 1415) *Comprehensive Dictionary (al-Qāmūs al-muḥīṭ)*, he says the following about his learning Arabic:

'Ego Daud Colvillus natione Scotus in regia Bibliotheca B[eat]i Laurencii ad Escorialum cum licentia superiorum tum praesidum s[anc]tae Inquisitionis tum Patrum monasterii et Bibliothecarii dictionarium istud dictum *Al Camus* manu mea descripsi ex quatuor diuersis exemplaribus, cum biennio ante, cum primum coeperam linguam hanc addiscere sine ullo alio auxilio quam per libros et dictionaria, transcripseram dictionarium *Goheri* [al-Ġawharī], et in transcriptione istius duos plus minus annos insumpsi, et tandem finem imposui anno Domini nostri 1623 Idibus circiter Augusti. Laus Deo et Beatae Virgini.'

'I, David, Colville, of Scottish nationality, have written with my own hand this dictionary, called *al-Qāmūs*, in the Royal Library of the Blessed Laurence in Escorial by permission of my superiors, both the presidents of the Holy Inquisition and the fathers of the Monastery and the Library, using four different manuscript. Two years earlier, when I had begun to learn this language [Arabic] without any help except through books and dictionaries, I had copied al-Ġawharī's (d. c. 1007) dictionary and spent roughly two years on doing this. I finally finished in the year of our Lord 1623, around the Ides of August (*i.e.* the 13th). Praise be to God and the Blessed Virgin.'

Cf. Löfgren and Traini, *Catalogue*, vol. 1, p. 76, no. 131. Since Colville finished copying al-Ġawharī's dictionary in 1619, as we know from its colophon [cf. Löfgren and Traini, *Catalogue*, vol. 1, p. 127, no. 233], he started learning Arabic shortly after his arrival in the Escorial.

these Arabic manuscripts is **M**, in which Colville endeavoured to compile the necessary materials to fill the gap in the Greek transmission of Gal. *in Hipp. Epid.* At the beginning of the manuscript, he says the following about how he produced the manuscript:

Commentarii Galeni numero sex in totidam sectiones Iii epidemiarum Hippocratis intergri ex arabica transcripti cum alioqui non extant apud Graecos nec Latinos nisi secundo et tertio commentar[io] et ex illis fragmenta aliquot misera, hic integros reperi in pluribus exemplaribus in praestantissima bibliotheca Regia ad D[omini] Laurentii Escurialem dicta et manu propria descripsi David Colvillus Scotus.

Galen's complete Commentary in six parts on the same number of sections in the second book of Hippocrates' *Epidemics*. I copied it from the Arabic, because it does not survive elsewhere, neither in Greek nor in Latin, apart from the second and third parts, and even of these only some pitiful fragments. I found it in its entirety in a number of manuscripts in the excellent Royal Library, called Escorial of St Laurence, and copied it with my own hand, I David Colville, the Scot.

At the beginning of book six, he gives fewer details:

Commentarii Galeni in Vitum epidemiarum Hippocratis a medii sexti commetarii usque ad finem octavi (ex translatione Honeini) qui differunt a supplementis quae edicta fuerunt Latine a Rasario.

Galen's Commentary on the sixth book of Hippocrates' *Epidemics*, from the middle of the sixth to the end of the eighth part (from Hunayn's translation); [these parts] differ from the supplements published in Latin by [Joannes Baptista] Rasarius [d. 1578].<sup>49</sup>

Thus, according to Colville's own words, he produced his copy of Gal. *in Hipp. Epid.* book Two 'from a number of manuscripts (*a pluribus exemplaribus*)'. From the catalogue we know that there were at least two manuscripts of this part of the text in the Escorial library. The use of the word 'pluribus' would suggest that Colville had access to other manuscripts as well. For book Six, the situation may have been different.

Let us now consider Colville's manuscript itself, namely **M**. Is it true that 'substantial variants do not occur at all' and that the 'marginal notes are only concerned with words which are difficult to read', as Pfaff claimed for MS **P**, a nineteenth-century copy of **M**? Obviously, only a careful collation of all the manuscripts can answer this question definitively. By collating the beginning of book

<sup>49</sup> He refers to Joannes B. Rasarius, *In Hippocratis librum de humoribus commentarii tres: ejusdem reliquum sexti commentarii in sextum de vulgaribus morbis: itemque septimus, et octavus | nuper in lucem editi ac latinitate donati: Jo. Baptista Rasario interprete . . .* (Venice, 1562); the commentary on the last two and a half parts of book six is spurious; he drew on Palladius (fl. c. first half of 6th cent. AD) to fill in the gap.

Two, however, we can get a first impression of how David Colville worked.

First of all, it is important to note that there are many differences between **E1** on the one hand, and **M** (together with **P**) on the other. Whilst the marginal notes in **M** were written solely by the same scribe as the text, David Colville, we have a variety of hands in the margins of **E1**, one of which appears to be that of Colville himself (**E1**<sup>2</sup>). Colville thus corrected **E1**, and his corrections are often identical to the text of **M**. Conversely, in the margins of **M**, we find at times variants reflecting the readings of **E1**. For instance, he introduced by ‘in alio (in another [manuscript])’ or the abridged form ‘in al.’ some such variants (see Appendix One, nn. 97, 104, 114). Yet in at least one instance (*ibid.*, §44, n. 102), there is a case where his text in **M** is different from **E1**, and where he notes a variant reading different from both that in **M** and in **E1**. This makes it likely that he had at least a third manuscript – apart from **E1** and the lost manuscript mentioned in the 1577 catalogue as number 33 – at his disposal. This would chime well with his statement that he produced **M** ‘from a number of manuscripts’.

The beginning of a Paris manuscript, fols. 1a–19b of Paris, BnF, MS fonds arabe 6734 (**P2**), contains the Arabic version of the first book of the Hippocratic *Epidemics*. Degen has argued persuasively that this was extracted from the lemmas of Hippocrates in Galen’s *Commentary*.<sup>50</sup> This is not the only case where the Arabic version of Hippocratic text is reconstituted from the lemmas contained in one of Galen’s commentaries.<sup>51</sup>

Finally, Bergsträsser<sup>52</sup> mentioned Munich, Bayerische Staatsbibliothek, MS Cod. arab. 803a (**Mu**), which he said was a partial copy of **E1**, containing extracts from Gal. *In Hipp. Epic.* on Book Two (notably ii, 1 and ii, 4). Dr Rebhan, of the Bayerische Staatsbibliothek, informed me that this manuscript ‘unfortunately does not exist’ in their collections,<sup>53</sup> and that MS cod. arab. 803 does not contain the extracts mentioned by Bergsträsser.<sup>54</sup> As a copy of **E1**, and given its fragmentary nature, **Mu** is unlikely to offer additional readings, even if it were located again.

For the constitution of Ḥunayn’s Arabic version of Gal. *In Hipp. Epid.*, the indirect tradition is potentially important. Its major exponents are al-Rāzī, Ibn Riḍwān<sup>55</sup> and Ibn al-Nafīs. The last two

<sup>50</sup> Rainer Degen, ‘An unknown manuscript of the Book of Epidemics of Hippocrates’, *Zeitschrift der Geschichte der Arabisch-Islamischen Wissenschaften*, 3 (1986): 269–79.

<sup>51</sup> See also Oliver Overwien, ‘Einige Beobachtungen zur Überlieferung der Hippokrates-schriften in der arabischen und griechischen Tradition’, *Sudhoffs Archiv*, 89 (2005): 196–225.

<sup>52</sup> Gotthelf Bergsträsser, *Ḥunayn ibn Ishāq und Seine Schule* (Leiden, 1913), p. 25.

<sup>53</sup> Email 5 July 2007.

<sup>54</sup> Email 12 July 2007 (sent by Alexander Morar).

<sup>55</sup> Ibn Riḍwān’s commentary on the *Epidemics* is extant in Cambridge, University Library, MS Dd. 12. 1 (fols. 127b–196b); cf. Fuat Sezgin, *Medizin-Pharmazie-Zoologie-Tierheilkunde bis*

have each written lemmatic commentaries on the Hippocratic *Epidemics*. Yet their engagement with the Hippocratic and Galenic texts is far more interesting than merely viewing them as quarries for lost Greek texts, as we shall see next.

#### AL-RĀZĪ'S CLINICAL TRIALS<sup>56</sup>

Abū Bakr Muḥammad ibn Zakariyā al-Rāzī (d. 925) is generally believed to be the greatest clinician of the Middle Ages.<sup>57</sup> He worked in, and at times even directed, a number of hospitals in Baghdad and his native Rayy (near modern Tehran). Space does not permit for a full discussion of how crucial he thought the *Epidemics* were for furthering the art of medicine. In the following, I shall only briefly highlight some aspects of his work as a clinician and author of medical treatises in which he was particularly concerned with the *Epidemics*.

Throughout his professional life, al-Rāzī placed great importance on case notes. His students often recorded them, and they published a selection, arranged according to topics from tip to toe, after his death as the *Book of Experiences* (*Kitāb al-Taḡārib*).<sup>58</sup> Moreover, al-Rāzī himself included some thirty case notes in his extensive files which, again, his students published after his death as the *Comprehensive Book* (*al-Kitāb al-Ḥāwī*).<sup>59</sup> At the beginning of the section of the *Comprehensive Book* containing these case histories, al-Rāzī explicitly states that one should 'beware not to neglect them [case histories contained in the *Epidemics*], for they are extremely useful,

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ca 430 H., *Geschichte des arabischen Schrifttums* 3 (Leiden, 1970), p. 35. Since it has not yet been the object of substantial scholarly attention, I only mention it here. Future research will have to determine its nature and scope.

<sup>56</sup> This is only a short sketch; for a more detailed discussion, see Peter E. Pormann, 'Medical methodology and hospital practice: The case of tenth-century Baghdad', in Peter Adamson (ed.), *In the Age of al-Farabi: Arabic Philosophy in the 4th / 10th Century*, Warburg Institut Colloquia (London, 2008) [in press].

<sup>57</sup> See Albert Z. Iskandar, 'Al-Rāzī al-Ṭabīb al-Iklīnī: Nuṣūṣ min maḥṭūṭāt lam yasbiq naṣruḥā (Al-Rāzī, the clinical physician: Texts from manuscripts not previously published)', *al-Maṣriq*, 56 (1962): 217–59.

<sup>58</sup> See Cristina Álvarez-Millán, 'Graeco-Roman case histories and their influence on medieval Islamic clinical accounts', *Social History of Medicine*, 12 (1999): 19–33; and Álvarez-Millán, 'Practice versus theory: Tenth-century case histories from the Islamic Middle East', in Peregrine Horden and Emilie Savage-Smith (eds.), *The Year 1000: Medical Practice at the End of the First Millennium*, special issue of *Social History of Medicine*, 13.2 (Oxford, 2000), pp. 293–306. The *Book of Experiences* has recently been edited by Ḥālid Ḥarbī, *Kitāb al-Taḡārib li-Abī Muḥammad ibn Zakariyā al-Rāzī ma'a minḥāḡ fī al-baḥṭ al-'ilmī 'inda al-Rāzī* (The Book of Experiences by Abū Muḥammad ibn Zakariyā al-Rāzī with a Study of al-Rāzī's Scientific Method), Mu'allafāt al-Rāzī (al-Rāzī's Works) 3 (Alexandria, 2006).

<sup>59</sup> Max Meyerhof, 'Thirty-three clinical observations by Rhazes (circa 900 AD)', *Isis*, 23 (1935): 321–56 and 14 pages of Arabic; reprinted in Meyerhof, *Studies in Medieval Arabic Medicine: Theory and Practice*, ed. Penelope Johnstone, Variorum Reprints (London, 1984), item v.

especially those contained in the *Questions [on the Epidemics]*.<sup>60</sup> Thus he views his own note-taking in the tradition of his Greek predecessors. Yet he also pursued specific purposes when recording these case histories. For instance, when searching for a new cure for dropsy (*istiqsā*'), he tried out different treatments in order to test a new therapeutic approach, mentioning that he took into consideration 'two thousand' patients' case notes.<sup>61</sup>

On the level of medical methodology, apart from such large numbers being present in clinical trials, the most impressive innovation is the use of a control group. When treating 'phrenitis (*sirsām*)', a sort of meningitis, al-Rāzī once used a control group in order to test the prescribed treatment, bloodletting, or as he put it: 'I once saved one group [of patients] by it [through bloodletting], whilst I intentionally left another group, so as to remove the doubt from my opinion through this [*astabri'u bi-dālika ra'yī*].'<sup>62</sup> For the present purposes, it is revealing that al-Rāzī devised this test involving a control group against the backdrop of Ḥunayn's *Questions on the Epidemics*. This shows that the Hippocratic tradition of the *Epidemics* was doubly important for al-Rāzī: he followed its model in his clinical practice and furthered his research through recourse to recording patients' histories; and the theoretical framework developed in Galen's *Commentary*, abridged in Ḥunayn's *Questions on the Epidemics*, stood him in good stead when devising his own approach to theory and practice.

#### IBN AL-NAFĪS

Finally, the famous physician and philosopher Ibn al-Nafīs wrote a lengthy commentary on the Hippocratic *Epidemics*, entitled *Kitāb Abīdīmiyā li-Abuqrāṭ wa-tafsīruhu al-marad al-wāfid, šarḥ al-šayḥ 'Alā' al-Dīn ibn al-Nafīs* (The book of *Epidemics* by Hippocrates – meaning 'epidemic disease'; commentary by sheikh 'Alā' al-Dīn ibn al-Nafīs). It is preserved in two manuscripts, Istanbul, Süleymaniye Kütüphanesi, MS Aya Sofya 3642 (AS), perhaps dating to the fourteenth or fifteenth century AD; and Cairo, Dār al-kutub, MS ṭibb

<sup>60</sup> Meyerhof, 'Thirty-three clinical observations', p. 1 [arabic]; see Owsei Temkin, 'A medieval translation of Rhazes' clinical observations', *Bulletin of the History of Medicine*, 12 (1942): 102–17; Al-Rāzī, *Comprehensive Book (al-Kitāb al-Ḥāwī)*, 23 vols., 1st ed. (Hyderabad, 1955–71), vol. 16, p. 189, lines 4–8.

<sup>61</sup> Al-Rāzī, *Šukūk 'alā Ġālīnūs* (Doubts about Galen), ed. Mahdī Muḥaqqiq (Tehran, 1993), p. 63, lines 14–18.

<sup>62</sup> Al-Rāzī, *Comprehensive Book*, vol. 15, p. 121, line 10–p. 122, line 3; the text has been previously edited from Oxford, Bodleian Library, MS Marsh 156, fol. 167a, by Iskandar, 'Al-Rāzī, the clinical physician', pp. 238–9. Iskandar had also edited and translated it in his doctoral thesis; see Albert Z. Iskandar, 'A study of al-Rāzī's medical writings, with selected texts and English translations', 2 vols. (D. Phil. thesis, University of Oxford, 1959), vol. 1, p. 305; vol. 2, p. 106.



Ṭal‘at 583 (C) produced in AH 1215, corresponding to AD 1800–1.<sup>63</sup> Peter Bachmann has shown that MS C is either merely a copy of AS or represents a very similar branch of the textual tradition.<sup>64</sup>

This commentary is lemmatic, that is to say that Ibn al-Nafīs first quotes a passage from the Hippocratic text, and then explains and expounds it. At the beginning of the text, he describes his method as follows:<sup>65</sup>

فإننا نشرع الآن في شرح معاني الكتاب المعروف بكتاب أبيذييا للإمام أبقرط وتفسيره المرض الوافد وهو الحادث عن فساد كيفيات الهواء وأما الحادث عن فساد جوهره فيخص باسم الموتان وليكن ذلك على وجه نقتصر فيه على تفسير ألفاظه وتحقيق مطالبه وإيضاح مشكله وتفصيل مجمله وأما بسط الكلام في التفاريع والتعرض للمخالفين بالتزييف والإبطال فمما اجتنبناه كراهة للإطالة واكتفئنا بما أفيدناه [sic ?] في كتب أخرى

We now embark on the path of explaining the meaning of the book known as ‘The book of the *Epidemics*’ by master [*imām*] Hippocrates – it means ‘epidemic disease (*al-maraḍ al-wāfid*)’ – namely that which occurs because the qualities of the air are corrupted. Conversely, that which occurs because its [sc. the air’s] substance is corrupted is designated by the specific term ‘plague (*mawtān*)’. This shall take the form of us briefly explaining its [the book’s] vocabulary [*alfāz*], establishing its aims, and clarifying obscure points [*muškilihi*],<sup>66</sup> and detailing its general content. To extend our discussion, however, by giving excessive details and to object to those who have a different opinion by showing them to be wrong and invalidating [their arguments] is something which we have avoided, because we were loath to talk at great length. We are satisfied with what we have provided in other books.

Therefore, Ibn al-Nafīs’ Commentary is much more concise than Galen’s. He often follows a fairly mechanical pattern of first quoting

<sup>63</sup> See H. Ritter and R. Walzer, ‘Arabische Übersetzungen griechischer Ärzte in Stambuler Bibliotheken’, *Sitzungsberichte der Preussischen Akademie der Wissenschaften*, phil.-hist. Kl. 26 (1934), pp. 801–46; Ṣalāḥ al-Munaḡḡim, ‘Maṣādir ḡadīda ‘an ta’rīḥ al-ṭibb ‘inda l-‘arab (New sources for the history of medicine among the Arabs)’, *Revue de l’Institut des manuscrits arabes*, 5 (1959): 229–348, on p. 270; and Albert Z. Iskandar, art. ‘Ibn al-Nafīs’, *Dictionary of Scientific Bibliography*, 9 (1975), pp. 602–6.

<sup>64</sup> Peter Bachmann, ‘Quelques remarques sur le commentaire du premier livre des “Épidémies” par Ibn al-Nafīs’, in *Actas, IV [i.e. quarto] Congresso de Estudos Arabes e Islámicos, Coimbra-Lisboa, 1 a 8 de setembro de 1968* (Leiden, 1971), pp. 301–9, on p. 304.

<sup>65</sup> Edited after AS, fol. 1b; previously translated into French by Bachmann, ‘Quelques remarques’, p. 305.

<sup>66</sup> This must be the correct reading; Bachmann, ‘Quelques remarques’, p. 305, read *mu‘allalihi*, explaining it as some sort of gerund (‘that the causes of which need to be given’), but this is an expression which Ibn al-Nadīm used elsewhere in a similar context, for instance the preface to his abridgment of his commentary on Ḥunayn’s *Question on Medicine*; see P. de Jong and M. J. de Goeje, *Catalogus Codicum Orientalium Bibliothecae Academiae Lugduno Batavae*, vol. 3 (Leiden, 1865), p. 230, no. 1304 (*ṭāḥ muškilātihi*).

the Hippocratic original, and then explicating it. In doing so, he frequently employs the same formulae ‘*ammā . . . fa (as to . . . it)*’ and ‘*qawluhu . . . yurīdu* (when he says . . . he means)’. Both Bachmann and Amal Abou Aly convincingly argued that Ibn al-Nafīs knew Galen’s commentary in Ḥunayn’s translation.<sup>67</sup> The latter even showed that Ibn al-Nafīs did not realise that certain problems of interpretation did not stem from the Greek original, but rather from Ḥunayn’s version.

### CONCLUSIONS

Ḥunayn’s Arabic version of Gal. *In Hipp. Epic.* is of crucial importance in two main respects: as a source for lost or badly preserved Greek texts; and as the basis for any study on its impact and influence on taking patient’s histories, recording case notes, and using them for teaching purposes in the medieval Islamic world.

Already in the 1620s, the Scottish scholar David Colville copied out carefully those parts of the Arabic translation not extant in Greek. Roughly a century and a half later, the celebrated Arabist Michael Casiri quoted extensively from the Arabic translation, and noted the crucial importance of this version,<sup>68</sup> as did the famous German philologist Johannes Mewaldt, saying: ‘Therefore, given that the Greek manuscripts [of Gal. *in Hipp. Epid.*] are so deplorable, we have to rejoice in the fact that this [Arabic] translation has come down to us [. . .].’<sup>69</sup> The doyen of Graeco-Arabic studies, the German physician Max Simon, undertook to edit and translate this Arabic version, but passed away before he could complete this task. Another German, Franz Pfaff, continued Simon’s work. When Wenkebach edited Gal. *in Hipp. Epid.* for the *Corpus Medicorum Graecorum* [CMG, V, 10. 1–2], he called on Pfaff to provide him with a German translation of the Arabic version, both to improve the Greek text, where it is extant, and to supplement it, where it is not.<sup>70</sup> In order to

<sup>67</sup> Bachmann, ‘Quelques remarques’; Amal Abou Aly, ‘A few notes on Ḥunayn’s translation and Ibn al-Nafīs’ Commentary on the First Book of the *Aphorisms*’, *Arabic Sciences and Philosophy*, 10 (2000): 139–50.

<sup>68</sup> Michael Casiri, *Bibliotheca Arabico-Hispana Escorialensis sive librorum omnium mss. quos, Arabice an auctoribus magnam partem Arabo-Hispanis compositos, Bibliotheca Coenobii Escorialensis complectitur, recensio et explanatio*, 2 vols. (Madrid, 1760–70), vol. 1, pp. 249–257, nos. 800–1.

<sup>69</sup> Quoted in Ernst Wenkebach and Franz Pfaff, *Galenus in Hippocratis Epidemiarum libros i et ii*, *Corpus Medicorum Graecorum*, V, 10.1 (Berlin), p. xxii: ‘Gaudere igitur debemus in tanta codicum Graecorum penuria, quod illa versio ad aetatem nostram pervenit, quae et recensionis rationem quam iniimus commendat et insuper nonnullis locis in memoria graeca aperte corruptis medelam aut affert aut qualis fere esse debeat commonstrat.’

<sup>70</sup> Pfaff’s translation, although a great achievement in its own right and a milestone in Galenic scholarship – it enabled generations of Classicists to access material lost in Greek –, is generally held to be unreliable; see Gotthard Strohmaier, ‘Galen in Arabic: Prospects and projects’, in Vivian Nutton (ed.), *Galen: Problems and Prospects* (London, 1981), pp. 189–96, on p. 189. Two instances of Pfaff’s translation being rectified through a fresh reading of the

do so, Pfaff drew on Simon's previous efforts, and his original aim was to publish the Arabic text alongside a revised German translation, but the economic circumstance in 1930s' Germany did not allow for the then costly printing of the Arabic. Pfaff ends his preface by saying: 'For the sake of scholarly rigour, the Academy wants to print the Arabic text at a later date, when the economic situation will again allow for the great expense.'<sup>71</sup>

To date, this vow has not been fulfilled. Nor have scholars of Arabic and Islamic medicine taken the trouble to edit, or even study, this seminal work. As we have seen above, especially for clinical and educational purposes, the Arabic version of Gal. *In Hipp. Epid.* was of crucial importance. It provided a framework for methodologically sophisticated tests, and helped students learn to take patients' histories and to diagnose them. Yet much of its impact on the development of medicine in the medieval Islamic world, and notably on the genre of case notes, awaits scholarly exploration. It can only be hoped that this Galenic commentary, the largest and greatest of its kind, will soon find editors who will publish the Arabic version and place it into its historical context.\*

#### APPENDIX ONE

Sample collation of Gal. *in Hipp. Epid.* book 2, part 1, beginning (containing the first case history). *CMG*, V, 10.1, p. 155, line 5–p. 158, line 32.<sup>72</sup>

MSS:

- E1** fol. 44b, line 6–fol. 45b, line 12  
**E1<sup>1</sup>** marginal note or correction in **E1** by the same hand as the scribe of the main text.  
**E1<sup>2</sup>** marginal note or correction in **E1** by David Colville, the scribe of **M**.  
**E1<sup>3</sup>** marginal note or correction in **E1** by a different hand.  
**M** fol. 1a, line 10–fol. 2a, line 24  
**M<sup>1</sup>** marginal note or correction in **M** by David Colville, the scribe of the main text.  
**M(P)** reading of **M**, with **P**, its apograph, offering the same text.

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sources can be found in: Philip van der Eijk, *Diocles of Carystus*, 2 vols. (Leiden, 2000–1), fr. p. 159, vol. 1, pp. 258–9, vol. 2, p. 297; and Patricia Curd, *Anaxagoras of Clazomenae: Fragments and Testimonia*, Phoenix Presocratics Series (Toronto, 2007), pp. 117–18.

<sup>71</sup> *Ibid.*, p. xxxiii: 'Der Wissenschaftlichkeit wegen will aber die Akademie doch den arabischen Text auch drucken lassen, wenn die Wirtschaftslage den Aufwand größerer Mittel wieder gestattet.'

\*When this present article was already at page proof stage, I learnt that the Wellcome Trust had agreed to fund a project, to be led by Simon Swain of the University of Warwick, to edit the Arabic version of Gal. *In Hipp. Epid.* One and Two, and translate it into English.

<sup>72</sup> Bergsträsser, *Hunain ibn Ishāq und Seine Schule*, p. 39 has previously edited the beginning of this extract, presumably from **Mu**.

**M(P)<sup>1</sup>** marginal note or correction in **M** by David Colville, with **P**, its apograph, offering the same note.  
**P** fol. 1a, line 1–fol. 3b, 4th line from the bottom

[1] المقالة الأولى من تفسير جالينوس للمقالة الثانية من كتاب أبقرات المسمى أفديميا<sup>73</sup> ترجمة حنين بن اسحق<sup>74</sup>

[2] قال أبقرات: [3] الجمر الصيفي الذي كان بقرانون جاءت أمطارٌ جودٌ مع حر الصيف كله [4] وكان أكثر ما يكون مع الجنوب [5] ويصير تحت الجلد صديد<sup>75</sup> [6] فإذا احتقن سخن وولد حكة<sup>76</sup> كانت تخرج فيه نفاخت شبيهة بحريق<sup>77</sup> النار [7] وكان تخيل إليهم أن ما دون الجلد يحترق احتراقاً.

[8] قال جالينوس [9] إن أبقرات وصف في المقالة الأولى أمر ثلاث حالات من حالات الهواء حدثت عنها أمراض<sup>10</sup> [10] ووصف في المقالة الثالثة من هذا الكتاب بعينه أمر حال واحدة وثانية<sup>78</sup> [11] فقدم أولاً في وصف تلك<sup>79</sup> الحالات كلها صفة تغير الهواء المحيط بالأبدان وخروجه عن طبيعته [12] ثم أتبع ذلك بصفة طبائع الأمراض التي حدثت لكثير<sup>80</sup> من الناس عن تلك الحالات [13] ولم يفعل ذلك في هذه المقالة على هذا المثال لكنه ذكر أولاً المرض الذي حدث<sup>81</sup> [14] ثم ذكر الوقت الذي حدث فيه من أوقات السنة<sup>82</sup> [15] ثم ذكر البلد الذي حدثت<sup>83</sup> فيه [16] ثم ذكر مزاج ذلك الوقت والخلط الردي<sup>84</sup> الذي تولد في أبدان الناس عن ذلك المزاج<sup>85</sup> [17] ثم وصف طريق فعل<sup>86</sup> ذلك الخلط الذي به حدث<sup>87</sup> السبب المولد للجمر [18] ثم ذكر العرض الذي تقدم<sup>88</sup> ذلك والعرض<sup>89</sup> الذي كان معه في تلك [P 1b] الحال والعرض الذي حدث

<sup>73</sup> [المقالة الثانية من كتاب أبقرات المسمى أفديميا M(P), E1<sup>2</sup>; om. E1.

<sup>74</sup> [ترجمة حنين بن اسحق M(P); om. E1.

<sup>75</sup> صديداً M(P); E1: صديد.

<sup>76</sup> [حكة M(P), E1<sup>2</sup>; om. E1.

<sup>77</sup> [تشبيهه يحرق M(P); E1: تشبيهه بحريق.

<sup>78</sup> [أمر حال واحدة وثانية M(P); sic E1, M(P); Pfaff: 'einen seuchenerregenden Luftzustand (؟) أمر حال واحدة).

<sup>79</sup> [تلك M(P), E1<sup>2</sup>; om. E1.

<sup>80</sup> [لكثير M(P); E1: لكثرة.

<sup>81</sup> [الأمراض التي حدثت M(P); E1: المرض الذي حدث.

<sup>82</sup> [السن E1, M; P: السن.

<sup>83</sup> [الذي حدثت M(P); والذي حدث E1: الذي حدثت corr.; E1: الذي حدثت.

<sup>84</sup> [الردي M(P); om. E1.

<sup>85</sup> [المزاج M(P); E1: المرار.

<sup>86</sup> [طريق فعل M(P); E1: طريق ذلك فعل.

<sup>87</sup> [حدث E1; M(P): أحدث.

<sup>88</sup> [يتقدم M(P); E1: يتقدم.

<sup>89</sup> [العرض E1, M; P: العرض أو العرض.

فيه بعد تزيده<sup>90</sup> والعرض الذي حدث فيه عند بلوغه والعرض الذي حدث فيه عند<sup>91</sup> منتهاه<sup>92</sup> [19] والسبب في تقديمه ذكر المرض على خلاف عادته ثم ثنى به فذكر<sup>93</sup> حال الهواء قصده للإيجاز<sup>94</sup> [20] فقد نجد<sup>95</sup> الواضع لهذه المقالة أبقراط نفسه كان أو تاسالوس ابنه حريصا على الإيجاز [21] ولا فرق عندي في ما نحن بسبيله بين أن يقال إن هذا الكتاب لأبقراط<sup>96</sup> وبين أن يقال إنه لتاسالوس [22] وأنا ملخص<sup>97</sup> هذه الأشياء التي ذكرتها<sup>98</sup> مجملا [23] فأقول إن فاتحة هذه المقالة كأنه جعلها شبيهة بما تقدم من الرسم قبل الشيء الذي يقصد لصفته [24] كأنه قال [25] إن الجمر الذي حدث في الصيف بمدينة قرانون [26] ثم تقطع إذا قرأت هذا وتبتدئ من الرأس وتقرأ جاءت أمطار جود [28] حتى تفهم في هذا<sup>99</sup> الكلام الأول من عندك أنه كان على هذه الجهة كأنه قال [29] إن الجمر الصيفي الذي كان بقرانون كان على هذه الجهة<sup>100</sup> [30] جاءت أمطار جود مع حر الصيف كله<sup>101</sup> [31] وكان أكثر ما يكون تلك الأمطار مع الجنوب. [10, 156] [32] والجمره هي قرحة تكون من تلقاء نفسها وعليها [M 1b] خشكريشة في أكثر الأمر سوداء وربما كانت بلون الرماد [33] ويكون معها<sup>102</sup> في المواضع التي تحيط بها حرارة شديدة حتى يحس من يلمسها منها بحرارة كثيرة فضلا عن أن يحسها صاحب القرحة [34] والمواضع أيضا التي<sup>103</sup> حول الخشكريشة ليست بصادقة<sup>104</sup> الحمرة<sup>105</sup> كما يكون في الورم الحار<sup>106</sup> الذي يسمى فلغموني<sup>107</sup> لكنه يكون مائلا إلى السواد والصلابة أيضا فيه أزيد كثيرا [35] وعلى هذه [P 2a] الصفة رأينا نحن الجمر الذي حدث بكثير من الناس بمدينة برغامن<sup>108</sup> ورآه غيرنا في سائر

90 عند تزييده: M(P); E1 [بعد تزييده.

91 E1<sup>2</sup> حدث: M(P); om. E1 [والعرض الذي حدث عند

92 om. Pfaff. [والعرض الذي حدث فيه عند منتهاه

93 ثنى بذكر: M(P); ثنا به فذكر: E1 [ثنى به فذكر

94 M(P)<sup>1</sup>: suspicior للإيجاز sine dubio scriptum e [?] يلايجان

95 نحو: E1; M(P) [نجد

96 أبقراط: P; لبقراط: M; E1 [لأبقراط

97 مفخص vel مفخص in alio: E1, M(P); M(P)<sup>1</sup>: [ملخص

98 ذكرتها ذكر: E1; M(P) [ذكرتها

99 E1; om. M(P) [هذا

100 الجحبة: M(P); E1 [الجحبة

101 E1, M; om. P. [كله

102 منها: E1; منها in alio: M<sup>1</sup>; منها in al.: P; P<sup>1</sup>: [معها

103 والموضع أيضا الذي: E1; M(P) [والمواضع أيضا التي

104 ليست بصادقة in al.: M(P)<sup>1</sup>: ليس بصادق: E1; M(P) [ليست بصادقة

105 الحمرة: E1; M(P) [الحمرة

106 M(P), E1<sup>2</sup>; om. E1. [الحار

107 بلغموني: M, E1; P: [بلغموني

108 برغاميس: E1, M(P) corr.; [برغامن

مدن بلد آسيا<sup>109</sup> كلها إلا الخطاء كالذي خبرنا به من رآه [36] ولهذا منذ كان أربعون سنة لم نر فيها حدوث عام آخر شبيه بذلك من هذا الجمر [37] وكان ذلك الجمر الذي كان بعقب حال من الهواء جنوبية رطبة مع سكون من الرياح [E1 54a] [38] وهذه هي جملة صفة الحال التي وصفها أبقرات أيضا.

[39] فإنه قال [40] إنه جاءت أمطار<sup>110</sup> جود مع حر الصيف كله [41] وحدث المطر في الصيف كله خارج عن الأمر<sup>111</sup> الطبيعي ولا سيما إذا كان المطر جودا [42] فإن<sup>112</sup> ذلك لو كان في الشتاء لجعل مزاجه مزاجا رديئا [43] فإن كان مع ذلك حر<sup>113</sup> أعني ألا تهبّ رياح قوية فإن الحر لا يكون في الصيف إلا بهذا السبب فإن الآفة تكون أعظم [44] وذلك أمر قد كان عرض بقرانوں فإنه قد كانت الرياح في ذلك الوقت وإن هبت في الأحيين<sup>114</sup> فإنها إنما كانت تكون جنوبية<sup>115</sup> [45] وهذه الرياح من أعون الرياح على إرخاء قوة البدن كما وصف أبقرات في كتاب الفصول وعلى أن يحدث أمراض العفونة [46] وقرانوں أيضا هي<sup>116</sup> مدينة من بلاد تساليا<sup>117</sup> من قبل أنها في وهدة وهي أيضا مع ذلك في ناحية الجنوب توافق ما كانت عليه<sup>118</sup> تلك الحال من الإفراط [48] ولذلك أيضا وقت تلك الحال من أوقات السنة الذي<sup>119</sup> دل عليه في قوله<sup>120</sup> الجمر الصيفي يعني الجمر الذي كان حدث في الصيف [49] على أن قوما فهموا من قوله هذا لا أنه كان في ذلك الوقت بل أنه يكون كذلك دائما وأن هذا أمر خاص لتولد<sup>121</sup> [P 2b] الجمر [50] ولا فرق في ذلك الجمر الذي كان في ذلك الوقت إذ كان تولد الجمر إنما شأنه أن يكون في الصيف [51] أو كان إنما حدث بقرانوں في الصيف<sup>122</sup> [52] فإن الذي يكتفي به هذا<sup>123</sup> فقط أن يعمل من أمر حدوثه أن مزاج الهواء الذي حدث منه<sup>124</sup> كان حارا عدما<sup>125</sup> للرياح رطبا [53] فقد نرى عيانا أن<sup>126</sup>

<sup>109</sup> أثينيا: M(P); E1: آسيا.

<sup>110</sup> أمطور [sic]: M(P); E1: أمطار.

<sup>111</sup> المجرى: M(P); E1: الأمر.

<sup>112</sup> إن: E1, M; P: إن.

<sup>113</sup> حرا: M(P); E1: حر.

<sup>114</sup> الاخلاخل: E1; M(P); M(P)<sup>1</sup>: in al. sic الالف sine punctis; M(P); M(P)<sup>1</sup>: الأحيين.

<sup>115</sup> جنوبية: M(P); E1: جنوبية.

<sup>116</sup> وهي: M(P); E1: وهي.

<sup>117</sup> إيطاليا: E1, M(P); تساليا: M(P)<sup>1</sup>.

<sup>118</sup> عليه بالحال: E1; M(P): عليه.

<sup>119</sup> التي: E1; M(P): التي الذي.

<sup>120</sup> بقول: E1; M(P): في قوله.

<sup>121</sup> لتوليد: E1; M(P): لتولد.

<sup>122</sup> M(P); om. E1: أو كان إنما حدث بقرانوں في الصيف.

<sup>123</sup> هوا: E1; M(P): هذا.

<sup>124</sup> فيه: E1; M(P): أمته.

<sup>125</sup> صريما: E1; M(P): عدما.

<sup>126</sup> M(P); om. E1: أن.

جميع الأجسام تعفن عند هذه الحال وإن لم يعلم السبب في ذلك [54] إلا أن أبقراط قد بين السبب في ذلك<sup>127</sup> بقوله [55] ويصير تحت الجلد صديد<sup>128</sup> [56] فإذا احتقن سخن [57] فإن معنى قوله احتقن إنما هو<sup>129</sup> أنه بقي في البدن داخلا فلم يستفرغ استفراغا ظاهرا للحس ولا استفراغا خفيا [58] لكنه لبث داخلا فعفن [59] ومن قبل ذلك سخن سخونة خارجة عن الأمر الطبيعي [60] فلما كان ذلك ولد أولا حكة [61] والحكة تكون من أخلاط لم تسخن سخونة شديدة جدا لكنها قد ابتدأت أن تسخن [62] فلما تبادى به الزمان ونفذ<sup>130</sup> أرق<sup>131</sup> ما كان<sup>132</sup> في ذلك الخلط الذي عفن من أسخف أجزاء الجلد بسهولة واجتمع تحت الصفيحة الخارجة منه لكثافته ولد النفاخات [63] فأما الشيء الأغلظ من ذلك الخلط فإنه لم ينفذ<sup>133</sup> إلى أن يبلغ إلى الصفيحة الخارجة من الجلد لكنه احتقن داخلا تحت الجلد [64] واجتمع<sup>134</sup> هناك فعفن وسخن سخونة شديدة حتى كان تخيل إلى صاحبه أن ما دون الجلد يحترق احتراقا [65] ثم من بعد هذا فإن النفاخات كانت تتمدد<sup>135</sup> من كثرة الرطوبة التي فيها وتتأكل من حداثها فتتقص<sup>136</sup> [66] والجلد الذي من تحتها كان يحترق من ذلك الخلط المفرط [M 2a] الحر [67] فيحدث منه فيه شبيه بالخشكريشة [P 3a] التي تحدث من الكي [68] وهذه الأشياء أشياء<sup>137</sup> تعم جميع الجمر [69] فأما الأشياء التي خصت<sup>138</sup> ذلك الجمر الذي حدث في ذلك الوقت فكانت<sup>139</sup> شدة إفراط الحرارة التي فيها<sup>140</sup> دون الجلد وتولد النفاخات وأنه ليس يجب<sup>141</sup> ضرورة أن يتقدم حدوث الجمر حدوث النفاخات [70] ولذلك عبر أبقراط عن هذه المعاني بألفاظ مختلفة الأزمان [71] فوصف الأعراض التي تعم الجمر بحروثها<sup>142</sup> دائما بألفاظ تدل على ذلك<sup>143</sup> الوقت الحاضر<sup>144</sup> [72] منها قوله [73]

127 ذلك الوقت: E1; M(P); ذلك [ذلك]

128 صديدا: E1, M(P); E1<sup>3</sup>; [صديد]

129 [إنما هو] E1; om. M(P).

130 [ونفذ] M(P); E1; [ونفذ]

131 مـ: supplend. كـه. M(P)<sup>1</sup>;

132 [كان] M(P); om. E1.

133 [ينفذ] E1 (Pfaff: *drang ... durch*); M(P); بيق.

134 [واجتمع] E1; M(P); [اجتمع].

135 [تتمدد] E1; تتمدد; M(P); تـد.

136 [فتتقص] M(P); E1; [فتتقص].

137 [أشياء] E1; om. M(P).

138 [خصت] M(P); M(P)<sup>1</sup>: in alio; حصب; E1; حصب.

139 [فكانت] E1; M(P); فكان.

140 [فيها] E1, M(P); M(P)<sup>1</sup>: in alio; ما في.

141 [يجب] E1; M(P); [يجب].

142 [بحروثها] E1; M(P); [يحدوثها].

143 [ذلك] M(P); om. E1.

144 [الحاضر] M(P); E1; الخاص.

ويصير تحت الجلد صديد [74] وقوله [75] فإذا احتقن سخن وولد حكة [76] فأما الأعراض التي خصت ذلك الجمر الذي كان في ذلك الوقت فلم يعبر عنها بمثل هذه الألفاظ [77] لكنه عبر عنها بألفاظ تدل أنها إنما عرضت<sup>145</sup> مع ذلك الجمر فقط [78] من ذلك أنه قال في النفاخات [79] كانت تخرج فيه نفاخات [80] وقال في الحرارة الخارجة عن الأمر الطبيعي [81] وكان تخيل إليهم إن ما دون الجلد يحترق احتراقا [82] والعجيب أن هذه النسخة يعرفها جميع القدماء ولا يزال من فسر هذا الكتاب يبحث عن السبب الذي [E1 54b] دعا أبقرات إلى استعمال<sup>146</sup> ألفاظ تدل على أزمان مختلفة [83] وتقدم أرتاميدوس<sup>147</sup> وأصحابه على أن غيروا هذه الألفاظ فجعلوها كلها تدل على زمان واحد على هذا المثال [84] وكان يصير تحت الجلد صديد [85] وكان إذا احتقن سخن وولد حكة [86] وأنا مجمل قولي منذ<sup>148</sup> أوله ثم أقطعه فأقول [87] إن قول أبقرات دل بقوله [88] جاءت أمطارٌ جودٌ مع حر الصيف كله [89] وكان أكثر ما يكون مع الجنوب [90] على السبب الذي يسمى البادئ الذي منه يكون تولد الجمر [91] وهذا السبب هو سبب خارج من<sup>149</sup> الأبدان [P 3b] التي نالتها الآفة [92] ودل بقوله [93] ويصير تحت الجلد صديد [94] على السبب الذي يسمى المتقادم الذي منه يكون تولد الجمر [95] وهو السبب الذي يحدث في البدن أولا [96] ودل بقوله<sup>150</sup> [97] فإذا احتقن سخن [98] على الجهة التي بها يحدث ذلك السبب الجمر وذلك هو إفراط حرارة الخلط الغالب في البدن [99] وغلبانه بسبب العفونة [100] وسماه صديدا من قبل أنه كان خارجا عن الطبيعة خروجا رديئا خبيثا [101] فأما قوله [102] وولد حكة [103] فهو عرض يتقدم حدوث الجمر [104] فأما ما بعد هذا فأعراض لزمت ذلك الجمر<sup>151</sup> خاصة الذي حدث في ذلك الوقت [105] وهو<sup>152</sup> حدوث النفاخات الشبيهة بحرق النار وإحساس<sup>153</sup> من الحرارة الشديدة فيما دون الجلد [106] حتى تخيل إلى صاحب القرحة أن ذلك الموضع منه يحترق احتراقا [107] وقد

<sup>145</sup> عرض: E1, M; P: [عرضت]

<sup>146</sup> أن يستعمل: M(P); E1: [استعمال]

<sup>147</sup> M(P)<sup>1</sup>: Artemidorus, puto.

<sup>148</sup> من: M(P); E1: [منذ]

<sup>149</sup> عن: M(P); E1: [من]

<sup>150</sup> M(P); om. E1; EI<sup>2</sup>: [ويصير تحت الجلد [...] يحدث في البدن أولا ودل بقوله]

ويصير تحت الجلد صديد على السبب الذي [يسمى المتقادم] الذي منه يكون تولد الجمره وهو السبب الذي [يحدث في البدن] أولا ودل بقوله.

<sup>151</sup> الحمى: M(P); E1: [الجمر]

<sup>152</sup> وهي: M(P); E1: [وهو]

<sup>153</sup> احساسا: E1; و احساسا: P; M: [و احساسا]



تقدم فدل على أنه تحدث منه إذا قرحة ذات خشكريشة<sup>154</sup> منذ أول كلامه حين قال  
 [108] الجمر الصيفي الذي كان بقرانون [109] فإن اسم الجمر إنما يدل على قرحة هذه  
 حالها مع التهاب يكون حولها كما قلت.

[1] The first part of Galen's Commentary to the second book by Hippocrates called *Epidemics*. Translated by Hunayn ibn Ishāq.

[Ἄνθρακες ἐν Κρανῶνι θερινοί· ὕεν ἐν καύμασιν ὕδατι λάβρω δι' ὅλου, καὶ ἐγίνετο μᾶλλον νότω· [καὶ] ὑπεγίνοντο μὲν ἐν τῷ δέρματι ἰχώρες· ἐγκαταλαμβανόμενοι δέ, ἐθερμαίνοντο, καὶ κνησμὸν ἐνεποίεον· εἶτα φλυκταινίδες ὡσπερ πυρϊκαυστοὶ ἐπανίσταντο καὶ ὑπὸ τὸ δέρμα καίεσθαι ἐδόκειον.]

[2] Hippocrates said: [3] 'Summer [*ḡayfī*] carbuncles which occurred [*kāna*] in Cranon; abundant rain came [*ḡā'at*] with the heat of the summer during its entirety [*kullahu*]. [4] This happened mostly [*kāna aktara mā yakūnu*] together with a south wind [*ḡanūb*]. [5] Pus develops [*yaḡīru*] under the skin. [6] When it is blocked [*iḥtaqana*], it becomes hot [*saḡana*] and generates [*wallada*] itching [*ḥikka*], during which blisters similar to the burning of fire used to emerge [*kānat taḡruḡu*]. [7] They imagined [*kāna tuḡuyyila ilayhim*] that what is under the skin is burning [*yaḡtariqu*] strongly.'

[8] Galen said: [9] 'Hippocrates described in the first book the issue of three states of air which cause diseases. [10] In the third part of this same book, he describes the issue of the first state and the second. [11] He begins by describing all these states in terms of change in the air which surrounds the bodies, and its unnatural state. [12] Then he proceeds by describing the nature of the diseases which befall many people because of these states. [13] In this book, he does not do this in this fashion, but rather discusses first the disease which occurred; [14] then he discusses the time of the year when it occurred; [15] then he discusses the country in which it occurred; [16] then he discusses the mixture [or 'temperament', *mizāḡ*, translating Greek κρῶσις] of this time and the bad humour generated in the bodies of the people because of it [the mixture]; [17] then he describes the way in which the humour works which was the cause for the carbuncles being generated; [18] and then he discusses the symptom [*'araḡ*] which precedes this, the symptom which accompanies it in this state, the symptom which occurs in it after its increase, the symptom which occurs in it when it reaches its peak, and the symptom which occurs in it at the end of it. [19] The reason for his mentioning the disease first contrary to his usual practice – he then turns and mentions the state of the air – is his intent to be brief. [20] We perceive that the author of this book – whether it be Hippocrates himself, or his son Thassalus – desires to be brief. [21] It makes no difference for me in our present endeavour whether one says that this book is by Hippocrates or Thassalus. [22] I am going to explain the things which I have discussed in a summary fashion, and say the following. [23] It is as if he [Hippocrates] made the beginning of this book similar to an outline [*rasm*, in the sense of

<sup>154</sup> من هذا قرحة جاءت خشكريشة: **M(P)**: (ذات **E1**<sup>2</sup>): **E1** (منه إذا قرحة ذات خشكريشة<sup>154</sup>)

‘heading’] which comes before the thing which he [actually] intends to describe. [24] It is as he said: [25] ‘The carbuncles which occurred in the summer in the city of Cranon’. [26] Then you stop, after you have read this, and start from the [actual] beginning, reading: [27] ‘abundant rain came’. [28] Then you understand by yourself that the first phrase was [meant] as if to say: [29] ‘The summer carbuncle which occurred in Cranon happened in the following way [*kānat ‘alā hādīhi al-ġihati*]: [30] abundant rain came with the heat of the summer during its entirety [*kullahā*]. [31] This happened mostly together with a south wind.’

[32] A carbuncle is an ulcer which occurs by itself; on it there is scab, mostly black, although it sometimes has the colour of ashes [*i.e.* grey]. [33] In the places surrounding it, it is accompanied by severe heat, so that if someone touches them, he feels a lot of heat, not to mention that the patient suffering from the ulcer also feels it. [34] The places, too, around the scab are not truly red, as in the case of an inflammation [*waram hārr*] called ‘*phlegmonē*’,<sup>155</sup> but rather are blackish; hardness is also much greater in it. [35] We have seen carbuncles according to this description in many people in the city of Pergamum, and others have seen it in other cities in all the land of Asia, apart from the mistake such as that about which he who saw it informed me [*illā al-ḥatā’a ka-alladī ḥabbaranā bihi man ra’āhu*]. [36] Therefore, for forty years we have not seen another year similar to that one as regards these carbuncles. [37] Those carbuncles which appeared following a southerly and wet state of wind, occurred together with the wind’s becoming still. [38] This is a summary description of the state which Hippocrates described as well.

[39] He said: [40] ‘abundant rain came with the heat of the summer during its entirety’. [41] That rain occurred during the whole summer [*fī al-ṣayfī kullīhi*] is unnatural, especially if the rain was abundant. [42] If this had happened during the winter, it [the rain] would have turned its mixture into a bad mixture [or ‘temperament’]. [43] If, in addition to this, there was heat – I mean that no strong winds were blowing, for heat during the summer only occurs for this reason – then the ailment becomes greater. [44] This is something which had previously happened in Cranon, for the winds at that time, even if they blew occasionally, used to be [*kānat takūnu*] only southerly. [45] This [south] wind is one of the most effective winds in slackening the strength of the body, as Hippocrates said in his book of *Aphorisms*,<sup>156</sup> and for producing diseases of putrefaction. [46] Cranon, too, is a city belonging to the land of Thessaly, insofar as it is situated in a depression. [47] Also, in addition to this, it is situated on the south side, and thus fits the excessive condition of this state. [48] Moreover, the time of this state belongs to the times of year which he indicated by saying ‘Summer carbuncles’, meaning ‘the carbuncles which had occurred [*kāna ḥadaṭa*] during the summer’. [49] Some people, however, understood him to have said not that it occurred [*kāna*] at this time, but that it is [*yakūnu*] always like this; that it is something specific to the generation of carbuncles; [50] and that there is no difference between these carbuncles which occurred at that

<sup>155</sup> For *waram hārr* as rendering φλεγμονή in the sense of ‘inflammation’, see Pormann, *Oriental Tradition*, p. 25.

<sup>156</sup> *Aph.* iii. 5: Νότοι βαρυήκοοι; ἀχλύδεις, καρηβαρικοί, νοθροί, διαλυτικοί· ὀκόταν οὗτος δυναστεύη, τοιαῦτα ἐν τῆσιν ἄρρωστίησι πάσχουσιν.

time [and other carbuncles], for carbuncles are typically generated during the summer. [51] Or [they understood] that they occur in Cranon only during the summer. [52] What he is content with is this: that what contributes to their [the carbuncles'] being generated is that the mixture of the air by which they are brought about is warm, stagnant, and is moist. [53] We see with our own eyes that all bodies putrefy in this state, even if he does not give the reason for this [explicitly]. [54] Hippocrates, however, explains the reason for this [implicitly] by saying [55] 'Pus develops [*yaṣīru*] under the skin. [56] When it is blocked [*iḥtaqana*], it becomes hot'. The meaning of his saying 'it is blocked [*iḥtaqana*]' [57] is that it remains inside the body, and is not purged in a way apparent to sense-perception, nor in a hidden way. [58] Rather, it stays inside and then putrefies. [59] Because of this, it becomes hot in an unnatural way. [60] When this happens [*kāna*], it first generates itching. [61] Itching is produced by humours which are not very virulently warm, but which have begun to become warm. [62] When [some] time has past, and the finest things in the humour which have putrefied easily penetrate the thinnest parts of the skin and accumulate under its outer layer because of its [the skin's] being dense, it generates blisters. [63] Things thicker than this did not penetrate so as to reach the outer layer of the skin, but were blocked [*iḥtaqana*] inside under the skin. [64] They accumulated there, then putrefied and became intensely warm until the patient 'imagined [*kāna tuḥuyyila ilā ṣāḥibihi*] that what is under the skin is burning [*yaḥtariqu*] strongly'. [65] Then afterwards the blisters were spreading out [*kānat tatamaddadu*] owing to the abundance of moisture in them, and corroding because of its [the moisture's] sharpness, so that they became scarce. [66] The skin underneath them was burning [*kāna yaḥtariqu*] because of this excessively hot humour, [67] so that there occurred [*fa-yaḥduṭa*] on it [the skin] because of it [the humour] something resembling scab which occurs [*tahduṭu*] because of cautery. [68] These are things common to all carbuncles. [69] The things specific to the carbuncles which occurred at this time were the extremely excessive heat in them under the skin, the fact that blisters were generated and that it is not absolutely necessary that the occurrence of the carbuncles precedes that of the blisters. [70] Therefore, Hippocrates expressed these ideas by different forms of time [*bi-alfāzin muḥtalifati al-azmāni*, i.e. 'tenses']. [71] For he always described symptoms [*a'rāq*] which are common to carbuncles in their [the symptoms'] occurrence through forms which indicate this present time, [72] such as when he [Hippocrates] says [73] 'Pus develops [*yaṣīru*] under the skin' [74] or when he says: [75] 'When it is blocked [*iḥtaqana*], it becomes hot [*saḥana*] and generates [*wallada*] itching.' [76] He did not express the symptoms which were specific to the carbuncles which occurred at that time with these forms, [77] but rather used forms which indicated that they occurred only with these carbuncles, [78] such as when he says about the blisters: [79] 'during which blisters similar to the burning of fire used to emerge [*kānat taḥruḡu*]', [80] or about the unnatural heat: [81] 'They imagined [*kāna tuḥuyyila ilayhim*] that what is under the skin is burning [*yaḥtariqu*] strongly.' [82] What is amazing is that all ancient authors knew this version, and that there are still people explaining this book by searching for the reason which prompted Hippocrates to use forms indicating different times.

[83] Earlier, Artemidorus [Capito] and his colleagues had changed these forms and made them all indicate one time in the following way: [84] 'Pus used to develop [*kāna yaṣṣṭru*] under the skin' [85] and 'when it was blocked, it became hot [*kāna idā iḥṭaqana saḥana*] and generated [*wallada*] itching.' [86] I am going to summarise what I have said from the beginning, so as to cut short my discussion, by saying the following. [87] When Hippocrates said [88] 'abundant rain came [*ḡā'at*] with the heat of the summer during its entirety. [89] This happened mostly [*kāna akṭara mā yakūnu*] together with a south wind', [90] he indicated the cause called 'procatarctic [*bādi*]', which brings about the generation of carbuncles. [91] This cause is external to the bodies affected by the disease. [92] By saying [93] 'Pus develops [*yaṣṣṭru*] under the skin', [94] he indicated the cause called 'pre-disposing [*mutaqādim*]', which brings about the generation of the carbuncles. [95] This cause first occurs within the body. [96] By saying [97] 'When it is blocked [*iḥṭaqana*], it becomes hot [*saḥana*]', [98] he indicated the way in which this cause brings about carbuncles, namely the excessive heat of the humour predominant in the body, [99] this predominance being due to putrefaction. [100] He called it 'pus [*ṣadīd*]', because it is unnatural in a bad and malicious way. [101] When he said [102] 'and generates [*wallada*] itching', [103] this is a symptom which precedes the occurrence of carbuncles. [104] What comes afterwards is symptoms concomitant of these carbuncles, especially those which occurred at that time, [105] namely the occurrence of blisters similar to burning fire, and the sensation of violent heat under the skin, [106] so that those suffering from the ulcer imagine that the place is burning strongly. [107] He had already indicated that this therefore causes an ulcer, [namely] right at the beginning of his discussion where he said: [108] 'Summer carbuncles which occurred [*kānat*] in Cranon'. [109] For the term 'carbuncles' only indicates an ulcer the state of which is this and which is accompanied by a burning around it, as I have said.

## APPENDIX TWO

Extract from Ḥunayn's *Summaries (Ġawāmi')* in Question-and-Answer Format, also called *Questions on the Epidemics (Masā'il al-Abīdīmiyā)*

MS M, fol. 119a:

[1] جوامع معاني المقالة الأولى من تفسير المقالة الثانية من كتاب إفيديميا على سبيل المسألة والجواب صنعة أبي زيد حسين بن إسحق المتطبب.<sup>157</sup>  
 [2] ما هي الجمرة: [3] هي قرحة من تلقاء نفسها فيها خشكريشة مثل الخشكريشة التي يكون لونها في أكثر الأمر أسود [4] وربما كانت بلون الرماد [5] مع حرارة شديدة فيما حوله ليس العليل وحده يحسها لكن من يمس الموضع من خارج [6] ومع الحمرة ليست بالخالصة كحمرة الورم الدموي لكنها مائلة إلى فضل سواد [7] مع صلابة أزيد من صلابة الدموي.

<sup>157</sup> In marg.: *Interpretationes Huneini super libros Galeni in 2.m epidemiarum Hippocratis et in 6m.*

[8] ما الذي يعم جميع الجمرة وما الذي يخص الجمرة التي حدثت بالمدينة المعروفة بقرانون [9] أما الذي يعم جميع الجمرة فالأمور التي ذكرناها [10] والتي تخص الجمرة التي حدثت بقرانون فشدّة إفراط الحرارة تحت الجلد وتولد نفاخات شبيهة بالنفاخات التي تكون من حرق النار فإن هذا ليس يتقدم ضرورة جميع الجمرّة

[11] ما بال الجمرّة التي بقرانون كان فيه شيء زائد على سائر الجمرّة [12] لشدة قوة العفونة كانت هناك [13] ولمّ اشتدت قوة العفونة هناك [14] لاجتماع أسباب كثيرة من الأسباب التي تعيس [؟] على حدوثها [15] أولها أمطار جاءت في أول الصيف [16] والسبب الثاني مجيء تلك الأمطار كان الصيف كله [17] والثالث أنها كانت أمطار قوية شديدة لو كانت مثلها في الشتاء أفسدت مزاجه [18] والرابع أنها كانت مع حر والحرا لا محالة لا يكون إلا مع عدم الرياح الشديدة [19] والخامس أنه كانت الرياح إن هبت في وقت من الأوقات إنما كانت تهب من جنوب وتحل القوة وتولد الأمراض الحادثة عن العفونة [20] والسادس أن قرانون هذه مدينة أيطاليا<sup>158</sup> موضعها منه موضع عميق جنوبي [21] ولك أن تضيف إلى هذه الأسباب شيئا سابعاً أن رطوبة تلك الحال من أحوال الهواء كانت تمنع من تحلل الفضول من الأبدان [22] فكانت تلتبث فيها داخل فتقوي وتشدّ عفونتها

[23] لمّ تحدث الحكمة في أول هذه العلة [24] لأن الحكمة إنما تحدث من أخلاط قد سخنت ولم تبلغ منها السخونة لكنها ابتدأت بها ابتداءً.

[25] مماذا كانت تحدث النفاخات من بعد الحكمة الشبيهة بالنفاخات التي تكون عن حرق النار والاحتراق تحت الجلد [26] من الخلط الذي كان سخن [27] فاشتدت سخوته عن قوة العفونة وشدتها [28] وكانت النفاخات تحدث مما رقّ منه عندما كان ينفذ فيما سخن من الجلد بسهولة [29] فإذا انتهى إلى سطحه الخارج اجتمع تحته لكثافته وتلرزّه [30] واجتمع [vacat]<sup>159</sup> [31] وكان الاحتراق تحدث مما غلظ منه عندما كان لا ينفذ لكن يبقى محتقناً فيه.

[32] ما قولك في النفاخة [33] أهي مشتركة عامة لكل جمرة أو هي خاصة للجمرّة التي تحدث بقرانون [34] أقول إن النفاخة مشتركة لكل جمرة على الإطلاق [35] فإنه من بعد أن تقف تلك النفاخة تحت القرحة وترى فيها الخشكريشة التي تكون من الكي [36] والذي كان يخص الجمرّة التي بقرانون النفاخات التي من حرق النار.

[37] من أي سبب تتقفى النفاخة [38] من سببين [39] أحدهما تمددها بسبب كثرة الرطوبة [40] والسبب الآخر تأكلها من حدثها.

<sup>158</sup> In marg.: *Debeat esse thessalia* *θεσσαλία* طساليا

<sup>159</sup> In marg.: *deest sed debet suppleri* فيه فسد *vel* [?] *simile*.

[1] Summary of the content of the first part of the commentary on the second book of the *Epidemics* in the form of question and answer, produced by Abū Zayd Ḥusayn ibn Ishāq, the physician [*mutaṭabbib*].

[2] What is a carbuncle [*ḡamra*]? [3] It is an ulcer [*qarḥa*] occurring by itself in which there is scab resembling the scab the colour of which is mostly black, [4] although it sometimes has the colour of ashes [*i.e.* grey]. [5] It is accompanied: by extreme heat around it which can be felt not only by the patient, but also by those who touch the spot from the outside; [6] by redness which is not absolute like the redness of a bloody swelling, but tending towards an excess of blackness; [7] and by hardness which is stronger than the hardness of a bloody [swelling].

[8] What is common to all carbuncles, and what is specific to the carbuncles which occurred in the city known as Cranon? [9] What is common to all carbuncles are the things which we have already mentioned [above in the previous question]. [10] The things specific to the carbuncles which occurred in Cranon are the extreme excess of heat under the skin, and the generation of blisters resembling those caused by the burning of fire. For this does not of necessity precede all carbuncles.

[11] Why is it that in the carbuncles which were in Cranon there was something more than in other carbuncles? [12] Because of the extreme power of putrefaction which existed there. [13] And why was the power of putrefaction extreme there? [14] Because of a concurrence of many causes which led [?] to its [the putrefaction's] occurrence. [15] The first [cause] was the rain which came during the summertime; [16] the second cause was the fact that the rain came during the whole of the summer; [17] the third that the rain was strong and severe – if such a rain occurred during the winter, it would corrupt its [the winter's] temperament; [18] the fourth that it was accompanied by heat – heat being necessarily accompanied by an absence of wind; [19] the fifth that the winds, even if they blew from time to time, only did so from the south, thus dissolving the strength and generating diseases caused by putrefaction; [20] sixth that this Cranon is an Thessalian<sup>160</sup> city, situated in a southern depression; [21] you can add to these causes a seventh, namely that the moisture of this state of air was preventing that the superfluties were dissolved [and expelled] from the bodies. [22] Therefore they [the superfluties] lingered inside them [the bodies], so that the putrefaction became stronger and more severe.

[23] Why did itching occur at the beginning of the illness? [24] Because itching is caused by humours which have previously been heating without have reached their [full] heat – rather, they have only begun [to be heated].

[25] What caused the blisters to occur after the itching, [the blisters] which were similar to blisters resulting from being burnt by fire, and burning under the skin? [26] The humour which had become hot. [27] Its heat became so severe because of the power and violence of the putrefaction. [28] The

<sup>160</sup> Colville's emendation; **M** 'Italian'.

blisters were caused by its [the humour's] fine part when it penetrated easily the area of the skin which had been heated. [29] When it [the humour] arrived at its [the skin's] outer surface, it gathered under it, because it was [too] thick and compact. [30] Thus it gathered there and was blocked.<sup>161</sup> [31] The burning occurred because of the viscous part of it [the humour], when it did not penetrate, but rather remained there being blocked.

[32] What do you say about the blister? [33] Is it shared by, and common to, all carbuncles, or specific to the carbuncles which occurred in Cranon? [34] I say that the blister is shared by absolutely all carbuncles. [35] For it [happens?] after the blister under the ulcer has followed [?] and in it appears scab caused by cautery. [36] The one which is specific to the carbuncles in Cranon is the blisters which are caused by burning.

[37] For what reason do blisters follow? [38] For two reasons: [39] 1) since they are stretched because of a large amount of moisture; [40] and 2) since they are corroded by their sharpness.

<sup>161</sup> There is a lacuna in the text here; the translation reflects Colville's emendation *f̄thi wa-sudda*.