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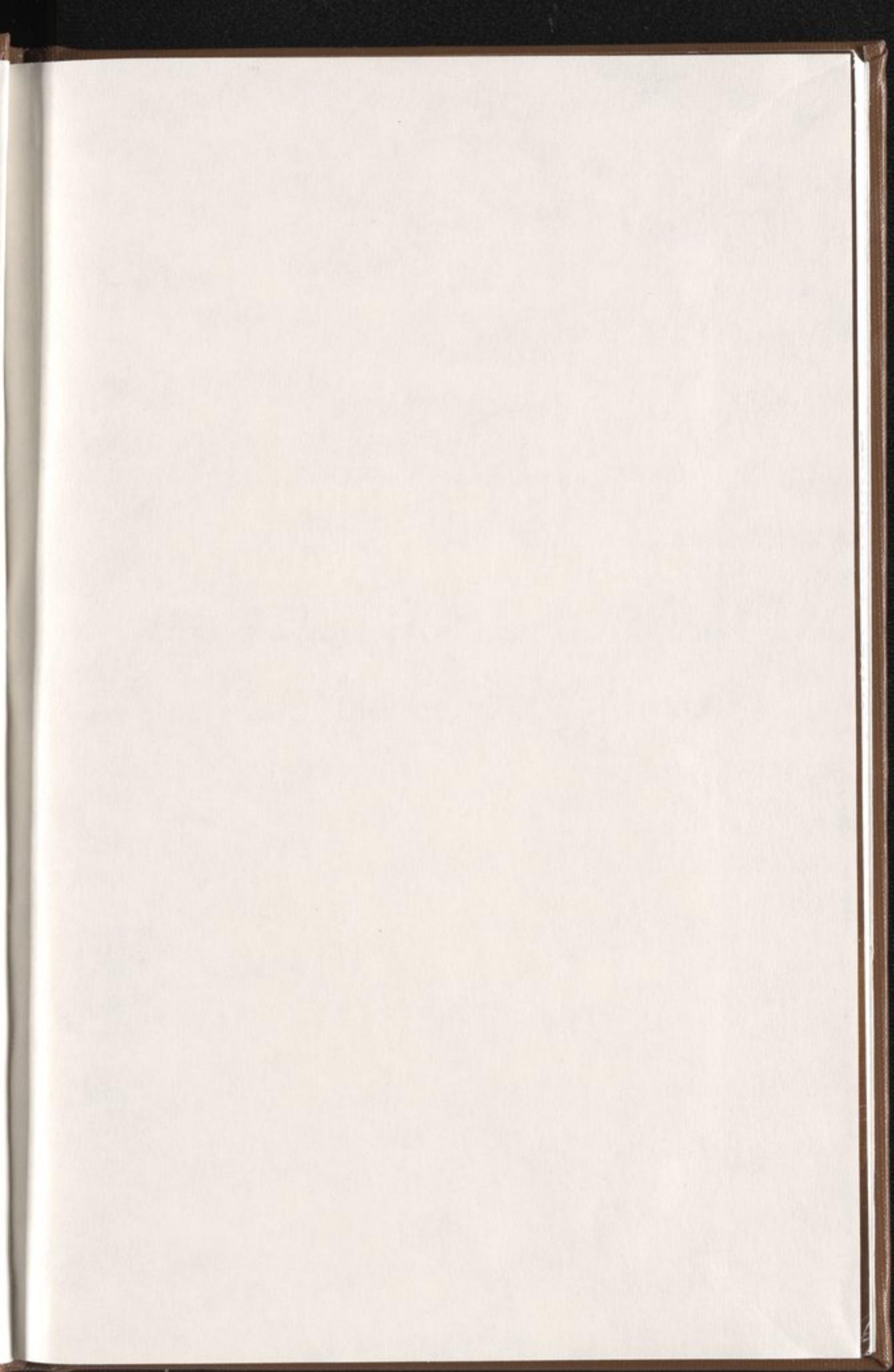


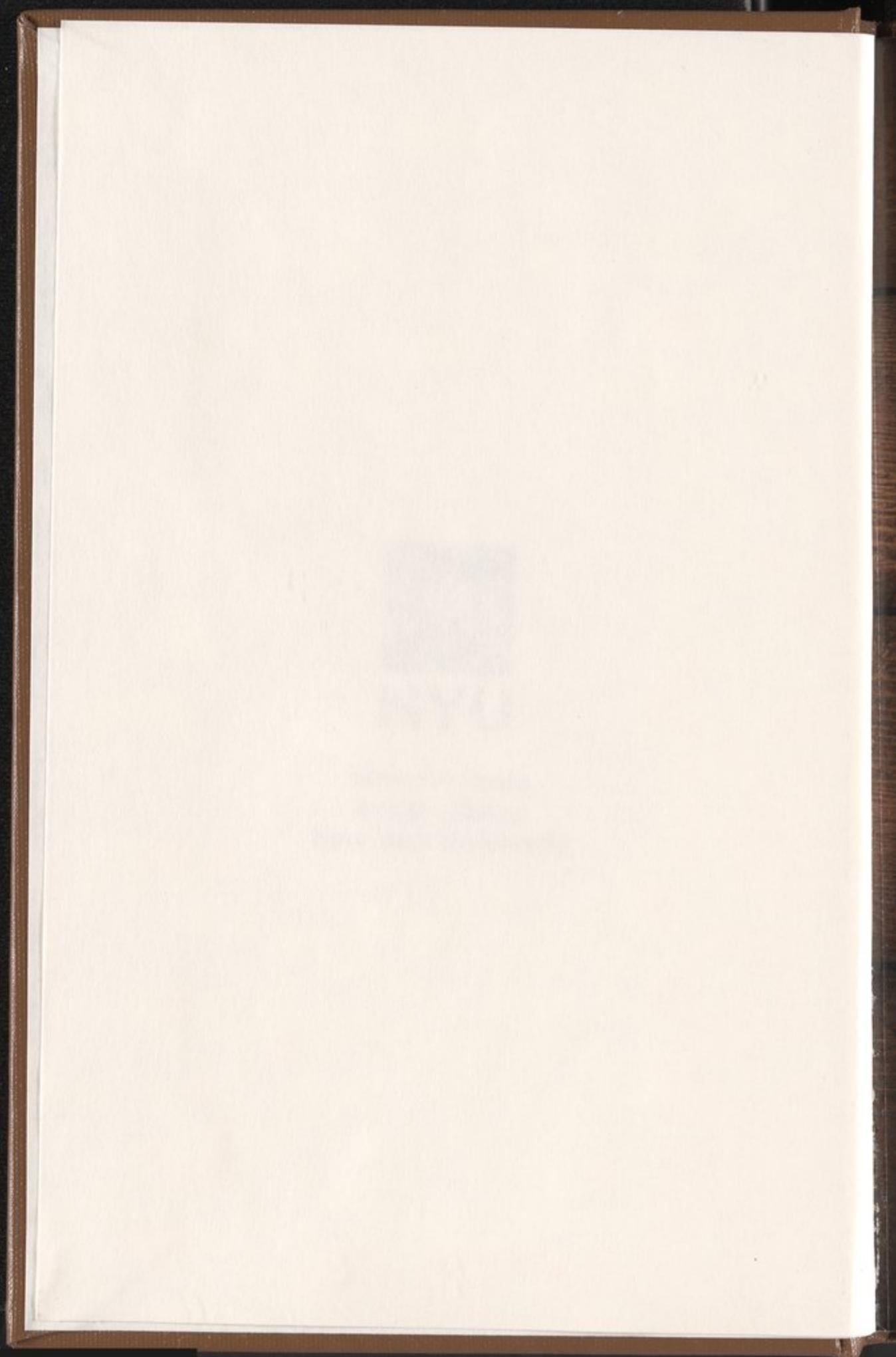
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Transmitting a Text
Through Three Languages:
*The Future History of Galen's
Peri Anomalou Dyskrasias*

Gerrit Bos
Michael McVaugh
Joseph Shatzmiller

The American Philosophical Society Press



TRANSMITTING A TEXT THROUGH
THREE LANGUAGES:

THE FUTURE HISTORY OF
GALEN'S *PERI ANOMALOU DYSKRASIAS*

APR 07 2015

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TABLE OF CONTENTS

Preface	v
I. Introductions	
A. The Arabic Translation from Greek by	
Hunayn ibn Ishāq (d. 873)	1
1. Introduction: Hunayn ibn Ishāq and his setting	1
2. Hunayn's Arabic text: <i>Fī sū' al-mizāğ al-muḥṭalif</i>	2
3. Hunayn's translation technique	5
B. The Latin Translation from Arabic by	
Gerard of Cremona (d. 1187)	9
1. Introduction: Gerard of Cremona and his context	9
2. Gerard's Latin text: <i>De malitia complexionis diverse</i>	11
3. Gerard's translation technique	12
4. The Latin edition	20
C. The Hebrew Translation from Latin by	
David b. Abraham Caslari (d. c. 1315)	25
1. David Caslari, his <i>Sefer ro'a mezeg mithallef</i> , and its setting	25
2. Caslari's translation technique	27
a. <i>His encounter with his Latin source</i>	27
b. <i>Caslari's Hebrew: The art of writing</i>	30
c. <i>Matters of vocabulary</i>	34
II. The Texts	37
A. The Arabic Text	37
B. The Arabic-English Translation	69
C. The Latin Text	81
D. The Hebrew Text	101
III. Glossaries	115
A. Arabic-Latin-Hebrew	115
B. Latin	140
C. Hebrew	154
Index	165
Index Codicum	168

PREFACE

One of the most remarkable features of the European Middle Ages is the process by which, in the twelfth and thirteenth centuries, Western Europe became possessed of Latin versions of most of the works of Greco-Arabic science and philosophy: these included works by Aristotle, Euclid, Ptolemy, and Galen, which were originally written in Greek and subsequently translated into Arabic, as well as works composed in Arabic by Christian, Muslim, and Jewish scholars, such as Avicenna, Averroes, and Maimonides. The new material intensified a passion for study in the twelfth-century schools and helped create the new universities of the thirteenth century, in the process transforming the foundations of medieval thought. The broad outline of these developments is well established: an early interest in astronomical and mathematical texts developed into a fascination with medicine and natural philosophy more generally in the second half of the twelfth century. The centers of translation were Spain for material in Arabic, and Sicily and Constantinople for material from Greek. Many of the translators are well known, and a few—such as Gerard of Cremona (d. 1187) or Burgundio of Pisa (d. 1193)—were particularly productive. The bulk of the translation effort was over by 1200, but significant additions to Latin knowledge were still being made in the century that followed by such men as Michael Scot, William of Moerbeke, and Armengaud Blaise.

To single out medicine for a closer look, the translations from Arabic by Constantine the African just before 1100 mark the beginning of the transmission process. They fused with Greek-Latin translations made in southern Italy into the collection of works loosely known as the *ars medicina* (later, *articella*) that soon became the nucleus for a loose system of medical teaching at Salerno. Translations by Burgundio and Gerard in the second half of the twelfth century greatly expanded the number of Galenic works available in Latin (e.g., *De ingenio sanitatis*, *De simplici medicina*, *De complexionibus*, *De crisi*) and added to them the great authorities of the Arabic-language tradition, including Avicenna, Abulcasis, and Rhazes. In the thirteenth century, the medical faculties of the newly established universities, Paris and especially Montpellier, also began to incorporate these authors, as well as Aristotle, into their teaching and created an increasingly sophisticated system of medical theory that would persist down through early modern times. Of course, in the end, the theory was shaped by the linguistic decisions made long before by the twelfth-century translators, who had varied widely in their ability to work with a second language: Burgundio could read Greek himself, whereas (at least at the beginning of his career) Gerard had had to work with a collaborator who translated the Arabic into a romance vernacular, which Gerard then put into Latin.

It is quite surprising that in this history that centers on the transmission of texts, the texts themselves should have received so little close study. Most of the new Latin texts of the twelfth century have never been carefully edited, and scholars have to read them in corrupt sixteenth-century editions, which often deform the translator's original linguistic decisions. The mechanics of translation are all the harder to get at because the few editions that exist have not always been compared with the Arabic or Greek sources from which they were taken. Indeed, even more of the Arabic originals lack careful modern editions than do their Latin translations. Of the seventy-odd works translated by Gerard of Cremona,

for example, fewer than a third have been given modern Latin editions, and most of those fail to compare the Latin systematically with the Arabic text on which they were based.

This means that the core of the transmission process remains to be studied and understood. The technique of the translators, their proficiency, their word choices, their achievements, and their limitations—with all the consequences that these entailed for meaning and for the content of future European intellectual life—cannot be known until the texts themselves have been carefully edited and compared. We have begun to understand something of the lives and broad social contexts of individual translators like Gerard of Cremona or Stephen of Antioch, but only when we study their translations in detail and comprehensively, against the framework of the works they are translating, will we be able to get into their minds and identify the technical devices that stamp a particular translation as their own. Obvious difficulties stand in the way, of course: knowledge of and access to the relevant Arabic, Greek, and Latin manuscripts; a facility in all the necessary languages; and not least, time, energy, and commitment. Text editing seems a relatively unappealing and unrewarding activity to many scholars.

The study that follows is in part a contribution to this lacuna in translation studies and results from a three-way collaboration. It focuses on a short Galenic text, *Peri anomalou dyskrasias*, whose Greek text has recently been edited by Elsa García Novo. One of us (GB) has prepared an edition of the Arabic translation made of that work in ninth-century Baghdad by Hunayn ibn Ishāq, basing it on the five known Arabic manuscripts studied in the light of the García Novo edition, and has accompanied it with an English translation of the Arabic. A second member of our group (MM) has prepared an edition of the Latin translation of that Arabic version, a Latin translation made in the twelfth century by Gerard of Cremona (the Latin version was often taught in the medieval universities, and some eighty manuscripts survive). Each of these editions is accompanied by an introduction that provides a look at the translator's technique as apparent in that work, whether from Greek to Arabic or from Arabic to Latin, and our various glossaries will help map out the details of their knowledge.

But there is more to the study offered here than these two editions, just as there was more to the process of medieval intercultural transmission than a movement from Greek to Arabic to Latin. Another ingredient in the process was Hebrew. Jews in eleventh-century Spain had read Arabic, but those who fled the repressive Almohads and settled in Languedoc or Provence in the twelfth century began to lose contact with that language, and a few Jewish scholars in these new territories began to translate Arabic-language philosophical and scientific works into Hebrew, beginning the creation of a new technical Hebrew vocabulary as they did so. Maimonides' *Guide to the Perplexed* was translated from its original Arabic to Hebrew well before his death in 1204, and Arabic-Hebrew translations of scientific and medical literature continued to be produced down to the end of the thirteenth century. But by 1300 the transformation of medieval Latin thought and the social prestige of European academic institutions had begun to make Latin academic medicine seem desirable to the Jews of Provence, and throughout the fourteenth century (and beyond) we find works of Latin scholastic medicine—both original works by medieval Latin authors and Latin translations from the Greco-Arabic tradition—being rendered into Hebrew for a non-Latinate Jewish audience.

One of these latter was *Peri anomalou dyskrasias*, whose Latin translation from Arabic had borne the title *De malitia complexionis diverse*. Around 1305, David Caslari of Besalú in Catalunya chose to translate Gerard's Latin version into Hebrew, probably motivated by its contemporary interest to European medical faculties. One manuscript of this translation survives, which the third member of our collaboration (JS) has edited by comparing its transcription

against late manuscripts of Gerard's text.¹ In this third instance, our introduction to the edition comments not merely on these differences, and on Caslari's approach to translation, but also on the extent to which Hebrew had developed a technical medical vocabulary by the beginning of the fourteenth century. Again, the relevant glossaries will reinforce our conclusions.

Anyone who reads our study is sure to be continually sensitive to the Greek text lurking unseen in the background to the three translations edited here. We had originally planned to reproduce Kühn's version of *Peri anomalou dyskrasias* in an appendix, for consultation by those who might want to explore the translation of particular terms or passages over time, but the recent exemplary edition of that work by García Novo has made it unthinkable to direct the reader to any other version of the Greek. Her edition has explored the later history of Galen's text for what it may contribute to establishing his original language; she has pursued that history not only over the three translations that concern us, but over other medieval and Renaissance Latin versions, providing an overview of the work's history down to relatively modern times that surveys a much longer period of time than we cover here. In addition, her edition provides the reader with an English translation of the Greek as well as a detailed commentary on the language, structure, and content of the treatise.² Her study thus allows students to explore Galen's own thought in exacting detail. Ours, we trust, will allow students to appreciate just what three subsequent cultures—Arabic, Latin, and Hebrew—made of it.

Short though it is, Galen's *Peri anomalou dyskrasias* (*De malitia complexionis diverse, De inaequali temperie*³) has never been easy for readers to summarize. Jean de St. Amand, one of its first expositors at the University of Paris in the late thirteenth century, gave a remarkably vague summary of it to his students:

In this book *On the evil of an unbalanced complexion* [Galen] considers generally an evil complexion as distinct from a natural complexion. It has two chapters: in the first . . ., he considers in how many ways an unbalanced complexion can arise, since it is either throughout the whole body or in a single part, and if it is in a single part, it is an aposteme arising either from blood or from choler or from phlegm or from melancholy. And he shows how it arises in different parts of the body, and how they are affected according to the diversity of the condition, and how pain arises in those members as they are changed. In the second . . . he shows how it occurs in a putrid fever. And what he says is clear.⁴

¹Late because, during the thirteenth century, an accumulation of scribal errors had evidently presented Caslari with a text somewhat different from the one Gerard had originally made from the Arabic.

²Galen, *On the Anomalous Dyskrasia*, ed. Elsa García Novo (Madrid: Editorial Complutense, 2010). García Novo's focus is of course on Galen's original version, but she has also looked attentively at its later history and its Arabic, Latin, and Hebrew translations for the help they may provide in establishing the Greek, and her work has been of inestimable value to our study. Another recent English translation of the work (under the title "On Uneven Bad Temperament"), based on Kühn's text, is included in Mark Grant, ed., *Galen on Food and Diet* (London: Routledge, 2000), 37–45.

³This last title did not come into use until the sixteenth century in the Greek–Latin translation of the work by Thomas Linacre (1549). It is often today used to refer to the work, but because of its relative modernity we have avoided using it in our study.

⁴"In isto libro de malitia complexionis diversae determinat in generali de complexione mala alia a complexione naturali et sunt in eo duo capitula. In 1° capitulo quod incipit 'malitia complexionis diversae etc.' determinat de complexione diversa quot modis fit quia aut est in toto corpore aut in parte et si fit in parte, aut est apostema sanguineum aut colericum aut flegmaticum aut melancolicum ostendens quomodo fit in diversis partibus et quomodo secundum passionis diversitatem patiuntur et quomodo fit dolor in ipsis membris dum fit transmutatio. . . . In 2° capitulo quod incipit 'redeamus ergo ad species malicie complexionis diversae etc.' ostendit quomodo fit in febre putrida et patet quod dicit"; Georg Matern, "Aus dem Revocativum memoriae des Johannes de Sancto Amando (XIII. Jahrhundert): Drei Bücher des Galen über die Temperamente," inaug.-diss., Berlin, 1894, 22.

John Redman Coxe gave an only slightly less vague account of it in the mid-nineteenth century:

By *intempories*, Galen apparently means that unseasonable or unfit state of some individual part of the body, or of the whole system, which predisposes to disease, if it be not actually disease itself. He makes four varieties of it—simple, compound, equal, and unequal. A number of affections are mentioned, seemingly as coming within the scope of this division. The modes of origin of this unequal *intempories* are described; a concise view of his division of the body is given; and some particulars, as by what means inflammation arises and terminates in any part. Sundry anomalies are explained of this temperament, such as the sense of heat and cold at the same time, and of rigors not followed by fever, etc.⁵

Neither is of much help to a modern scholar interested in understanding Galenic thought, but their difficulties in summarizing the work are excusable, for the text is disordered, digressive, and elliptical. It is no wonder, perhaps, that medieval readers mined it for its specific contentions and failed to understand it synthetically. Its argument is best understood by reading the ending first to appreciate what Galen thought he had said, and then going back to study earlier elements from the text in the light of that account. When we do this, we find that the work is what we might think of as a Galenic nosology—a way to classify, through their causes, the majority of diseases from which humankind suffers.

Reconstructing Galen's thought in this way, we have arrived at the following succinct interpretation of his views in *Peri anomalou dyskrasias*. Many diseases, perhaps most, Galen says here, are caused by a complexional imbalance or dyscrasia—that is, an excess of one or more of the four primary qualities (the hot, cold, dry, or moist). Such a dyscrasia can arise from an external cause; for example, exercise or climate can overheat the body as a whole. It can also come from an internal cause, as when a humoral residue dominated by one or more of the four qualities flows into one of the fundamental constituents of the body, the homoiomeric members (that is, those composed of one and the same type of material: bones and muscles and veins and flesh and skin and fat, rather than the hand or finger built up from those simplest members). Dyscrasias vary in kind, depending not only on the nature of the inflowing humoral qualities, but also on the member into which they flow. Along with a qualitative dyscrasia, such humoral influxes also typically produce a swelling in the member, such as phlegmon or cancer or erysipelas, and different influxes produce different kinds of swellings; for example, phlegmon arises from hot blood.

Local hot dyscrasias (which can arise not only from humoral influxes but also from localized humoral putrefaction, which does not entail swelling) are the causes of fevers. In such cases, the dyscrasia is not universally distributed throughout the member, but is “unequal,” heterogeneous: most intense at the site of the humoral influx, weaker at the periphery of the member, and weaker still in the simple members with which the originally affected member is connected (as muscles communicate with veins). In fact, it is this heterogeneity or unequal intensity that we perceive as pain; thus, the pain of the fever called “epiala” arises out of the juxtaposition of cold and hot in the body. If a hot dyscrasia should succeed in extending itself throughout the whole body, so that the body is fully and perfectly heated, a hectic fever is the result, in which the patient feels no pain since all parts of his body are equally hot. In this way, although not as systematically expressed as here, Galen has in this little treatise unified different pathological conditions, both fevers and swellings (including tumors and abscesses), within a single explanatory framework.

⁵John Redman Coxe, *The Writings of Hippocrates and Galen. Epitomised from the Original Latin Translations* (Philadelphia: Lindsay and Blakiston, 1846), 583–584.

I. INTRODUCTIONS

A. The Arabic Translation from Greek by Ḥunayn ibn Ishāq (d. 873)

1. Introduction: Ḥunayn ibn Ishāq and his setting¹

When the Abbasids came to power in 749, they initiated the translation into Arabic of virtually the whole nonliterary scientific output of the ancient Greeks. Their efforts encompassed astrology and alchemy and the rest of the occult sciences; arithmetic, geometry, astronomy, and the theory of music; metaphysics, ethics, physics, zoology, botany, and logic; and medicine, pharmacology, and veterinary science. This translation activity, centered in Baghdad, the newly founded capital of the empire, was unique in its scope and scale and lasted for more than two hundred years, until the end of the tenth century. It was helped greatly by the availability of paper, which was introduced into the Muslim world shortly after the capture of Samarkand in 704. The enterprise involved the entire elite of Abbasid society—caliphs, princes, civil servants and military leaders, merchants and bankers, and scholars and scientists. Syriac, the language of the Christian population, played a major early role in the process, because until translators were available who could translate directly from Greek into Arabic, many works were translated first into Syriac and into Arabic only later. The vast majority of these translators were Syriac-speaking Christians who knew Greek as a liturgical language and sometimes also as a scientific language.²

Foremost among the translators was Ḥunayn ibn Ishāq al-‘Ibādī (809–873). Later known as Johannitus in the West, Ḥunayn was a Nestorian Christian hailing from al-Ḥīra (in modern-day Iraq), who was nicknamed the “Prince of Translators.” Bilingual in Arabic and Syriac, he is said to have studied medicine in Baghdad under the renowned physician and translator Yuhannā ibn Māsawayh. He then left the capital for three years to study Greek, and after returning to Baghdad he began his career as court physician and professional translator, enjoying the support and sponsorship of the Banū Mūsā, a wealthy family who patronized learning during this period.³ His activity, along with that of his associates, is of paramount importance because it led to new initiatives beyond the field of translation proper, including the composition of original scientific works in

¹This introduction is adapted from the one in V. Nutton with G. Bos, *Galen on Problematical Movements*, *Cambridge Classical Texts and Commentaries* 47 (Cambridge: Cambridge University Press, 2011), 20–22, 85–87.

²See the fundamental studies by D. Gutas, *Greek Thought, Arabic Culture: The Graeco-Arabic Translation Movement in Baghdad and Early 'Abbasid Society (2nd–4th/8th–10th centuries)* (London: Routledge, 1998); and P. E. Pormann and E. Savage-Smith, *Medieval Islamic Medicine* (Edinburgh: Edinburgh University Press, 2007), 28–29. For Syriac, see S. P. Brock, “The Syriac Background to Ḥunayn’s Translation Techniques,” *Aram* 3 (1991): 139–162; and P. E. Pormann, *The Oriental Tradition of Paul of Aegina’s Pragmateia* (Leiden, Netherlands: Brill, 2004).

³See F. Micheaud, “Mécènes et médecins à Bagdad au III^e–IX^e siècle: Les commanditaires des traductions de Galien par Ḥunayn ibn Ishaq,” in *Les voies de la science grecque: Études sur la transmission des textes de l’Antiquité au dix-neuvième siècle*, ed. D. Jacquart (Geneva: Droz, 1997), 147–180, on 167–170.

Arabic, and it helped to establish an open intellectual climate in which the major questions posed by the transmitted knowledge were hotly debated. Hunayn himself composed a number of original works, mainly in medicine, but also in philosophy, meteorology, zoology, and linguistics.⁴

Hunayn is traditionally credited with a great number of translations of works on medicine, as well as on mathematics, philosophy, magic, and even oneiromancy, although recent scholarship has shown that many of these ascriptions are false, such as that of the famous dream book of Artemidorus.⁵ We are especially well informed about his translation activities in medicine thanks to his *Risāla ilā 'Alī ibn Yahyā . . . (Epistle . . . Concerning the Translations of Galen's Works)*, a detailed survey of the various translations of Galen's works as available in his time.⁶ In the *Risāla*, which survives in two different versions,⁷ Hunayn lists a total of 129 Galenic works, of which he had translated about a hundred, either into Syriac for his Christian colleagues, or into Arabic for Muslim sponsors of his work like the Banū Mūsā, or into both. He employed two members of his family—his son Ishāq and his nephew Ḥubayš ibn al-Ḥasan al-A'ṣam—and another student, 'Isā ibn Yahyā. Neither Ḥubayš nor 'Isā translated from the original Greek, as their knowledge of that language was too poor, but rather from Hunayn's Syriac translations, and in a few cases they employed Hunayn's Arabic version as the basis for a translation into Syriac. These translations are often a valuable tool for reconstructing a corrupt Greek text, since the Greek manuscripts that were used were often several centuries older and less corrupt than the ones we possess today.

2. Hunayn's Arabic text: *Fī sū' al-mizāg al-muḥtalif*

Hunayn translated Galen's *Peri anomalou dyskrasias* (*On the Anomalous Dyscrasia*) under the title *Fī sū' al-mizāg al-muḥtalif* sometime between 856 and 873. About its translation, Hunayn remarks in his *Risāla*: "It [i.e., Galen's *Peri anomalou dyskrasias*] was translated [into Syriac] by Ayyūb.⁸ I had a manuscript of this text in Greek, but I

⁴See M. Ullmann, *Die Medizin im Islam*, Handbuch der Orientalistik I, Ergänzungsband VI, 1 (Leiden/Cologne: Brill, 1970), 115–119; G. Strohmaier, "Der syrische und arabische Galen," *Aufstieg und Niedergang der römischen Welt*, ii.37.2 (1987–2017); repr. in idem, *Hellas im Islam: Interdisziplinäre Studien zur Ikonographie, Wissenschaft und Religionsgeschichte*, Diskurse der Arabistik, vol. 6, ed. H. Bobzin and A. Neuwirth (Wiesbaden: Harrassowitz, 2003), 85–106.

⁵See M. Ullmann, "War Hunain der Übersetzer von Artemidors Traumbuch?" *Die Welt des Islams* 13 (1971): 204–211; Gutas, *Greek Thought*, 145.

⁶See G. Bergsträsser, *Hunain ibn Ishāq: Über die syrischen und arabischen Galen-Übersetzungen*, Abhandlungen für die Kunde des Morgenlandes 17.2 (Leipzig: Brockhaus, 1925); idem, *Neue Materialien zu Hunain ibn Ishāq's Galen-Bibliographie*, Abhandlungen für die Kunde des Morgenlandes 19.2 (Leipzig: Brockhaus, 1932); F. Käs, "Eine neue Handschrift von Hunain ibn Ishāq's Galenbibliographie," *Zeitschrift für Geschichte der Arabischen-Islamischen Wissenschaften* 19 (2010–2011): 135–193.

⁷See Bergsträsser, *Neue Materialien*.

⁸Ayyūb ar-Ruhāwī al-Abraš (d. 835), the author of an encyclopedia on the natural sciences entitled "Book of Treasures": see *Encyclopaedia of Philosophical and Natural Sciences as Taught in Baghdad about A.D. 817 or Book of Treasures by Job of Edessa*, Syriac text ed. and trans. with a critical apparatus by A. Mingana (Cambridge: Heffer, 1935). He was a translator of Galen into Syriac for Ǧibrīl ibn Baḥtišū' (d. 827) and for his son Baḥtišū' ibn Ǧibrīl. On Ǧibrīl ibn Baḥtišū' and his son see Ullmann, *Medizin im Islam*, 109–110; and Strohmaier, "Der syrische und arabische Galen," 94.

did not yet have time to read it. Subsequently, I translated it into Arabic for Abū l-Hasan ibn Müsā.⁹

Galen had not divided his little work into chapters, and Hunayn seems not to have introduced divisions into his translation either. In order to provide a standard frame of reference for our study, therefore, we have introduced chapter breaks into our edition of Hunayn's text that correspond to the nine chapters into which the work is divided in Kühn's Greek edition, chapters that we have further divided editorially into smaller units. When we refer in these introductions to specific passages in the text, we will identify them in the form "§3.1" or, in the many cases when there can be no confusion as to the text in question, simply as "3.1."

The Arabic text is extant in the following manuscripts:¹⁰

1. Istanbul, Ayasofya 3593 (A), fols. 49a–52b, Mağribi script, A.H. 400–600 (A.D. 1000–1200).¹¹ The manuscript has not only some marginal corrections but also some explanatory notes, as in §3.1, explaining the kind of disease resulting from a flux of hot superfluities to the muscles: namely, hot tumor.
2. Madrid, Biblioteca Nacional 5011 (B) (formerly 130/3), Mağribi script, early fifteenth century, no foliation.¹² The text (which is partly illegible due to severe staining) was studied in Jewish circles; see, e.g., the note in Judeo–Arabic that the pulsating and nonpulsating vessels do not belong to the homoiomeric parts (§2.2).
3. El Escorial, Real Biblioteca del Monasterio 848/2 (E), fols. 48b–53b, Mağribi script, fourteenth century.¹³ The manuscript suffers from several omissions.
4. El Escorial, Real Biblioteca del Monasterio 879/2 (C), fols. 41b–46a, Mağribi script, thirteenth century.¹⁴ The manuscript suffers from several corruptions and omissions, some of which have been corrected in the margins. Parts of the last lines in the inner lower sections of the text are hard to read due to fading of the ink.

⁹Bergsträsser, *Hunain ibn Ishāq*, no. 52. In the subsequent Arabic medical tradition the text is known from quotations by the Arab physician Abū Bakr Muḥammad ibn Zakariyā' al-Rāzī in his medical notebook entitled *K. al-Ḥawīfī l-ṭibb* (see F. Sezgin, *Geschichte des arabischen Schrifttums*, vol. 3: *Medizin-Pharmazie-Zoologie-Tierheilkunde bis ca. 430 H.* [Leiden: Brill, 1970], 109); and by the Jewish physician Müsā ibn Maymūn (Moses Ben Maimon), who summarized §1.1–2 in his *K. al-fusūl fī l-ṭibb* (Medical Aphorisms) 3.27 (see Maimonides, *Medical Aphorisms*, Treatises 1–5, a parallel Arabic–English edition ed., trans., and annot. G. Bos [Provo: Brigham Young University Press, 2004], 39–40), and a section from §8 about the "reason why in some fevers a sensation of heat and cold occurs simultaneously" in his *K. al-fusūl fī l-ṭibb* (Medical Aphorisms) 10.36 (Maimonides, *Medical Aphorisms*, Treatises 10–15, a parallel Arabic–English edition ed., trans., and annot. G. Bos [Provo: Brigham Young University Press, 2010], 11).

¹⁰See the extensive discussion in E. García Novo, *Galen, On the Anomalous Dyskrasia (De inaequali intemperie)* (Madrid: Editorial Complutense, 2010), 26–29.

¹¹See H. Ritter and R. Walzer, "Arabische Übersetzungen griechischer Ärzte in Stambuler Bibliotheken," *Sitzungsberichte der Preussischen Akademie der Wissenschaften*, Jahrgang 1934, Philosophisch-historische Klasse (Berlin, 1935), 813, 838; Sezgin, *Geschichte*, 109; and García Novo, *Galen, On the Anomalous Dyskrasia*, 27.

¹²See F. Guillen Robles, *Catálogo de los manuscritos Árabes existentes en la Biblioteca Nacional de Madrid* (Madrid, 1889), no. CIII, 65; H. Derenbourg, *Notes critiques sur les manuscrits arabes de la Bibliothèque Nationale de Madrid* (Paris, 1904), 20–21; Sezgin, *Geschichte*, 109; and García Novo, *Galen, On the Anomalous Dyskrasia*, 28.

¹³See H. P. J. Renaud, *Les manuscrits Arabes de l'Escorial décrits d'après les notes de H. Derenbourg*, vol. 2, facs. 2–3 (Paris: Geuthner, 1941), 55; Ullmann, *Die Medizin im Islam*, 39; Sezgin, *Geschichte*, 109; and García Novo, *Galen, On the Anomalous Dyskrasia*, 27.

¹⁴See Renaud, *Les manuscrits Arabes*, 91; Ullmann, *Die Medizin im Islam*, 39; and García Novo, *Galen, On the Anomalous Dyskrasia*, 27. We thank Cristina Alvarez Millán for providing us with photocopies of the manuscript.

5. Lisbon, Academia das Ciencias, Vermelho 292–293 (L), fols. 45r–50v; Oriental script, fourteenth century.¹⁵ The manuscript starts at §2.3: أَنْ نَقْصِدْ قَصْدْ. It suffers from omissions and vocalization mistakes, as in 3.2, where it has القرحة instead of الفرجة, and in 3.4, where it has اِيْصَالْ instead of اِيْصَالْ. It has a unique correct reading, namely يَبْلُغْ in 3.4, where the other manuscripts have يَنْبَغِي for Greek ὀφέξεται.
6. Paris, Bibliothèque Nationale ar. 2847 (P), fols. 106a–114b; A.H. 614 (A.D. 1217).¹⁷ The manuscript contains Hunayn's translation in an elaboration by Abū Djafar Aḥmad ibn Muḥammad ibn abī l-Aš'at, who died in A.D. 970. Ibn abī l-Aš'at copied Hunayn's translation, divided the text into six chapters, and added small introductory sentences to each section, while Chapter 4 has some summarizing sentences featuring the text itself. For instance, the introduction to the first chapter goes as follows: "In this chapter he [i.e., Galen] states that an anomalous dyscrasia may happen in the entire body, in some parts, or in one part, and [explains] why he called it an 'anomalous dyscrasia.' He also [explains] the difference between an anomalous dyscrasia and a dyscrasia in general, and how many kinds there are, both simple and compound." According to the introduction on fol. 106a and the colophon on fol. 114b, he considered this treatise to be the fourth treatise of Galen's "On the Temperament." The manuscript suffers from occasional scribal omissions and corruptions.

A summary of the Arabic translation by Thābit ibn Qurra is extant in Istanbul, Süleymaniye 3631, fols. 34a–38b.¹⁸

The manuscripts listed previously can be divided into two families:

1. ALP (of which AP are closely related, versus L)
2. BCE (of which BE are closely related, versus C)

Our edition is based on A, since it is the oldest manuscript and its readings are generally correct. In the case of mistakes and/or corruptions, the other manuscripts have been consulted. Significant variant readings featuring in these manuscripts have been noted in the critical apparatus. The Arabic text has been compared throughout with Galen's Greek text in the edition by García Novo.

¹⁵See A. Sidarus, "Un recueil de traités philosophiques et médicaux à Lisbonne," *Zeitschrift für Geschichte der Arabischen-Islamischen Wissenschaften* 6 (1990): 174–194, at 179; and García Novo, *Galen, On the Anomalous Dyskrasia*, 27. We are grateful to Cristina Alvarez Millán for providing us with photocopies of the manuscript.

¹⁶According to García Novo, *Galen, On the Anomalous Dyskrasia*, 27 n. 71, a thorough examination of the manuscript would have to be done in order to rule out the possibility that the missing folios of the text are scattered throughout the volumes.

¹⁷See Baron de Slane, *Catalogue de manuscrits arabes* (Paris, 1883–1895), 513; Ullmann, *Die Medizin im Islam*, 39, 138–139; and Sezgin, *Geschichte*, 109.

¹⁸See Sezgin, *Geschichte*, 109; E. Savage-Smith, "Galen's Lost Ophthalmology and the Summaria Alexandrinorum," in *The Unknown Galen*, ed. V. Nutton (London: Institute of Classical Studies, 2002), 121–138, at 130; and García Novo, *Galen, On the Anomalous Dyskrasia*, 27.

3. Hunayn's translation technique

From Hunayn's *Risāla*, we get a very good impression of his method of translation and edition.¹⁹ It appears that he worked very much like scholars today in establishing a critical text: he corrected older Syriac or Arabic versions by means of the Greek original. He collected as many manuscripts as possible, to which end he traveled to Syria, Palestine, and even Egypt; he then collated the manuscripts available of one particular text, selected one as the basic text for the edition, and used the other manuscripts for emending corruptions, occasionally inserting significant variant readings from the Greek manuscripts at hand into the text itself. A good impression of his translation technique has been given by one of his later admirers, as-Safadī (d. 1363). Contrasting Hunayn's technique with that of those translators who painstakingly translated word for word from the Greek, as-Safadī remarks:

This method is bad for two reasons. First, it is impossible to find Arabic expressions corresponding to all Greek words and, therefore, through this method many Greek words remain untranslated. Second, certain syntactical combinations in one language do not always necessarily correspond to similar combinations in the other; besides, the use of metaphors, which are frequent in every language, causes additional mistakes.

The second method is that of Hunayn ibn Ishāq, al-Jauharī [a famous tenth-century lexicographer], and others. Here the translator considers a whole sentence, ascertains its full meaning, and then expresses it in Arabic with a sentence identical in meaning without concern for the correspondence of individual words. This method is superior; and hence there is no need to improve the works of Hunayn ibn Ishāq.²⁰

Hunayn followed an ancient method of the Syriac translation tradition, represented by Sergius of Rēs'ainā: trying to render the sense more than the words. In order to clarify the sense of the Galenic text, he sometimes changed the word order within a clause, substituted a pronoun for a noun, used a paraphrase, or added short explanations. He also often used two synonyms for one Greek term.²¹

All these features of his technique recur in his *Fī sū' al-mizāq al-muhtalif*.

An example of a change in the order is the following:

1.2: وقد يكون من سوء المزاج المختلف صنف آخر من غير أن ينصب إلى الأعضاء فضل
 (Gr.: ὅνευ δ' ὑλῆς ἐπιρρύτου, μόνοις ταῖς ποιότησιν
 ἀλλοιουμένων τῶν μορίων, ἀνώμαλος γίγνεται δυσκρασία.)

¹⁹See Bergsträsser, *Hunain ibn Ishāq*.

²⁰Translation from Brock, "Syriac Background," 147.

²¹See Strohmaier, "Der syrische und arabische Galen," 101; García Novo, *Galen. On the Anomalous Dyskrasia*, 30. For a detailed survey of Hunayn's translation technique, see G. Bergsträsser, *Hunain ibn Ishāq und seine Schule: Sprach- und literargeschichtliche Untersuchungen zu den arabischen Hippokrates- und Galen-Übersetzungen* (Leiden: Brill, 1913); M. Salama-Carr, *La traduction à l'époque Abbasside: L'École de Hunain ibn Ishāq et son importance pour la traduction* (Paris: Didier Érudition, 1990), although she delivers less than the title promises; Brock, "Syriac Background"; Pormann, *Oriental Tradition*; O. Overwien, "The Art of the Translator, or: How did Hunain ibn Ishāq and his School Translate?" in "Epidemics" in Context: *Greek Commentaries on Hippocrates in the Arabic Tradition*, ed. P. Pormann (Berlin-Boston: De Gruyter, 2012), 151–169.

Examples of explanations:²²

وفي الحمى التي يجد صاحبها فيها الحرّ والبرد في حال واحدة ويسمّيها اليونانيون افيفالس
 1.1: (Gr.: τοῖς ἡπιάλοις καλούμενοις πυρετοῖς)

Ibid.: الترهل وهو الورم البلغمي (Gr.: οἰδισκόμενον)

3.1: وأعني الأعضاء الأولى في هذا الموضع العصب (Gr.: νεῦρα δ' ἐστὶ ταῦτα)

3.2: فلغموني وهي الورم الحارّ (Gr.: φλεγμονή)

Ibid.: إما أن يغلب الفضل الذي ينصب إلى العضلة (Gr.: νικήσαντος μὲν τοῦ ρεύματος)

5.3: اقطيقوس وهي الثابتة (Gr.: ἔκτικός)

6.1: قلة التفاضل بينها في الحرّ والبرد (Gr.: τῷ μετρῷ τῆς ὑπεροχῆς)

6.3: بالأشياء المشاكلة المشابهة للأبدان الصحيحة (Gr.: διὰ τῶν ὁμοίων)

7.1: عن الورم الحارّ المسمى فلغموني (Gr.: ἐπὶ φλεγμονῇ)

8.1: المعى الذي يسمى قولون (Gr.: τὸ κόλον)

8.2: وأما الحمى التي يسمّيها اليونانيون افيفاليس فالذى يناله من الحرّ (Gr.: τοὺς ἡπιάλους πυρετούς)

8.4: من هذاسوء المزاج الذي تحدث عنه النافض التي لا تلتحقها حمى
 (Gr.: ἐκ ταύτης τῆς δυσκρασίας)

Ibid.: الحمى التي تسمى افيفاليس (Gr.: ὁ ἡπιάλος)

9.1: منزلة الورم الحارّ المعروف بفلغموني والورم الذي يعرف بالسرطان والورم الذي
 يعرف بالحمرة والبشر الذي يعرف بالنمطة والورم المعروف بالترهل والورم المعروف
 بالأكلة الذي يسمّيها اليونانيون عقرانا وهو العارض مع سلوك العضو في طريق الموت
 (Gr.: παραπλησίως τῇ φλεγμονῇ, καρκίνος, ἐρυσίπελας . . . ἔρπης,
 οὕδημα . . . γάγγραινα)

9.2: الرطوبة التي تنصب إلى العضو (Gr.: τὸ ρεῦμα)

Ibid.: الورم المسمى فلغموني (Gr.: φλεγμονή)

Ibid.: فإن استحال كله عن آخره ظاهره وباطنه فصار كله بحال واحدة
 (Gr.: ἐι δὲ πᾶν δὲ οὐλον δι' οὐλου μεταβάλλοι καὶ ὄλλοιωθείη)

Examples of paraphrase:

4.3: كان ذلك أعنون على سرعة العفونة إليها (Gr.: τότε δὴ καὶ μάλιστα)

5.1: ذلك التجويف خاصة من القلب (Gr.: ἐκείνην μάλιστα)

²²Cf. García Novo, *Galen, On the Anomalous Dyskrasia*, 30.

حتى لا تكون عند ذلك في حد ما هونا يسخن فيه لكن تكون في حد ما قد سخن وفرغ من سخونة خارجة عن الأمر الطبيعي
(Gr.: ως μηκέτι θερμαίνεσθαι μόνον, ἀλλ' ἡδη τεθερμάνθαι παρὸ φύσιν)

كل حمّى من هذا الجنس الذي نكرناه قبل المسمى اقطيقوس
(Gr.: οἱ ἐκτικοὶ πυρετοὶ πάντες)

إن عدت إلى إنسان فاقمته
(Gr.: εἰ στήσας ἀνθρωπὸν)

في أجزاء صغار... ولا يكون بعدها في الصغر
(Gr.: δι' ἐλαχίστου)

وأمّا الحمى التي يسمّيها اليونانيون افياليس هي مركبة
(Gr.: σύνθετος δ' οὖν ἔστιν)

9.1: خلط من جنس المرار الأصفر
(Gr.: χολώδους)

Ibid.: والذي يحدث منها عن المفبعضها يحدث عن المبارد غليظ وبعضها يحدث عن المحال حال أخرى
(Gr.: ἦτοι θερμοῦ καὶ λεπτοῦ καὶ ζέοντος ἢ ψυχροῦ καὶ παχέος, ἢ πως ἄλλως διακειμένου γίγνεσθαι)

Examples of the use of two synonyms for one Greek term:

1.2: بسيطة مفردة for Gr. ἀπλαῖ

3.1: ويزحّها ويضغطها for Gr. θλίβονται

4.2: أطفّها وأرقّها for Gr. λεπτομερέστατον

Ibid.: فبكّ وشدة for Gr. δυσκόλως

Ibid.: لطيفاً ريقاً for Gr. λεπτομερές

Ibid.: ثخينا غليظاً for Gr. παχυμερές

5.2: تاماً مستكماً for Gr. τελέως

5.3: التامة المستحكمة for Gr. τελέως

Ibid.: وليس...ألم ولا وجع for Gr. ἀνώδυνος

Ibid.: مستوية على حال واحدة for Gr. ὁμοίως

Ibid.: الآلم والوجع for Gr. ἡ ὁδύνη

Ibid.: ليس معها ألم ولا وجع for Gr. ἄπονοι

6.2: يبرز منه شيء فيخرج ويضغط ما يبقى منه ويفسخه for Gr. τὸ μὲν ἐκπιέζει τὰ δὲ θλῆ

6.3: مفسدة قاتلة for Gr. φθαρτικούς

Ibid.: بمثّله وشبيهه for Gr. πρὸς τῶν ὁμοῖων

Ibid.: بالأشياء المشاكلة المشابهة for Gr. διὰ τῶν ὁμοιῶν

Ibid.: والبرء والشفاء for Gr. ἀναιρεσίς

7.2: سخن وغلى for Gr. ζέσαντος

8.1: يعرض الألم والوجع لمن for Gr. ἀλγοῦσιν

Ibid.: السبب في الألم والوجع for Gr. ὁδύνης οἱ τίον

9.2: أغلظ وأعسر for Gr. χαλεπωτέρα

We might add, finally, that García Novo was able to establish that Hunayn's Arabic text contained additions that reflected Galen's original text and needed to be inserted into her Greek edition:

1.2: تجاوزان مقدار القصد = Gr. <πάντως>

1.3: إنما = Gr. <μόνον>

Ibid.: ففرضي = Gr. πρόκειται <μοι>

Ibid.: أذكر = Gr. ἀναμνήσαι <σε>

2.2: الفرج = Gr. χώρας <κενά>

6.1: على ما هو منها أبред = Gr. ἡ ψυχρότερον

8.3: على حال = Gr. <κατὰ τὴν διάθεσιν>

One of her emendations raises a particularly interesting problem. In §8.1, where all the Greek manuscripts refer to pain without inflammation occurring in "the colon or the teeth [όδόντας]," she found that two copies of Hunayn's Arabic text (AP) speak of "the colon or the testicles [الأنثنيين]" instead, and as a result, she emended ὁδόντας to ὄρχεις.²³ However, she did not consider that four other Arabic manuscripts (BCLE) do in fact read "teeth [الأسنان]" at this point, and since she acknowledges (p. 245) that there is independent evidence that Galen believed that pain in the colon and in the teeth had a common element (*De diff. sympt.* III.5), we have concluded that the actual reading of the Greek manuscripts here, ὁδόντας, is more likely to be correct. Our Arabic text consequently reads **الأسنان** with BCLE.²⁴

²³García Novo, *Galen. On the Anomalous Dyskrasia*, 30, 44, 245.

²⁴How then might "testicles" as well as "teeth" have turned up in the Arabic textual tradition? Some (although not all) classicists believe that ὁδόντας was a Hellenistic euphemism for ὄρχεις, on the basis of a surviving fragment from Menander's *Epitrepones*. In that case, we might speculate that the word *odontas*, used literally and intentionally by Galen, was glossed as *orcheis* by a later reader who thought he knew what Galen had meant to imply by that word, and that the two readings were associated in the manuscript from which Hunayn worked. If Hunayn had recorded both those readings, and later Arabic copyists had ended by following one or the other, we would have exactly the situation we find today in the manuscripts.

B. The Latin Translation from Arabic by Gerard of Cremona (d. 1187)

1. Introduction: Gerard of Cremona and his context

The Islamic invasion of Visigothic Spain began in 711, and within fifty years or so a new society, al-Andalus, had established itself in the peninsula. Its Umayyad rulers established themselves at Cordoba, and in the early tenth century assumed the title of caliph. Yet a hundred years later, the caliphate had collapsed and begun to break up into smaller kingdoms or *taifas*, and at the same time the Christian kings in the northwest of the peninsula were beginning to extend their power southward. For a time, the valley of the river Duero provided a kind of de facto boundary between the two worlds, but a permeable one. The king of León-Castile, Alfonso VI (1065–1109), began in the 1070s to repopulate the lands south of the Duero, with the tacit acquiescence of the Muslim ruler of the *taifa* of Toledo just beyond. When that ruler was assassinated, Alfonso decided to try to seize the territory for himself, which he did in 1085. With this act, he not only gave his kingdom its largest city, he brought back into Christian hands the most important archbishopric of the old Visigothic realm.

Alfonso looked south to extend his kingdom, but he looked north for support. He allied himself with the Cluniac movement that had begun in Burgundy and, gradually, a web of Cluniac monasteries began to cover Leon and Castile; the first archbishop of Toledo appointed after its recovery was, indeed, a Cluniac monk, Bernard de Sedirac (d. 1125). The king ensured papal support by decreeing (in 1080) that the old Visigothic liturgy maintained in Muslim Toledo by its tolerated Christian inhabitants, Mozarabs, should be replaced by the Roman rite. In turn, the popes encouraged in various ways the sending of money and men (knights and clerics both) across the Pyrenees into Christian Spain in order to consolidate and extend the reconquest—as it were, in a prelude to the First Crusade of the 1090s.

The cathedral was the natural center of intellectual activity in the newly Christian city of Toledo. It was governed by a chapter dominated by reforming churchmen who had come to León-Castile from elsewhere and who inevitably had relatively little in common with their Mozarab communicants, who in these first generations spoke Arabic as well as Romance.¹ But by the middle of the twelfth century, there are hints that the cathedral clergy were becoming interested in gaining access to Arabic-language texts that might be relevant to theological issues, in particular texts dealing with psychology and with the “spirits” of Galenic medicine. Toledo had been a great center of scientific learning under its *taifa* kings, and Arabic manuscripts of scientific works would not have been hard to come by. The earliest sign is the dedication by a certain John of Seville to the second postconquest archbishop of Toledo, Raymond de la Sauvetat (d. 1152; another Cluniac), of a translation of Qustā ibn Lūqā’s work *De differentia spiritus et anime*. It was followed a little later, probably in the 1150s, by a translation of Avicenna’s discussion of the soul in his encyclopedic *Shifā*.

¹On the following, see C. Burnett, “The Coherence of the Arabic-Latin Translation Program in Toledo in the Twelfth Century,” *Science in Context* 14 (2001): 249–288, at 250–252.

prepared by a cathedral archdeacon, Dominicus Gundissalinus, in collaboration with "Avendauth," who was probably Abraham ibn Dāūd, a Jewish refugee from the intolerant Almohads who had taken control of al-Andalus. Avendauth read the Arabic words and translated them into the Romance vernacular, and Gundissalinus translated the vernacular into Latin. Thus at midcentury Toledo possessed both Arabic-language scientific texts and a community of scholars interested in encouraging their translation.

The twelfth century is famously an age of translation, when many translators, all over Europe, from Greek as well as from Arabic, sought to make Greco-Arabic learning available in Latin to the new schools of northern Europe.² But Toledo stands out because one individual who spent several decades working there in the second half of the century—Gerard of Cremona—has become iconic of the entire movement. His friends and associates (*socii*) were so impressed by his efforts that after his death they drew up a brief account of his achievement, and this little bio-bibliography has established him historically as a truly distinctive figure, in a way reminiscent of Hunayn three hundred years before. We can infer from this account that he was born in 1114, and that he left Italy for Toledo because he hoped to find Ptolemy's *Almagest* there. If the tale is true, it shows that Europe's contacts with Castile were already building Toledo up as a potential center of scientific knowledge. Exactly when he arrived we do not know, but by 1157 he had been made a canon of the cathedral, and his future there was thereafter secure. He died thirty years later, with (according to the list drawn up by his friends) more than seventy Arabic-Latin translations of philosophical, scientific, and medical works to his credit.

The translations named in the list are grouped under explicit headings: *dialectica*, *astrologia*, *phylosophia*, *fisica*, *alchimia*, and *geomantia*. Charles Burnett has proposed that they reveal a deliberate and conscious program, that they are meant in part to supply the needs of students of the liberal arts, and beyond that, for *phylosophia* at least, to make available to Latin readers the Aristotelian texts recommended by the philosopher al-Fārābī in his work *On the Classification of the Sciences*, which Gerard also translated.³ Although Gerard's colleague Gundissalinus was simultaneously continuing his own translations of Arabic philosophical writings (including, curiously, al-Fārābī's treatise), he chose to stay away from Aristotle's writings, apparently leaving them to Gerard. *Fisica* in this list refers to medicine, and Gerard's medical translations were as influential as any he produced: twenty-five in total, including ten works by Galen as well as the enormous *Canon* of Avicenna, the *Chirurgia* of Albucasis, and two practical surveys by Rhazes, the *Liber ad Almansorem* and the *Liber divisionum*. Within a hundred years, European medical faculties would be grounding the training of students in these texts, as the *Canon* and what Luis García Ballester has called "the new Galen" began to dominate curricula there.⁴

Already in Gerard's lifetime, visitors from the north were coming to Toledo to see him at work or to obtain manuscripts of the new science and medicine to take away with them. The Englishman Daniel of Morley has left an often-quoted account of his experiences there: of how he had been disappointed by the content of studies at Paris and had left for Toledo, famous for its study of the natural sciences by the wisest philosophers in the world, and had

²M.-T. d'Alverny, "Translations and Translators," in *Renaissance and Renewal in the Twelfth Century*, ed. R. L. Benson and G. Constable with C. D. Lanham (Cambridge, MA: Harvard University Press, 1982; repr., Toronto: University of Toronto Press, 1999), 421–462.

³Burnett, "Coherence," 257–261.

⁴L. García-Ballester, "The New Galen: A Challenge to Latin Galenism in Thirteenth-Century Montpellier," in *Text and Tradition: Studies in Ancient Medicine and Its Transmission Presented to Jutta Kollesch*, ed. K.-D. Fischer, D. Nickel, and P. Potter (Leiden: Brill, 1998), 55–83.

subsequently returned to England with a priceless quantity of books. His language even suggests that Gerard's translation program might have been conducted as a kind of seminar—that as Gerard translated into Latin the Romance words that his Mozarab assistant Galippus was translating out of Arabic (the same procedure used by Gundissalinus and Abendauth), auditors were commenting on the language and debating the meaning of the results.⁵

2. Gerard's Latin text: *De malitia complexionis diverse*

Three Latin translations of Galen's work *Peri anomalou dyskrasias* are found in medieval manuscripts. One, beginning "Inequalis dyscrasia fit quidem," is attributed to Niccolò da Reggio (fourteenth century) in the colophon and is said to have been *capitulatus* by Francesco da Piemonte; like all Niccolò's translations, it was made from a Greek original.⁶ A second, beginning "Inequalis distemperantia fit aliquando," has been identified by Elsa García Novo in three manuscripts; she attributes it to Pietro d'Abano, who also worked from a Greek text.⁷ The third, beginning "Malitia complexionis diverse quandoque," is anonymous in the manuscripts, but the list of translations by Gerard of Cremona that his *socii* attached to his biography includes an item (no. 48) entitled "Liber Galieni de malitia complexionis diverse tractatus i.," which must surely refer to this version.⁸ We have edited it here under that title, which is also the title ordinarily given to it in manuscripts.

Even though the overall plan of *De malitia complexionis diverse* may not have been entirely clear to readers, the fact that it referred repeatedly to various fevers and their causes made it of great interest to medieval physicians and no doubt helped make the treatise an important part of the "new Galen" that emerged as the expanded basis for medical study at European universities circa 1300. Although only two formal commentaries on the work are known to have survived, by Arnau de Vilanova and Dino del Garbo, it was listed as one of the required books in the Montpellier curriculum of 1309, and it was one of the Galenic works summarized by Jean of Saint-Amand for students at Paris in the 1290s.⁹

Not surprisingly, there exist many manuscripts of Gerard's Latin translation: García Novo has identified eighty-five.¹⁰ The text underwent a number of changes as it was copied and recopied, and a complete collation of all the sources has seemed to us not to be worthwhile. In preparing our edition, therefore, we made a preliminary collation of half a dozen manuscripts of the Latin version—chosen at random, but all, as it happened, of the

⁵K. Sudhoff, "Daniels von Morley Liber de naturis inferiorum et superiorum," *Archiv für die Geschichte der Naturwissenschaften und der Technik* 8 (1918): 1–40. Daniel mentions Galippus's role and the apparently public setting of the translation process at pp. 9, 39–40. A more recent edition is by G. Maurach, "Daniel von Morley, 'Philosophia,'" *Mittellateinisches Jahrbuch* 14 (1979): 204–255.

⁶R. J. Durling, "Corrigenda and Addenda to Diels' Galenica: I. Codices Vaticanini," *Traditio* 23 (1967): 462–476, at 466. Durling identifies a copy of this translation in MS Vatican City, BAV Palat. lat 1211, fols. 53r–55r, and quotes its ending: "Explicit liber Galieni de iniquali dyscrasia translatus a magistro Nicolao de Regio de Calabria capitulatus a magistro Francisco de Pedemonte." E. García Novo, *Galen, On the Anomalous Dyskrasia (De inaequali temperie)* (Madrid: Editorial Complutense, 2010), 80–92, identifies seven manuscripts containing this translation, gives the chapter divisions that survive in two of them, comments on some aspects of Niccolò's translation technique, and uses selected relationships between the manuscripts as a basis for a proposed stemma.

⁷E. García Novo, "Pietro d'Abano y su traducción del tratado de Galeno *De inaequali intemperie*," in *Φιλον σκιά: Studia philologiae in honorem Rosae Aguilar*, ed. A. Bernabé and I. Rodríguez Alfageme (Madrid: Universidad Complutense, 2007), 223–234; *idem*, *On the Anomalous*, 73–80.

⁸Burnett, "Coherence," 279.

⁹Saint-Amand's summary has been quoted previously, p. vii.

¹⁰García Novo, *Galen, On the Anomalous Dyskrasia*, 52–64.

fourteenth century—and compared their readings with the text of the Arabic translation prepared by Hunayn ibn Ishāq. This process brought to light a number of passages in the Latin seeming to show marked discrepancies from Hunayn's text, and we then focused on these passages in a partial collation of a much larger number of manuscripts. This led to our identification of three copies of the text, all of the first quarter of the thirteenth century, which consistently preserved readings clearly conforming to the Arabic:

A = Paris, BN n.a.l. 343, fols. 37–39v; once Cluny 71, in a reasonably accomplished scribal hand, c. 1225.

H = London, British Library Harl. 5425, fols. 53v–56v; in an informal scholar's cursive, probably French, c. 1200. The library's online catalogue dates it variously to "2nd half of the 13th century" and to "mid-13th cent." A digital version of the manuscript is accessible at http://www.bl.uk/manuscripts/Viewer.aspx?ref=harley_ms_5425_f053v

O = Vatican City, BAV Ottob. 1158, fols. 86v–88v; a scholar's hand, perhaps Italian, first quarter of thirteenth century.¹¹

A full collation of these three confirmed their general fidelity to the Arabic. The edition of the Latin translation that follows in part II of this study is based primarily on the Paris manuscript, but the readings of the other two have also been reported.

3. Gerard's translation technique

On the face of it, it is surprising that comparatively little close attention has been given to Gerard of Cremona's technique of translation; after all, his versions of Arabic philosophical, scientific, and medical writings were arguably the foundation of the European intellectual revival of the High Middle Ages. Of the very few relatively close-grained studies of Gerard's technique, ones that actually reflect on his vocabulary and his choice of words, most have focused on his translation of mathematical (including astronomical) texts, and scholars have been ambivalent about his skills.¹² Paul Kunitzsch, who has carefully studied Gerard's translation of Ptolemy's *Almagest*, has spoken somewhat disparagingly of his "sklavische Wörtlichkeit,"¹³ yet he has conceded that that very literalness prevented Gerard from making major errors in translation, even though his misreading of individual words led him to produce "some of the most ridiculous absurdities."¹⁴ Anthony Lo Bello's comments on individual features of Gerard's translation of al-Nayrizi's commentary on Euclid's *Elements* are perhaps slightly more positive: he refers more tolerantly to Gerard's "Arabisms" (instances when, by his literalness, Gerard fails to reproduce exactly the implications of the Arabic terms), cites passages where he displays richness as well as poverty of expression, and identifies still other passages where he corrected or enlarged upon the original text.¹⁵

¹¹We are grateful to the participants in the symposium on medical paleography held at the National Humanities Center in the fall of 2010, especially Rodney Thompson and Consuelo Dutschke, for looking at photocopies of these manuscripts and offering these tentative judgments.

¹²Despite its promising title, the study by I. Opelt, "Zur Übersetzungstechnik des Gerhard von Cremona," *Glotta* 38 (1959): 135–170, compares Gerard's Latin wording with its distant Greek original, not the Arabic from which it was immediately derived, and is of no use for our purposes.

¹³P. Kunitzsch, *Der Almagest: Die Syntaxis Mathematica des Claudius Ptolemaus in arabisch-lateinischer Überlieferung* (Wiesbaden: Harrassowitz, 1974), 104.

¹⁴Idem, "Gerard's Translations of Astronomical Texts, Especially the *Almagest*," in *Gerardo da Cremona*, ed. P. Pizzamiglio (Cremona: Biblioteca statale, 1992), 71–84, at 83.

¹⁵A. Lo Bello, *Gerard of Cremona's Translation of the Commentary of al-Nayrizi on Book I of Euclid's "Elements of Geometry"* (Boston-Leiden: Brill, 2003), 138–155.

Michael Weber, however, on the basis of his comparative study of two Latin translations (by Gerard and Dominicus Gundissalinus) of al-Fārābī's introduction to the philosophical sciences, offers a rather harsher assessment. For one thing, he declares, Gerard's "methodical, word-for-word translating . . . produced an inartistic Latin and a syntactical nightmare"¹⁶: Gerard insisted on providing Latin equivalents for Arabic particles that did not need to be translated, Weber says, and he repeatedly fell back on transliterations of the original wording. Moreover, he failed to understand even simple idiomatic usage, and above all (as Weber insists), he did not appreciate that the different forms of the Arabic verb have significantly different meanings and regularly simply adopted the meaning of the root form (form I). For Weber, Gerard's errors are so egregious that he must never have reread his translations, otherwise he would have caught his mistakes.

Although Gerard's mathematical and philosophical translations played a central role in the growth of thirteenth-century scholasticism, his contribution to the revival of European medical learning was even more critical: the translations ascribed to him include the works of Galen, Avicenna, Rhazes, Albucasis, and others, and they underpin the explosive growth of academic Latin medicine in the thirteenth century. Nevertheless, his medical translations have attracted relatively little interest. This lack of attention may be due in part to the inaccessibility of scholarly editions, not only of his translations, but of the Arabic texts that underlie them. Of the twenty-odd medical works he is supposed to have translated (more than a quarter of his total output), only three of the Latin products have so far been edited.

Yet even in the absence of such critical editions, Danielle Jacquart, the one scholar who has addressed Gerard's medical translations, has ventured to put forward something unique. She has looked closely at manuscripts and printed versions of Latin works attributed to him—most notably Avicenna's *Canon*, Rhazes' *Liber ad Almansorem*, and the *Breviarium* or *Practica* of Serapion—and she has compared them with Arabic manuscripts of the same works. On this basis, she has evolved what is in effect a systematization of the features that appear to define Gerard's translation technique, a systematization drawn from the medical translations but potentially applicable to those of other subjects as well.¹⁷ We can summarize these features as follows:

- First, the translations are extremely literal. They maintain the word order of the original Arabic, and consistently render Arabic nouns, verbs, and even conjunctions and particles, always with the same Latin word.
- As a consequence of this literalism, they often misunderstand and fail to convey the sense of an Arabic idiom.
- As a further consequence, their style is heavy and lumbering. Repetitive phrases in Arabic are repetitive in Latin, with no attempt at a variation in phraseology to give relief to the reader.
- Gerard's evident concern for exactitude meant that, when faced with an unfamiliar Arabic word or one for which there was no obvious Latin equivalent, he tended to fall back on a transliteration of the Arabic.¹⁸

¹⁶M. C. Weber, "Gerard of Cremona: The Danger of Being Half-Acculturated," *Medieval Encounters* 8 (2002): 123–134, at 123–124.

¹⁷D. Jacquart, "Remarques préliminaires à une étude comparée des traductions médicales de Gérard de Crémone," in *Traduction et traducteurs au Moyen Age*, ed. G. Contamine (Paris: C.N.R.S., 1989), 109–118.

¹⁸Jacquart offers a suggestive typology of motives for such transliteration in D. Jacquart, "Note sur les *Synonyma Rasis*," in *Lexiques bilingues dans les domaines philosophique et scientifique: (Moyen âge - Renaissance)*, ed. J. Hamesse and D. Jacquart (Turnhout: Brepols, 2001), 113–121, at 113–115.

e) A number of the translations attributed to Gerard include explanatory glosses of varying extent evidently composed by a reader of Arabic, possibly the translator himself. If so, this is a further feature of the Gerardian style.¹⁹

Jacquart recognizes that there may be a certain variability or range within each of these characteristics, but she suggests that this variability might supply a key to understanding the way in which Gerard developed his translation skills over the course of his career. As we have seen, most of these features have been commented on individually by historians looking at Gerard's nonmedical translations, but by drawing them together in this way she has provided an extremely useful framework for assessing any translation ascribed to him, even if it carries with it a comparatively negative assessment of his work. Let us see how well it might apply to his translations of the Galenic works (which were not included among those Jacquart examined) by examining his version of Galen's *De malitia complexionis diverse* and testing her model by looking for her proposed features one by one.

Two of these features do not characterize *De malitia* to any degree. It is perhaps not surprising that (e) is not an important element of this work: explanatory glosses might have seemed unnecessary for such a brief and relatively nontechnical text. Even so, there are a few passages where we might wonder whether we see a remark interpolated by the translator himself. In 4.3, the text speaks of the retention of putrefying humors, and the Latin goes beyond the Arabic in a gloss, "in interioribus scilicet." In 8.2, where the fever known as *epiala* is spoken of as attacking "someone" (*ei*), MS A preserves an early gloss "id est patienti," which may have been widespread in early manuscripts, because it has become largely incorporated into the manuscript tradition by the fourteenth century. (We will comment somewhat later on another possible addition by Gerard to the textual tradition.) Still, there is certainly nothing in the *De malitia* like the obvious translatorial comments that characterize many of his other works.

Moreover, (d) transliterations are also almost entirely lacking here. We have found only two instances of a transcribed or transliterated Arabic word in *De malitia*. One occurs in 2.2, where Galen explained that the hand was composed of the wrist (*karpos*), metacarpals (*metakarpia*), and fingers; Ḥunayn had rendered these respectively as رَسْغ "wrist," مشط "comb" (coining by simile a new anatomical term to illustrate the separation of the individual metacarpals), and أصابع "fingers." Gerard had no trouble with "fingers," not surprisingly, but he appears to have had difficulty in finding Latin anatomical equivalents for the other two. He could translate مشط literally as *pecten*, and did so, but he could not do the same for رَسْغ and simply transcribed it as *rasceta*.²⁰ In this case, he seems to have fallen back on a transcription only because he was forced to it. The second transliterated word we have come upon in *De malitia* is *siphac* (صفاق), in 3.3, used to refer to the peritoneum, but that is not a coinage original with Gerard. It goes

¹⁹To the examples of this feature given by Jacquart, "Remarques," 112, can be added the material attached to Gerard's translation of Alkindi's *De gradibus*: see Arnau de Vilanova, *Aphorismi de gradibus*, ed. M. R. McVaugh, *Arnaldi de Villanova Opera Medica Omnia*, II (Granada-Barcelona: University of Granada, 1975), 294–295, 299–301. See also Jacquart, "Note," 115–116.

²⁰He used the exactly same terms, *pecten* and *rasceta*, when he translated Avicenna's *Canon*: cf. "De anatomia rasete" and "De anatomia pectinis plante," *Canon* Li.v.i.21–22 (Venice, 1507; repr. Hildesheim: Olms, 1964), fol. 12v. See also A. Fonahn, *Arabic and Latin Anatomical Terminology. Chiefly from the Middle Ages* (Kristiania: Jacob Dybwad, 1922), 115, 126.

back to Constantine the African and the late eleventh century and was in wide currency by Gerard's day.²¹

Indeed, one might wonder whether Gerard had made something of an effort to search out meaningful Latin equivalents for Arabic terms rather than fall back on transliteration. In 1.2 and 9.1, he employed the word *estiomenus* to translate Ar. ፻፻, meaning an eroding sore, a term that had been used by Hunayn to render Galen's word φαγέδαινα (a devouring ulcer) in *Peri anomalou dyskrasias*. The technical term *estiomenus* (or the phrase *herpes estiomenus*) was already being used by eleventh-century Latin medical writers and was evidently derived from Greek ἔρπης ἐσθιόμενος—that is, a “devouring” or corroding ulcer—as defined by Galen in *Ad Glauc.* II.1. It was perhaps via the old Greek-Latin translation of this text that it had entered Latin medical literature.²² Gerard was thus using a contemporary Latin technical term to identify the Galenic condition hidden behind the Arabic word, and he seems to have made the identification consistently.²³ Evidently he either had a good knowledge of contemporary Latin medical literature or had access to someone who did.

Another possible example of his access to Latin medical terminology is his choice of the word *epiala* to render Ar. انجفالس. It seems less likely that this is Gerard's Latin transliteration of the Arabic *infiālis* than that the Greek word (ἵπταλος) transliterated by Hunayn had independently made its way into medical Latin as *epiala* and that Gerard was applying it correctly. As more and more of his medical translations are studied, we may expect to learn more about the extent of his terminological sophistication.²⁴

²¹Constantine entitled a chapter “De passionibus siphac” in his *Pantegni*, a translation of ‘Alī ibn al-‘Abbās’s *Kitāb al-malāki: Pantegni*, Theorica 9.39, in *Opera Omnia Ysaac* (Lyon, 1515), II, fol. 49v. In his retranslation of the Arabic text (c. 1127), Stephen of Antioch continued to use Constantine’s term: *Haly filius abbas, Liber totius medicine* (Lyon, 1523), Theorica 9.36, fol. 119. On these works, see *Constantine the African and ‘Alī ibn al-‘Abbās al-Maġūsi: The Pantegni and Related Texts*, ed. C. Burnett and D. Jacquart (Leiden: Brill, 1994). The use of the term in Gerard’s translation of the *Canon* is discussed by J. Hyrtl, *Das Arabische und Hebräische in der Anatomie* (Vienna, 1879; repr., Wiesbaden: M. Sandig, 1966), 221–223. Hyrtl does not comment on its presence in earlier Latin texts.

²²The phrase is used and explained in the *Passionarius* of Gariopontus, at V. 38: “herpes estiomenus id est qui se comedet et in altum serpit et late pascitur,” *Passionarius Galeni* (Lyons, 1526), fol. 74vb. Professor Eliza Glaze has kindly identified for us the corresponding passage in the old Latin translation of *Ad Glaucem* (corresp. *Galeni Opera*, ed. C. G. Kühn, vol. 11 [Leipzig, 1826], 74), which confirms Gariopontus’s dependence on it for this term: “Nam herpes qui estyomenus dicitur, id est qui se commedet et in altum serpens late pascitur”; MS Vat. Barb. Lat. 160, fol. 69v. In that work, Galen explained that the term had already been used by Hippocrates, evidently referring to *Aphorisms* V.22, but the pre-Constantinian Greek-Latin translation of that aphorism was apparently not the source of the medieval neologism, for it renders Hippocrates’ ἔρπησιν ἐσθιομένοισιν simply as “nervosis consumentibus” (MS Vat. Barb. Lat. 160, fol. 181v). It is also noteworthy that Constantine’s Arabic-Latin translation of that aphorism did not use the phrase *herpes estiomenus* either, but instead used *herpes comedens*. Apparently Constantine was not acquainted with the former phrase.

²³Thus, in *Canon* I.ii.i.iv (fol. 26va), Gerard translates ፻፻ with the expanded technical term as *herpes estiomenus* (I have confirmed the Arabic reading in the edition of Rome, 1593, at p. 38). By Gerard’s day, to be sure, its use was not confined to the medical community. Thus, in about 1170, Peter of Blois can be found referring to someone who suffered from “herpes estiomenus, qui vulgo lupus dicitur” (J. P. Migne, *Patrologia Latina*, vol. 207, col. 293A), although the wording may perhaps suggest that Peter was not entirely sure what the condition really was.²⁴Paul Kunitzsch has already made the point that contemporary Arabic-Latin glossaries (like that published by C. F. Seybold, *Glossarium Latino-Arabicum* [Berlin, 1900]) simply did not include the technical terminology that Gerard often needed to be able to deploy: P. Kunitzsch, “Gerhard von Cremona als Ueersetzer des Almagest,” in *Festgabe fuer Hans-Rudolf Singer: Zum 65. Geburtstag . . .*, ed. M. Forstner (Frankfurt am Main: P. Lang, 1991), 1.347–358, at 356.

These two features may be missing in *De malitia*, but the other three highlighted by Jacquot are certainly present. We will consider them in turn.

a) Gerard's generally word-for-word approach in this text is obvious, and helps us explain away at least one apparent confusion in his translation: Where, in 5.2, the Arabic text speaks of a "range" or "latitude," the Latin speaks instead of *intendum*, but it is at least possible that at this point Gerard saw *غرض* in his manuscript rather than *عرض*. It might be remarked that his maintenance of the structure of the Arabic sentences in the Latin version was often accomplished with little sense of awkwardness, despite what might appear to be a process of mechanical substitution. Thus, for example, his replacement of Arabic by Latin particles—connective, modal, and focal—was generally intelligent and effective. Interestingly, a number of the equivalences noted by Jacquot in the *Canon*—ولكن = *verum*, بل = *immo*, اذا = *cumque*—are not found in *De malitia*, for the words *verum* and *immo* are never employed there, and its one use of *cumque* corresponds to *ومتنى*. Particularly distinctive in the latter work is *ل!* = *verumtamen*. A number of Gerard's preferred terms as identified by Jacquot (*donec*, *semita*) do turn up frequently in *De malitia*, although *penitus* (occurring six times, always tr. Ar. *أصلًا*) is a particular favorite there, but such frequencies obviously depend on the character of the Arabic text being translated. Still, one possible advantage to the historian of the word-for-word approach is that the choice of equivalences may prove to be a way of distinguishing among translators.

Charles Burnett has made it plain that word-for-word translation was a widespread ideal going back to late antiquity and was pursued by many twelfth- and indeed thirteenth-century figures, who argued that only in this way could the original text be conveyed faithfully, free of interference by the translator; although some critics wanted to see translations for sense, the *verbum e verbo* technique was the dominant one.²⁵ Thus we must be careful not to ridicule this feature of Gerard's work: it testifies neither to incapacity nor to unimaginativeness. We might wonder, in fact, whether his occasional addition of separate explanatory glosses might not have been his own deliberate attempt to keep the translation itself as pure and as accurate as possible.²⁶

The word-for-word approach is so carefully maintained in *De malitia* that it is a little jarring when Gerard abandons it. This he does most often by making what we might call a "syntactical shift." Ordinarily, Gerard will translate a noun with a noun, a verb with a verb, a relative clause with a relative clause, and so forth, but not always. Occasionally, he will opt to replace one part of speech with another. Consider the end of 6.3, where the Arabic breaks off a digression by saying literally "speech [الكلام, a noun] about this is beyond what we are in." The Latin version reads "loqui de hoc est preter illud in quo sumus"; that is, it is as usual almost painfully literal, translating preposition by preposition, pronoun by pronoun, *except* that Gerard has chosen to use a verbal infinitive rather than a noun like *loquela* to translate *الكلام*. Another convenient example comes in 3.3, where the Arabic text reads adjectivally *الخراجات الحادثة*, "the exitures arising," and Gerard translates with a relative clause, *exiturarum que fiunt*, "the exitures which arise."²⁷

²⁵C. S. F. Burnett, "Translating from Arabic into Latin in the Middle Ages: Theory, Practice, and Criticism," in *Editer, traduire, interpréter: Essais de méthodologie philosophique*, ed. S. Lofts and P. Rosemann (Louvain-Paris: Peeters, 1997), 55–78.

²⁶Cf. *ibid.*, 69.

²⁷Relative constructions were one of the stylistic devices being used by translators as far back as Cicero to make up for Latin's lack of a definite article, as Donna Shalev has pointed out to us; see Roland Poncelet, *Cicéron traducteur de Platon. L'expression de la pensée complexe en latin classique* (Paris, 1953), 139–157.

In a number of such cases he deviates from his normal custom of exact substitution and uses a different part of speech to render (almost always intelligently) the content; he may use a noun or a participle, for example, instead of a finite verb. It is a first sign of his readiness to transcend strict word-for-word translation, in favor, perhaps, of ease of Latin reading. We will come to others.

b) From the very outset of this project, we were struck by the general accuracy and general intelligibility of Gerard's translation of *De malitia*.²⁸ A few apparent mistranslations came to our attention at the beginning, but it soon dawned on us that most of these were accurate, word-for-word translations of variant readings to the Arabic text, and from one family of variants in particular. It is evident that Gerard was working from an Arabic text related closely to the Madrid and Escorial manuscripts (our **B** and **E**), because his translation often follows the exact wording of their variant readings. García Novo has independently offered evidence to show that Gerard's Arabic manuscript descended from an ancestor of **E** (she did not make use of **B**).²⁹ The following passages added to the ones she adduces in support of this conclusion do not exhaust the possible examples:

6.3 Hunayn, MS A. ... لا الأفعى ... ("nor a viper a viper"); Hunayn, MSS BE. ... لا الأفعى ... مثلاً ("nor a viper something similar"); Gerard, *neque vipera sibi similem*

8.1 Hunayn, MS A. ... الذي يشبهه فركساغورس بالزجاج ("which Praxagoras compares to glass"); Hunayn, MSS BE. ... الشبيه بالزجاج ("similar to glass"); Gerard, *similis vitro*

In one particularly interesting passage (3.4), the text reads يَتَغَيِّرُ, the **BE** variant reads يَخْرُجُ, but the Latin text reads *alteratur et egreditur*; evidently Gerard's manuscript provided him with the variant reading from the other tradition, and he incorporated both into his translation. And although his manuscript may have been most closely related to **BE**, the Ayasofya manuscript (**A**) also presents at least one reading that helps explain an apparent oddity in his translation of *De malitia*: In 8.2, where **BE** follow the Greek manuscripts and read اَلْأَسْنَانِ ("teeth," Gerard refers instead to the testicles! But, in fact, at this point **A** also reads الْأَنْثَنِيَّنِ ("testicles").³⁰ In the end, there seem to be relatively few serious problems with the translation, though 1.3 seems peculiar: الْبَدْنُ الَّذِي يَفْسُدُ مَرَاجِه = *corporis cuius alteratur complexio*. Here perhaps يَفْسُدُ was read as يَغَيِّرُ.

There are a very few instances of the particular problem signaled by Jacquot, that literalness sometimes stands in the way of understanding an idiom, but they do appear. In his original text, Galen referred the reader twice to his work *On Anatomical Procedures*, and

²⁸Some of the apparent errors in translation noticed by García Novo, *Galen, On the Anomalous Dyskrasia*, 65–66, seem to have arisen from her comparison of the Arabic text with a late version of the Latin text, as it had evolved and changed over time. (She reports only that she used "several manuscripts" of the late thirteenth century [p. 141].) For example, Hunayn's موجود في جمِيع الأشياء، الخارجَة ("and it is present in every external thing") does indeed appear in late manuscripts in the formulation she quotes, "in omnibus interioribus rebus et extrinsecis invenitur" (4.3), but in the earliest manuscripts it is simply translated "in omnibus rebus extrinsecis invenitur." See below, p. 89. Another error she discovers in this translation (E. García Novo, "Composition et style du traité de Galien de *inaequali intemperie*: Avantages et désavantages pour la transmission du texte," in *Storia et ecdotica dei testi medici greci*, ed. A. Garzya and J. Jouanna [Naples: M. D'Auria, 1996], 141–151, at 142–145) depends on the way in which the Latin translation is punctuated; in our version (below, p. 83) the "error" has disappeared.

²⁹García Novo, *Galen, On the Anomalous Dyskrasia*, 66.

³⁰See above, p. 8 n. 24.

Ḥunayn not surprisingly cited it by the title he had given it when he himself translated it into Arabic, *كتاب في علاج التشريح*, or “book on the treatment of anatomy.”³¹ “Treatment,” *علاج*, can also mean a specifically medical treatment, and that is the sense (lacking a knowledge of the Arabic form of the Galenic titles) in which Gerard took it, calling it, somewhat curiously, a book “*de medicatione anatomie*.”

c) One of the examples highlighted by Jacquart to illustrate the supposed stolid repetitiveness of Gerard’s approach to translation is his systematic use of *oportet* in his rendition of the *Canon* to regularly represent Ar. ينْبَغِي in contrast, for example, to the supposedly Gerardian translation of Rhazes’ *Liber ad Almansorem*, which alternated between the use of *oportet* and the use of the gerundive to indicate necessity. She has used the contrast to suggest that two different hands might have produced the two translations.³² In *De malitia complexionis diverse*, as it happens, ينْبَغِي is twice translated as *oportet*, but it is also translated once as *decens est* and once as *conveniens est*. Here is the first indication that Gerard (in this work, at least) was alert to the possibility of repetitiveness and sometimes tried to avoid it.

There are various other contexts that make it clear that Gerard did not automatically translate each Arabic word with one and only one Latin word. Ar. أَيْضًا, for example, is rendered fourteen times as *etiam* in *De malitia* but also four times as *quoque*. Again, at the beginning of 6.4, in successive phrases, the Arabic reads صَاحِبَهُ لَا يَصْهَّ and then لَا يَصْهَّ صَاحِبَهُ; Gerard translates the noun (the same in both cases) as *qui ea laborat* the first time, but *patiens* the second. Or consider 2.1, where four parallel phrases contain the verb قَسْمٌ; Gerard translates it as *dividere* twice, then uses *sequestrare*, and finally returns to *dividere*. It may be impossible to be sure of the reasons for his variation in wording, but at least it is obvious that he was consciously deciding not to use the same Latin word in all four phrases, and perhaps the simplest explanation is that here too he was alert to stylistic concerns and was trying to avoid repetitiveness.³³ Nothing is known about Gerard’s early education in Cremona, but it is certainly not unlikely that he would have had some exposure there to rhetoric and to the Ciceronian conviction that *variatio delectat*.

On the basis of his version of Galen’s *De malitia complexionis diverse*, Gerard of Cremona’s abilities as a translator seem to us to deserve somewhat more than the merely grudging condescension that they are often accorded: He is by no means just a pedestrian, mechanical substituter of one word by another. His careful application of the *verbum e verbo* technique, sometimes complemented by independent explanatory glosses, marks him as a thoughtful follower of a contemporary ideal who was by no means rigid in his approach to texts. What is it that might explain why our judgment tends to be more positive than that offered by other scholars? There are a number of possible reasons why the translations ascribed to him by his students might vary in quality and might show differences of style, all of which indeed Jacquart has already sketched out. It might perhaps be that his style evolved; for example, he might have felt freer and less constrained in his work as his career developed. After all, his translations were produced in Toledo over a period of thirty

³¹ G. Bergsträsser, *Ḥunain ibn Ishāq über die syrischen und arabischen Galen-Übersetzungen*, Abhandlungen für die Kunde des Morgenlandes 17.2 (Leipzig: Brockhaus, 1925), 19 (Arabic text).

³² Jacquart, “Remarques,” 114–115; D. Jacquart, “Les traductions médicales de Gérard de Crémone,” in Pizzamiglio, *Gerardo da Cremona*, 57–70, at 63. See also D. Jacquart, “Note sur la traduction Latine du *Kitāb al-Mansūrī* de Rhazès,” *Revue d’Histoire des Textes* 24 (1994): 359–374.

³³ Lo Bello, *Gerard of Cremona’s Translation*, 143, gives another example of such “richness of expression” (to use his phrase) in the commentary on al-Nayrīzī.

years or so. It would be remarkable if his approach (as well as his knowledge of Arabic) had not changed during that time, and a number of historians have explored this possibility.³⁴ Weber accepts a proposal by Burnett, that al-Fārābī's work served Gerard as an outline for his program of translations, and concludes that, therefore, he must have translated that work at the outset of his career, which would help explain its relative crudity.³⁵ And other stylistic features too might provide an index to the sequence of his writings. Jacquart has plausibly suggested that transliterations might have been more frequent in his earlier translations.³⁶ Or it might be that he had more difficulty with severely technical material, like the *Almagest*, than with Galen's more discursive texts. His biography tells us that he actually went to Toledo looking for the *Almagest*, and he may well have started to work on it at the very beginning of his career, before he had become a fully mature translator. Kunitzsch believes that he continued to struggle with it for most of his years in Toledo.³⁷

Yet we are a long way from being able to identify a standard that will allow us to securely distinguish Gerard's early translations from his later ones. One of us has recently raised the possibility that his translations might be arranged chronologically by following the way in which he translated the common Arabic phrase وَذَلِكَ أَنْ ("and that is because"). In roughly half his known translations, Gerard rendered this phrase quite literally, *et illud ideo quoniam*, but in many others he gave it a much freer translation, *quod est quia*.³⁸ It would not seem implausible that he gradually moved from the more to the less literal version over the course of his career. As it happens, al-Fārābī's work is one of those translations in which Gerard consistently uses *et illud ideo quoniam*, which would reinforce Weber's notion that this latter work was an early one. Yet by this same token, Gerard's translation of *De malitia* would likewise have been produced in the first stages of his career, because the eight instances of وَذَلِكَ أَنْ in the Arabic text edited here are all rendered *et illud ideo quoniam*, and that would suggest that the competence that we think we observe generally in this translation was an early feature of Gerard's activity.

In any case, Jacquart's stylistic categories thus fit *De malitia* just as they do the *Canon*—or the translations of al-Fārābī or al-Nayrīzī, for that matter—but in each case perhaps to a different extent. In *De malitia*, Gerard's translation technique is very obviously grounded in dependence on a word-for-word equivalence, which in this case has served him quite well, yet he felt it possible and desirable to vary that technique within certain limits. For us to call it "sklavische Wörtlichkeit" would be too severe. What we have called syntactical shifts are one instance of this flexibility; if the frequency of such shifts should prove to vary from translation to translation, it might give a rough sense of chronological development. Moreover, he is more at ease with multiple meanings of Arabic words and idiomatic constructions in *De malitia* than Weber found him to have been in his translation of al-Fārābī. Weber commented somewhat dismissively that in the latter translation Gerard did not realize that, while the word *نفس* means "soul," it can also function as a reflexive

³⁴Paul Kunitzsch, on the other hand, has argued that the Gerardian translations showing a more fluid style, like his translation of Euclid's *Elements*, must have been revised and polished by someone else; P. Kunitzsch, "Translations from Arabic (Astronomy/Astrology): The Formation of Terminology," *Bulletin DuCange* 63 (2005): 161–168, at 163–164.

³⁵Weber, "Gerard of Cremona," 134.

³⁶Jacquart, "Traductions médicales," 63.

³⁷Kunitzsch, "Gerard's Translations," 82–83; idem, "Gerhard von Cremona," 351–354.

³⁸M. McVaugh, "Towards a Stylistic Grouping of the Translations of Gerard of Cremona," *Mediaeval Studies* 71 (2009): 99–112.

pronoun, and for that reason he invariably rendered it simply as *anima*, with serious consequences for intelligibility.³⁹ Yet in the *De malitia* translation Gerard renders as *نفس* *anima* in 6.2 but as *sibi* in 4.3, in each case wholly appropriately. Still other comparable examples could be offered:

3.1: من نفس أبدان العروق = *ex ipso corpore venarum*⁴⁰

Ibid.: نفس العروق الضوارب = *ipsas venas pulsatiles*

7.3: من نفس البدن = *ex ipso corpore*

8.3: في نفس أحشائه = *in ipsis suis visceribus*

Nor does he ever feel compelled in this work to fall back on creative transliterations of Arabic in order to represent words in the original. On all these grounds it seems to us necessary to acknowledge that in translating *De malitia complexionis diverse* Gerard was already demonstrating a certain sophistication and skill.

Finally, it may also be that, like a Rubens presiding over a translatorial workshop, Gerard worked with various assistants over those thirty years who inevitably made their own particular and distinctive contributions to the products of his evolving technique. We have already seen that the translators of the *Canon* and of *De malitia* agreed in their rendering of *أن* *وذلك أن*, employing a different locution from that used by the translator of *Serapion*. To this can be contrasted the fact that, as Jacquart has revealed, the Arabic word *نوبية* (meaning an attack of fever) is consistently translated as *paroxismus* in the *Canon* but as *accessio* in the *Liber ad Almansorem*, and in this instance the practice of the *De malitia* translator agrees with the *Liber ad Almansorem* against the *Canon*.⁴¹ This would tend to reinforce the possibility that a number of persons may have been simultaneously active in a circle of translators centering on Gerard, and to indicate that distinguishing their individual contributions is likely to be an intricate puzzle.

Historians are obviously a long way from being able to explore these possibilities with any confidence. Indeed, there are still other questions to be pursued to which our edition of *De malitia* may have little or nothing to contribute: Did Gerard always work with a dragoman like Galippus, using the local vernacular orally as an intermediate stage between Arabic and Latin? Did he go back to translations a second time to polish or revise them?⁴² What is needed is more work on the Gerardian translations and the Greco-Arabic works that they communicated to the Latin world, more editions of the Arabic and Latin texts themselves, so that more points of comparison can be accumulated for study. We hope that our study will encourage others to pursue this goal.

4. The Latin edition

In a very real sense there can be no one privileged Latin text of *De malitia complexionis diverse*, for the text was in continuous evolution from the moment of its translation, and the version that was an object of study in the medieval universities a hundred years

³⁹Weber, "Gerard of Cremona," 128.

⁴⁰Or, in our MSS BE, من نفس بدن العروق.

⁴¹This particular contrast is paralleled by the fact that, as we pointed out previously, the Latin particles *immo* and *verum*, which are commonplace in the translation of the *Canon*, were never used by the translator of *De malitia*; see Jacquart, "Traductions médicales," 63.

⁴²These questions are touched on by Jacquart, "Traductions médicales," 69–70, and (implicitly) in idem, "Note," esp. 373; and by Weber, "Gerard of Cremona," 127–128, 132–133.

later was already significantly different from that which came from Gerard of Cremona's pen. Our primary goal in editing a Latin version of Galen's treatise has therefore been to provide a text that is as close as reasonably possible to Gerard of Cremona's original. We have done this, as explained previously, by systematically comparing selections from many of the surviving Latin manuscripts to the Arabic version and identifying three early thirteenth-century manuscripts (AHO) whose particular readings are significantly closer to the Arabic, even though they are often less graceful in Latin. To give one example only: at one point (4.3) the Arabic refers to "a transformation that arises [literally, "an arising transformation"] in abscesses"; our manuscripts maintain the adjectival construction, *veniens apostematatum resolutio*, whereas later manuscripts regularly change this to a noun, *eventus apostematatum resolutio*. These manuscripts were then collated and their variants assessed against the Arabic text to construct the text given here. Of the three, A's readings often prove to be the best, in the sense that they most consistently conform to the Arabic, and we have therefore followed the text of A when there was no reason to do otherwise. (We have examined both A and H directly, but have studied O only in a microfilm copy.) We have standardized the spelling of the text, however, and have not bothered to report spelling variants among the three manuscripts. All three have been corrected repeatedly by later scribes, and we have reported those corrections only when they seem to bear usefully upon the textual tradition.

At the end of the thirteenth century, *De malitia complexionis diverse* was the object of a scholastic commentary by Arnau de Vilanova at the medical faculty of Montpellier. The modern editors of that commentary have accompanied it with the Galenic text as found in MS Erfurt, Amplon. F. 249, fols. 234rb-236vb (E), a fourteenth-century copy whose language conforms closely to the Galenic passages embedded in Arnau's commentary.⁴³ A comparison of that text with ours makes clear that by 1300 the version of *De malitia* used in the schools had undergone a number of changes from Gerard's original text, some trivial, some less so. And it is only to be expected, therefore, that when *De malitia* was translated into Hebrew by David Caslari, at just about that moment, the translator would have been working with a manuscript that had acquired readings differing from those in Gerard's original version; not surprisingly, the Hebrew text edited in the last part of this study reveals a number of such divergences. In order to make it possible partially to visualize the Latin that Caslari might have had before him, we have selected three other fourteenth-century manuscripts besides E, whose wording of certain passages in the Galenic text sometimes suggests the source of the Hebrew divergence:

F = Paris, BN lat. 6865, fols. 152-154v.

P = Cambridge, Peterhouse 33, fols. 23v-25, and

V = Vatican City, BAV Palat. Lat. 1095, fols. 51v-53v.

We have given the variant readings in **EFPV** for those passages—in boldface, for emphasis—together with the readings of **AOH**, the Hebrew, and the Arabic, to give the reader the opportunity to better understand why the Hebrew took the form that it did. Sometimes the Hebrew agrees, not with a variant shared by **EFPV**, but with one found in only one or two of these manuscripts. We have still called attention to the coincidence, even

⁴³ Arnau de Vilanova, *Commentum supra tractatum Galeni de malitia complexionis diverse*, ed. L. García Ballester and E. Sánchez Salor, in *Arnaldi de Villanova Opera Medica Omnia XV* (Barcelona: University of Barcelona, 1985). The editors explain their reasons for selecting E on p. 145.

though the agreement of the two might be due to independent decisions by a Latin and a Hebrew scribe. In a few cases, we have pointed to other divergences (between **AOH**, on the one hand, and **EFPV**, on the other), even when they are not obviously reflected in the Hebrew translation as well, for example in passages where Caslari did not offer a word-for-word translation of the Latin and might have been working from either tradition. Occasionally, these notes will reveal the evolution of the translation, as it were, in process, as in n. 168, where the original reading of *fit* (or perhaps *sit*) was revised to *deficit* by a later student of **A**, and where *deficit* has become the unquestioned reading in **V**. Likewise, in n. 101, we can see *ante* passing into *post*. But we should make it clear that we do not pretend by any means to provide a systematic or exhaustive list of all the passages in Gerard's translation that had undergone a change by the beginning of the fourteenth century.

Two such changes, however, are worth particular comment. At the end of 3.2, a long phrase, "and sometimes it is in the smallest of the spaces and furthest from the eruption, and it is the most dangerous" (*et quandoque est in minore foraminum et remotoire a loco exitus et est maioris periculi*), is included in **V** that is entirely absent in the Greek and Arabic manuscript traditions. The same phrase has also been added in the margin of **F**, but it is missing in **AHOEP** (indeed, **V** itself adds the marginal note "in alio loco vacat"), and it is probable that it was added by a later Latin scribe who wanted to round out Galen's enumeration at that spot of the possible sites in which pus can collect. This distinctive phrase is also incorporated into the Hebrew translation of the text and thus must have originated in the thirteenth century.

The other intriguing passage comes at the end of 8.2, where the Arabic text might be translated thus: "As everything that cools and heats is scattered through small parts, . . . it is impossible that there should be *one part among these small ones that has a single sensation of cold and heat without the other*." When MS **A** was copied, two competing translations of the italicized passage were already circulating: the text of **A** reads "aliqua harum minimarum partium sensus in aliquo frigido et calido absque alia" (version 1), but the scribe has added in the margin "in alio, pars ex istis parvis in qua sit sensus una calor et frigoris absque alia" (version 2). **HOE** simply give version 1 and make no reference to the alternate possibility. In contrast, the Hebrew translation of David Caslari appears to be based on version 2 rather than on version 1. Surprisingly, the texts of MSS **FP** give *both* versions of this passage, first version 2 and then, immediately following, version 1.

Let us now look more closely at the Arabic itself of the words (italicized previously) from which the two versions derive:

[م] يمكن أن يوجد . . .

... جزء من هذه الأجزاء الصغار حسناً فيه واحد من البرد والحر دون الآخر

When we compare this with the two Latin versions, word by word, it is apparent that version 2 is written in Gerard's easily recognizable translational style of word-for-word substitution closely following the sequence of words in the Arabic, and that version 1 is much freer, especially for the first half of the passage. What presumably happened is that Gerard's original translation gave version 2 of these words, and that shortly thereafter, on a very early copy of the text, someone—conceivably even Gerard or an aide—entered a rewording of this passage (version 1) in the margin. Subsequent scribes either substituted the marginal version 1 for the original version 2 (as in **HOE**), or followed version 2 and ignored the marginal version 1 (the Hebrew translation was evidently based on such a text), or, in a failure of understanding, entered the marginal version 2 into the text proper immediately following version 1 (as in **FP**). In **V**, a further confusion has occurred. Originally,

the text gave only version 1, as in **HOE**, but its scribe came upon a copy with version 2 in it as well and had placed it in the margin of **V**, thus reversing, if we are right, the relative positions in which versions 1 and 2 began. In the edition that follows, we follow version 2, which on this argument conveys Gerard's original language.

The several linguistic versions of our Galenic treatise have been differently broken up by their original editors. Galen's own Greek text was apparently not originally divided up into individual chapters.⁴⁴ The same is true of its Arabic translation by Hunayn. The early manuscripts **AHO** of the Latin version by Gerard show no subdivision either, nor indeed do the majority of the late ones (including **FPV**). But in at least four late manuscripts (and in the 1490 edition as well),⁴⁵ the text is broken up more or less consistently by rubrication into eight chapters that begin at the following words:

- Chap. 1: *Malitia complexionis diverse* (1.1; the beginning of the treatise)
- Chap. 2: *Mea igitur intentio* (beginning within our 1.3)
- Chap. 3: *Nunc autem oportet* (2.3) or *Et nos iam in hiis* (within 2.3)
- Chap. 4: *Inde est quod* (3.1)
- Chap. 5: *Cumque calor sanguinis* (4.1)
- Chap. 6: *Cum autem prima omnia* (5.3)
- Chap. 7: *Redeamus autem ad species* (7.1)
- Chap. 8: *Quis ergo cum sensibiliter* (within 8.1)

After that, the consistency disappears: One manuscript (**U**) marks off three additional chapters beginning *Ex hoc quidem sermone* (in 7.3), *Et preterea est febris* (in 8.2), and *Iam igitur manifestum* (in 8.4), respectively, whereas another (**S**) starts a separate unit only at the last of these passages.⁴⁶ Perhaps some later scribes decided that, as it stood, the final Chapter 8 was too long and required further subdivisions. In all these copies, these chapters carry titles, whether copied as part of the original text or filled in by a later hand, or in one case entered into a marginal gloss, although most of the titles show a certain variability from one copy to the next.

This attempt at chapterization and the imposition of titles apparently goes back at least to the end of the thirteenth century, the moment when the works of Galen were becoming central to academic medical training. In MS Vat. Urb. 209 (**U**), where the chapter titles are embedded in a regular marginal gloss, the glossator has written, opposite "Mea igitur intentio,"

cap^m ii^m in quo premittit in sua doctrina notitiam membrorum in quibus debet fieri secundum fit mala complexio diversa, vel ca^m ii^m cuius intentio est investigare diversa componentia membrorum secundum anathomiam. Prima tamen secundum magistrum Tadeum melior. . . .

As it happens, versions of these two competing chapter titles can be found, respectively, in **DGS** and **B**.⁴⁷ If, as appears likely, the glossator in **U** was referring to Taddeo

⁴⁴⁴⁵The treatise is composed of units . . . and not divided into chapters"; García Novo, *Galen, On the Anomalous Dyskrasia*, 139.

⁴⁶We have examined the texts in MSS Basel D.1.5 (**B**), Cesena D.XXV.2 (**D**), Cesena S.V.4 (**S**), and Vat. Urb. 209 (**U**), as well as the 1490 Galen (**G**). García Novo, *Galen, On the Anomalous Dyskrasia*, p. 65, cites two other manuscripts where the text is broken into chapters (MSS Krakow BJ 800 and Klosterneuburg CCI 126), neither of which we have been able to consult.

⁴⁷**G**, the 1490 text, includes only the first six of these chapter divisions (ii.21r).

⁴⁸The chapter titles are as follows: *in quo investigat diversa continentia membrorum per hanotomiam* (**B**); *in quo premittit sue doctrine notitiam membrorum in quibus debet fieri mala complexio et diversa* (**D, G**); and *in quo premittit sue doctrine notitiam et membrorum in quibus debet fieri malitia complexionis diverse* (**S**).

Alderotti (d. 1295), who in the late thirteenth century profoundly shaped the form of medical teaching at Bologna,⁴⁸ his gloss seems to show us that at that moment some medical masters were beginning to try to impose an intellectual structure on *De malitia*, breaking it up into units titled so as to convey their understanding of the work's organization and meaning. Taddeo, incidentally, was the teacher of Dino del Garbo, one of the few medical academics known to have prepared a commentary on this Galenic text.⁴⁹ In any case, however, and for whatever reason, this chapterization never came to dominate the manuscript tradition of the work, and we have not followed it here.⁵⁰ (Indeed, the modern editors of Arnau de Vilanova's commentary concluded that by the fifteenth century a very different division of the text into twelve chapters of roughly equal length had become traditional in the medieval schools, and they found it useful to break up the text and Arnau's commentary accordingly.⁵¹) Instead, in order to provide a common system of reference for the three texts, we have maintained in the Latin version the chapter/section divisions introduced editorially into the Arabic edition (e.g., 3.3).

Niccolò da Reggio's translation of *De malitia* from Greek is not likely to have been prepared much earlier than 1310 (his earliest known translation was produced in 1308).⁵² One copy of this version notes (above, n. 6) that it was divided into chapters by Francesco da Piemonte, who died in 1320, by which time of course the medieval chapterization of Gerard's translation had already taken place, and it is impossible not to wonder whether this might have determined some of Francesco's chapter divisions. A number of the earlier chapter breaks in the Gerardian version coincide with those in that of Niccolò/Francesco. The Gerardian Chapters 1 through 3 and 5 coincide exactly with Francesco's first four chapter breaks, there numbered Doctrine I Chapters 1 and 2, and Doctrine II Chapters 1 and 2. After that point, however, the two versions are divided up rather differently.⁵³

⁴⁸N. G. Siraisi, *Taddeo Alderotti and His Pupils* (Princeton: Princeton University Press, 1981).

⁴⁹Ibid., 71–72.

⁵⁰None of the later manuscripts that we collated for the Latin edition contain obvious chapter divisions or titles, but in two of them, PV, a later hand had written numbers in the margin to identify the beginnings of chapters 2–5 in the list given previously.

⁵¹Arnau de Vilanova, *Commentum supra . . . de malitia complexionis diverse*, ed. García Ballester and Sánchez Salor, 145–146.

⁵²Lynn Thorndike, "Translations of Works of Galen from the Greek by Niccolò da Reggio (c. 1308–1345)," *Byzantina Metabyzantina* 1 (1946): 214.

⁵³See García Novo, *Galen, On the Anomalous Dyskrasia*, 86–87.

C. The Hebrew Translation from Latin by David b. Abraham Caslari (d. c. 1315)

1. David Caslari, his *Sefer ro'a mezeg mithallef*, and its setting

MS Oxford, Bodl. Opp. Add. Fol. 18 (Neubauer 2083), contains at fols. 19v–27r a Hebrew version of Galen's *Peri anomalou dyskrasias* under the title *Sefer ro'a mezeg mithallef* (a literal rendering of *De malitia complexionis diverse*), which goes on to describe the text as “translated by the wise R. David Abraham ha-Kaslari from the Christian language into the holy tongue.” The codex itself is a Hebrew medical miscellany comprising five treatises, of which our Galenic text is the second, preceded by a translation from the Arabic of Hippocrates' *Airs, Waters, Places* completed in 1299 by Solomon, son of the well-known translator Nathan ha-Me'ati.¹ Third in the manuscript comes an anonymous translation of the Avicennan work called “der kleine Kanon” by Moritz Steinschneider, then follows an equally anonymous translation from Latin of Rhazes' *De egritudinibus iuncturarum*.² The collection concludes with an original treatise on hemorrhoids composed by Solomon ibn Ayyub of Béziers (thirteenth century).³ The copyist has dated the manuscript in a colophon immediately after the *Sefer ro'a mezeg mithallef* (fol. 28r): “Praise to the Living God. [This copy was done] by me, Yehi'el of Genzano, son of Mordechai the physician of blessed memory, of Grosseto. I have copied it in Genzano in the month of Sivan of the year 5235 [i.e., June 1475], may it be of blessing.”⁴

There is still nothing to seriously challenge Steinschneider's presumption, set out more than a century ago, that this David b. Abraham Kaslari (or Castlari, Caylar, or Kaylar; today usually Caslari, which is the form we will use from here on out) is the man of that name who was an early member of a Jewish family prominent in fourteenth-century Languedoc and Catalonia,⁵ at the moment when medieval Hebrew culture there was at its pinnacle,

¹Galen's *Commentary on the Hippocratic Treatise Airs, Waters, Places in the Hebrew Translation of Solomon ha-Me'ati*, ed. A. Wasserstein, *Proceedings of the Israel Academy of Sciences and Humanities* 6.3 (Jerusalem: Israel Academy of Sciences and Humanities, 1982).

²M. Steinschneider, *Die Hebraeischen Übersetzungen des Mittelalters und die Juden als Dolmetscher* (rpt. Graz: Akademische Druck u. Verlagsanstalt, 1956), 696–697, 727.

³Solomon ben Joseph ibn Ayyub, “Ma'amar 'al ha-Tehorim,” ed. L. M. Herbert, intro. A. Marx, *Harofé Haivri* 1 (1929), 62–111.

⁴*Catalogue of the Hebrew manuscripts in the Bodleian Library*, comp. A. Neubauer (rpt. Oxford: Clarendon Press, 1994), cols. 712–713; *Catalogue of the Hebrew manuscripts in the Bodleian Library*, supplement, comp. M. Beit-Arié (Oxford: Clarendon Press, 1994), col. 385.

⁵The discussion of the Caslari family by Ernest Renan (drawing on Adolf Neubauer's materials), “Les écrivains juifs français du XIV^e siècle,” *Histoire littéraire de la France* 31 (1893): 351–802, at 644–646, treats David after Abraham as if to imply that he was David's son. But Renan's only evidence for this would seem to be the fact that the introduction to the *Sefer ro'a* names the translator as “David the son of Abraham,” which does not exclude the possibility that our David Caslari was the son as well as the father of an Abraham. He also quotes (p. 644) a text that apparently identifies Abraham's father David as the son of Yahse'el—“Abraham, fils de David, fils de Yahceel”—but in fact the Hebrew original actually reads “father” instead of “son”; that is, Abraham was the *father*

both economically and culturally⁶; his contemporaries were the frontrunners in the study of sciences in general and of medicine in particular. David (Davin) was part of this intellectual leadership. The Caslari family can be found in Perpignan from 1273 through 1286,⁷ but David can be traced moving to Narbonne in the early 1280s, where he seems soon to have become an important figure in the Jewish community. He was a member of a group of notables that obtained a favorable charter from the city's archbishop in 1284.⁸ A letter written to him there from his friend Abraham Bedersi survives, suggesting that he had both interest and skill in Hebrew letters.⁹

David Caslari was still living in Narbonne in 1305, as was his son Abraham,¹⁰ but in the following year they, like all the Jews in France, were expelled from the royal domain. He and his family may have moved directly to Besalú, in Catalunya; at any rate, he was to be found living there in 1315. By March 1316, however, he had died.¹¹ David's son Abraham, also a physician, is more famous today.¹² In the year that his father died, Abraham contracted with the Catalan town of Castelló d'Empúries to act as its town physician, but by the 1320s he had returned to Besalú. Here, his prestige began to grow in both the Jewish and Christian worlds. When at some time during these years the identity of a certain Caslari living in Perpignan had to be established, Abraham's signature was sufficient to confirm the fact.¹³ He composed the first of several original medical works in this period, and Kalonymos of Arles eulogized him after visiting him at Besalú at the end of 1322.¹⁴ He also began to attend members of the Catalan royal family in their illnesses, and finally moved to Barcelona in 1334.¹⁵ His last medical treatise was composed in 1349.¹⁶ His son Yahse'el followed the profession of his grandfather and his father, but seems to have died before the latter.¹⁷

of Yahse'el, which is confirmed from other sources. J. Régné, *Étude sur la condition des juifs de Narbonne du V^e au XIV^e siècle* (Narbonne: Gaillard, 1912), 214, argues that the David who was Abraham's father is identified as a physician. M. Grau i Montserrat comes to the same conclusion: "Metges jueus a Besalú (s. XIV)," *Actes, I Assemblea d'Estudis sobre el Comtat de Besalú*, 1968 (Olot: Aubert, 1972), 29–33, at p. 30. So does R. W. Emery, *The Jews of Perpignan in the Thirteenth Century* (New York: Columbia University Press, 1959), 24 n. 2, who provides further detail about family relationships. Most recently, on the basis of an exhaustive examination of the Besalú archives, Grau i Montserrat has developed a full genealogical tree of the Caslari family in the fourteenth century: he depicts David the son of Abraham (d. 1315/16) as the father of Abraham (d. 1349), who was the father of Yahse'el (d. 1324/25), who was the father of David (d. bef. 1352), who was the father of Yahse'el (d. ca. 1423), who was the father of David (d. 1404); M. Grau i Montserrat, "La juderia de Besalú (Gerona)," 2 vols. (Ph.D. diss., Universitat de Barcelona, 1975), vol. 1, 366–367. If Grau is correct, and if our David b. Abraham is one of the Besalú Caslaris, he can only be the man who died in 1315/16.

⁶Steinschneider, *Hebraischen Übersetzungen*, 653.

⁷Emery, *Jews of Perpignan*, 24 n. 2.

⁸Régné, *Étude*, 231–234 (doc. VIII).

⁹N. S. Doniach, "Abraham Bédersi's Purim Letter to David Kaslari," *Jewish Quarterly Review*, n.s., 23 (1932), 63–69. Cf. H. Gross, *Gallia Judaica* (Paris, 1897), 425.

¹⁰Régné, *Étude*, 214, 216. He infers this from a list of Jewish heads of families in Narbonne, recorded in 1305, which includes both a master Davin, physician, and an Abraham du Caylar (p. 123, n. 1).

¹¹Girona, Arxiu Històric Provincial, fons de Castelló d'Empúries, manual 89: Abraham de Castlar, *judeus de Narbona phisicus filius quondam magistri Davidis de Castlar*, is contracted as town physician 3 non. Mar. 1315/16.

¹²Gross, *Gallia Judaica*, 619–621.

¹³*Teshuvot ha-RaN: Responsa of Rabbi Nissim Gerondi*, ed. Leon N. Feldman (Jerusalem: Mekhon Shalem, 1984), no. 33, pp. 137, 141, 145.

¹⁴Renan, "Écrivains juifs," 451.

¹⁵Barcelona, Arxiu de la Corona de Aragó, Canc. reg. 487, fol. 266v.

¹⁶Renan, "Écrivains juifs," 645.

¹⁷Grau i Montserrat, "La juderia de Besalú," 1:367, fixes Yahse'el's death between April 1325 and January 1326.

Why might David Caslari, living in Languedoc/Catalunya around 1300, have singled out this relatively minor Galenic medical work for translation? As we have already pointed out, Gerard of Cremona's Latin version, *De malitia complexionis diverse*, was apparently "discovered" by Latin academic medicine in the 1290s through the agency of Arnau de Vilanova, who prepared a commentary on the work and helped see to it that it became a required element in the Montpellier curriculum formalized by Clement V in 1309. David Caslari might easily have heard of the interest being generated at Montpellier by the new work, for the Jewish medical community in the region was well acquainted with what was going on in the Christian faculty there, and it could have been brought to his attention (and a copy of the Latin text made available to him) in this way. Indeed, the prominence of fevers in the contents of *De malitia* might encourage pushing speculation a little further. In November 1325, David's physician son Abraham finished writing his work *'Aleph ra'anān* ("Green leaf"), a treatise (in five books) on fevers¹⁸; it is intriguing to wonder whether the availability of his father's new Galenic translation might have been one of the factors leading him to compose the work, and when the *'Aleph ra'anān* is eventually edited (at least five manuscripts of the work survive), we will be able to see whether it contains citations of *De malitia complexionis diverse*.

2. Caslari's translation technique

a. His encounter with his Latin source

Gerard of Cremona's translation of *De malitia complexionis diverse* was not the only one extant in David Caslari's lifetime. Two others had been completed in the early fourteenth century, both made from the original Greek version rather than from Hunayn's Arabic. One was prepared by Pietro d'Abano (d. 1315), the other by Niccolò da Reggio, apparently drawn up between 1308 and 1320.¹⁹ However, we would naturally presume that Caslari worked from Gerard's Latin version, for this was the one that was already established in academic use at Montpellier and elsewhere. Moreover, the two Greek-based translations apparently had very little circulation in the later Middle Ages, for García Novo has identified a mere three surviving copies of Pietro's version and only seven of Niccolò's. Our presumption is confirmed when we compare virtually any passages across the various versions. Consider, for example, these two sentences towards the end of 8.3:

And it seems that this symptom ['ārid] did not happen to anyone at all in the past [fī l-mutaqaddim], because no one followed this regimen of ease of life and the consumption of a large quantity of food. Therefore, we find ancient physicians judge [yāhkamūna] it to be necessary that rigor is followed by fever. (The Arabic version, translated literally.)

Et videtur quidem quod accidens hoc non accidit ante [ante AHO, post FPV] alicui penitus, quoniam non fuit aliquis hominum usus hoc regimine quietis et multitudinis cibi. Et propter hoc invenimus antiquos medicorum iudicantes quod necesse est ut tremorem consequatur febris. (The Latin version of Gerard.)

It seems that this accident will not happen at all to those people who are not used to a regimen of rest and much food. And for this reason we find that the ancient doctors

¹⁸Renan, "Écrivains juifs," 645.

¹⁹E. García Novo, *Galen, On the Anomalous Dyskrasia* (Madrid: Editorial Complutense, 2010), 73–91.

decree that it is absolutely necessary that tremor will carry fever with it. (The Hebrew version, translated literally.)

In ancient days [*palai*], as it seems, nobody suffered this way, because no one happened to spend his life in such inactivity and satiety, and for that reason, it has been written [*gegraptai*] by the ancient doctors that fever necessarily accompanies rigor [*rhigos*]. (The Greek version, translated by García Novo, 169, 171.)

Olim autem ut videtur nullus ita passus est, quia nemo sit otiosis et impletive dietatus, et ideo scriptum est ab antiquis medicis ex necessitate rigorem sequi febrem. (Translation of Pietro d'Abano, MS Cesena S.V.4, fol. 136va.)

Antiquiter autem ut videtur nemo ita patiebatur, quoniam nullus tantum otiose et implete dietabatur, et propter hoc scriptum est ab antiquis medicis ex necessitate sequi rigorem febrem. (Translation of Niccolò da Reggio, MS London, Wellcome 286, fol. 133rb.)

Numerous features here indicate the dependence of the Hebrew on Gerard's Arabic-based translation rather than on either of those made from the Greek: the repetition of '*arid/accidens*' in the Hebrew, a word not found in the Greek-based versions, as well as the echo of *yahkamuna* in Hebrew ("decree"), where the Greek-based translations instead follow Galen's language (*gegraptai*) in using *scriptum*; and, quite conclusively, Caslari's evident perpetuation in this passage of a scribal error found in some of the Latin manuscripts of the Gerardian text (which write *post* for *ante*) when he set the condition in the future rather than in the past. We can thus proceed to assess Caslari's Hebrew against Gerard's Latin in detail, with complete confidence. (Whether the two Greek translations are truly independent seems much less certain.)

How did David Caslari go about translating from a Latin manuscript? Scholarly studies of Latin-Hebrew translation practice are far rarer than those of Arabic-Latin translation. In the latter case, it is clear that one frequent approach was for an Arabic-reading assistant to translate the Arabic words out loud into a Romance vernacular, and for the translator to translate the Romance term into Latin,²⁰ but we have no reason to think that Caslari needed an intermediary to translate the Latin for him. To be sure, there are various signs in the translation as we have it that Caslari may have read the Latin text aloud in Hebrew, often word by word, sometimes phrase by phrase, and that an assistant copied down what he heard, but none of them is conclusive. In 6.1, for example, Latin *aer* should have been translated as '*avīr*', but instead was translated '*éver* (= *membrum*), suggesting the possibility of a word misheard in transmission, although the words are not sharply different orthographically—*aleph-bet-resh* versus *aleph-vav-yod-resh*—and the apparent mistranslation could have been the product of a later scribal error. Again, in the Middle Ages Jews typically pronounced (and often wrote) *dalet* occurring at the end of a word interchangeably with *tav*, and indeed, in 5.3 we find the plural of the word *ru(a)ḥ* (= "spirit") spelled as a scribe might have imagined he heard it, *ruhod*, rather than the correct *ruhot*. Similarly, some Jews pronounced the vowel "ah" as "oh," which could explain why in 7.2 "warm vapor" (properly *ha-ed ha-ḥam*) is spelled *ha-ed ha-ḥom*. Likewise, in 8.1, Latin *extremo* is translated as *keṣat* ("some") rather than the expected *keṣot*; the two words come from different Hebrew roots, but their second vowels can be easily confused in pronunciation (although here again a defective spelling may be involved instead).

²⁰See above, 11.

The Hebrew version of *De malitia complexionis diverse* that Caslari produced in the early fourteenth century is here and there quite different from the Latin version that Gerard of Cremona had set down, two hundred and fifty years before. Many of these differences arose as a result of evolutionary changes over time in the intermediary Latin text from which the Hebrew was ultimately created, as scribes committed errors of various kinds, and they are easy to pick out because Caslari usually translated the Latin carefully and nearly word for word; even the postpositive words that are used in Latin to channel the flow of thought but do not necessarily deserve translation into English are routinely replaced by a Hebrew equivalent: for example, *vero* and *autem* are both normally rendered 'omnam. A good example of this verbal evolution occurs in 5.2, where the word *dolor* that Gerard employed to translate وجع was in time mistakenly turned by Latin scribes into *calor* and therefore became *ha-hom* in Caslari's Hebrew version. Sometimes his faithfulness led him into error, as in 8.2, where Gerard's original text read *secundus*, which many late manuscripts converted into *sensus*; Caslari wrote here "sense of the second [body]," and it seems not improbable that he was following a Latin manuscript whose reading was something like *sensus al. secundus*. In a similar instance in 7.2, Gerard's *virtutem cause operantis* became *virtutem esse operantis* in later manuscripts, and we can infer that some of them preserved both readings, because Caslari wrote "the essence of the power of the cause's activity."

It is another mark of his faithfulness that passages omitted by eye-skip in the later Latin manuscripts also prove to be missing in Caslari's Hebrew text; in 8.1, for example, early manuscripts follow the Arabic in reading

manifesta est quod accidit eis passio et dolor, *et passio et dolor etiam accidit ei*,

but the italicized words have dropped out in many later ones, and they are not to be found in the Hebrew. Such changes to Galen's original meaning are evidently not Caslari's mistakes but accurate translations of what he had before him. In other instances, however, this is less clear. In 8.3, the Latin manuscripts regularly read

in hiis febribus etiam est diversa, *et est etiam diversa* in eo qui,

but nothing corresponding to the italicized phrase is present in the Hebrew. Was Caslari depending on a Latin copyist whose eye had slipped from one *diversa* to another? Was the Latin text correct, and was it Caslari's eye that slipped? Or did the eye of a Hebrew scribe slip in the century and a half intervening between Caslari's accurate original and Yehi'el's copy? At the moment we have no way of knowing.

The presence of chapter divisions (and sporadic chapter titles) in Caslari's translation is apparently a further indication of his dependence on a comparatively late Latin manuscript. We have shown previously (pp. 23–24) that chapter divisions and titles are present in a small number of the Latin manuscripts, and that their first introduction into the text seems to go back roughly to the last quarter of the thirteenth century. Caslari's Hebrew translation is marked off into eight chapters, which prove to coincide almost exactly with those in the few chapterized Latin manuscripts. Only Chapter 6 in the Hebrew is an exception, and it begins just one sentence before the start of the same chapter in the Latin version. Just three of its chapters carry titles, but they are evidently translations into Hebrew of the corresponding Latin ones:

Chap. 1: "he will put in it the difference between illnesses of an unbalanced complexion" (cf. G = *Galeni Opera* [1490]: *in quo ponit divisionem et subdivisionem malitiae complexionis diverse*).

Chap. 3: "he will teach in it all the essence of an illness of an unbalanced complexion and will put in it the difference between its kinds" (cf. G: *in quo determinat commune essentiam mal*<iti>*e complexionis diverse et docet communiter distinguere species eius*).

Chap. 4: "he will explain in it how a hot illness of an unbalanced complexion is generated" (cf. G: *in quo ponit qualiter generatur mala complexio diversa calida cum materia in musculo*).

Evidently the Latin manuscript from which Caslari worked was one of those relatively few copies into which chapter divisions had been inserted and at least some chapter titles incorporated.

Finally, the Hebrew presents a number of divergences from the Latin that are very likely to be the product of Caslari's difficulties in reading the manuscript from which he was translating and, in particular, his unfamiliarity with Latin handwriting. In 7.3, for example, where the Latin manuscripts read *qualitas*, Caslari seems to have thought he saw *equalitas*, for he translates *mi-shaveh*. He seems to have had particular problems with Latin abbreviations. In 3.4, *quoniam* (typically abbreviated *qñ*) is translated *ke-she* (= *quando*, typically abbreviated *qñ*); in 7.1, *tantum* (*tñ*) is translated *ve- 'omnam* (= *tamen* or *tñ*); and so forth. In 4.1, Latin *quanto* seems to have been misread as *quando* (*ve-ka-'asher*).

In general, however, when Caslari read the Latin accurately, he translated it competently. In a few instances (e.g., 5.1, 5.3) he mistakes the subject of the sentence for the object; once (7.3), he seems to have interpreted the Latin *cum* as meaning "when" rather than "since." His most serious misunderstanding was corrected by a later editor. In 4.1, the Latin version began "Cumque calor sanguinis que est in membro apostemoso," but the Hebrew version had left out any word for *calor* and had translated the word *apostemoso* (meaning "of the nature of a tumor or abscess [in Hebrew, *mursah*]") as *mitmagel*, "of the nature of pus [muglah]." In the margin, however, *mitmagel* has been corrected to *mitmarsem*, "aposteme-like," and below that correction a further note completely retranslates the original Latin phrase, now including the word *calor*, using the correct participle *mitmarsem*, and even glossing the participle as follows: "that is, possessing a *mursah*." In the next sentence of the Latin, the word *apostemoso* reappeared and was again rendered *mitmagel* in the Hebrew text, and again the word was corrected to *mursiy* in the margin, but this time the corrector went even further and added, in Hebrew characters, "b. l. [= be *la'az*, = 'in Latin'] *apostomosa*." From this point on, however, although the mistranslation persists in the text, it is not corrected again; perhaps the editor felt he had called sufficient attention to it already. The original translation of *apostemosus* as *mitmagel* probably goes back to Caslari, but the correction with transliterated Latin attached shows that a later student of the Hebrew text with a better command of Latin medical terminology may have been reading it in conjunction with a Latin copy of Galen's work. (The text and the marginal corrections are both in the same hand, presumably Yehi'el of Genzano's, who appears to have copied automatically what he found before him.)

b. Caslari's Hebrew: The art of writing

At the end of the twelfth century, Maimonides set down his views on the proper approach to translation:

If someone plans to translate from one language to another, and tries to render word for word and to follow the order and presentation of the original, he will have a very hard time doing it and his translation will end up faulty and untrustworthy. Al-Batrīq [a famous Greek-to-Arabic translator, c. 800] dealt with the works of Aristotle and Galen

in this manner, and as a result his translations are very confusing. It is wrong to translate like this; rather, a translator from one language to another first has to understand the subject-matter and then to express it in terms that will be best understood in the new language. He cannot achieve this without sometimes moving words back and forth [in a sentence], replacing a single word with several words (or several words with a single one), and even omitting some words and adding others, so that the subject will be dealt with clearly and understandably in the language in which he is expressing it. Hunayn ibn Ishāq treated the Galenic books in this way, and his son Ishāq did likewise with the Aristotelian ones. This is the reason why their translations are so remarkably understandable. . . .²¹

Maimonides might not have been entirely satisfied with David Caslari's translation of Galen. Caslari was certainly not as systematic a word-for-word translator as Gerard of Cremona, but as we have said, it was still, broadly speaking, the approach he tended to use in turning Latin into Hebrew. It was not that he ordinarily followed ploddingly the Latin word order in his Hebrew: he occasionally did that when the wording was simple and straightforward—

(2.2): **וְאֶל הַדָּבָרִים הַכְּרָתָה חַיָּב וּמְרוּם לְפִי שְׁבָעָבוּרִים יִתְאַמֵּת מֵהַשְׁמִישׁ לְכֹרֶךְ**

"And these things, necessity will oblige their remembrance because through them will be verified what we shall continue to narrate"; Lat., "Hec ergo sunt quorum necessario fuit rememorandum, ut per ipsa verificatur quod in sequentibus narrabo"

(4.2): **אמֵן מֵה שִׁיחַמּ רָאשׁוֹנָה, כִּשְׁגַּבְרַ הַחֹם, יִתְחַמֵּם הַדָּם אֲשֶׁר בְּגִידִים הַדּוֹפְקִים**

"But what will be heated first, when the heat becomes stronger, heated will be the blood which is in the pulsing veins"; Lat., "Primum vero quod ex sanguine calefit, cum in eo superfluit calefactio, est sanguis quod est in venis pulsatilibus"

—but he more often altered the sequence of words in the original sentence, changed singular nouns to plural, and the like.

In general, Caslari managed to replace each Latin word with a corresponding Hebrew word, but his replacements were by no means always identical, far less so than Gerard's Latin equivalents for Arabic words. In translating *De malitia* from Arabic into Latin, for example, Gerard had nine times replaced Hunayn's phrase *wa-dhalika anna* with the words *et illud ideo quoniam*, a curious verbal equivalence that can be traced as a kind of signature throughout many of Gerard's other Arabic–Latin translations.²² There is no corresponding consistency in Caslari's translation of the Latin phrase *et illud ideo quoniam*, which most often becomes *ve-hayah zeh* (3.1, 6.2, 6.4, 8.2) or *ve-ha-sibbah* (5.3, 6.3, 9.2), but it also appears as *ve-la-zehu* (5.1), *ve-la-zeh* (6.2), and *ve-hayah ken* (5.3). Again, we have already mentioned Caslari's concern to supply a Hebrew equivalent when he came upon one of the particles or other short words like *vero* or *autem*, much more important to Latin than to Hebrew, that shape the relation of one clause to another. He did not, however, maintain a set of standard equivalences. *Vero* and *autem*, as we have said, both usually become *'omnam* in

²¹ Translated from the text published in *Igrot ha-Rambam / Letters and Essays of Moses Maimonides*, ed. I. Shailat (Jerusalem: Ma'aleh Adumim, 5748/1987), vol. 2, 532. A slightly compressed translation of the entire letter from which this passage is taken is given in *Letters of Maimonides*, ed. L. D. Stitskin (New York: Yeshiva University Press, 5737/1977), 130–136. See also G. Bos, *Novel Medical and General Hebrew Terminology from the Thirteenth Century, Volume 2, Journal of Semitic Studies*, Supplement 30 (Oxford, 2013), 6–7.

²² M. McVaugh, "Towards a Stylistic Grouping of the Translations of Gerard of Cremona," *Mediaeval Studies* 71 (2009): 99–112.

David's Hebrew, but *tamen* is rendered variously by *'omnam* (8.2, 8.4), *ve-hinneh* (1.2), and *ve-ulam* (6.4); *verumtamen* by *'omnam* but also by *'aval* (2.2; 8.4), *ve-hinneh* (6.1), *ve-ulam* (6.4), and *u-ve-'emet*; and *quidem* by *be-'emet* (2.2, 3.2), *hinneh* (8.3), and *'ella* (1.2).

Nor is it just with connectives, particles, and the like that Caslari permitted himself a considerable freedom of translation. Somewhat surprisingly, he would occasionally do the same thing when dealing with more denotative Latin nouns and verbs. Gerard of Cremona had always translated the Arabic word *shay'* as *res*, whenever he came upon it in *De malitia*. However, when in his turn David Caslari encountered Latin *res* in Gerard's translation, he rendered it in a variety of ways: as *'illah* ("cause"; 3.2), and sometimes (6.3) as *davar* or *'inyan*. Gerard used the verb *provenire* three times in two consecutive sentences in 8.3–4, each time to translate Ar. *hadatha*, but Caslari used a different Hebrew verb in each case to translate Gerard's word: first *yithaddesh* ("occur"), then *yavó* ("come"), and finally *tigreh* ("happen"). To give one more example, Latin *resolutio* is rendered as both *killayon* and *hefsed* ("decay") by Caslari in 3.2, it is translated as both *hishtannut* and *mitpa'el* in one and the same sentence in 4.2, and shortly afterwards in 4.3 as *gevul*.

Indeed, at times his apparent search for an alternative translation could lead Caslari into patent absurdities. Ordinarily, he translated Latin *animal* quite normally as *ba'al hayyim* (6.3). But in 5.1, where what is in question is Galen's experiment of putting one's finger into the left side of a live animal's beating heart in order to feel its fiery hotness, Caslari instead translated *animal* as *ish* ("man")! Did he really intend the implication that he was making—or did he even recognize it—that Galen had practiced human vivisection, and that he, David, was endorsing it to his Hebrew readers?²³

We have referred to this variability as "freedom," but it might equally well be called "inconsistency." Caslari evidently did not think it important to try to find a single Hebrew equivalent for each Latin word that would convey to the Hebrew reader the fact that the same Latin term was in question each time the Hebrew appeared. Nor, indeed, did he think that the reverse was important: he used the same Hebrew word to represent a variety of Latin ones, again often in close proximity to one another. In 5.2, Hebrew *taklit* is used to translate both *terminus* and *principium* (although the translation of *principium* as *taklit* might also be a copyist's error for *tehillah* or *hathalah*; as a matter of fact, in 3.4 Caslari does indeed use *hathalah* to translate *principium*). In 8.3, *migreh* ("event") is used to render *accidens*—*migreh* was the standard equivalent for *accidens* in philosophical literature—but shortly thereafter it is also used to translate both *eventus* and *proventus* in one and the same paragraph (9.2)! *Derek* ("way") translates both *modus* and *dispositio* in 8.1 (elsewhere it also translates *via* and *semita*); *teva'* is used for *natura*, for *complexio*, and for *dispositio*, all in a single sentence of 3.4. We have already seen that *'inyan* was one of five Hebrew words that Caslari used to translate *res* (1.2, 3.1, 3.2, 3.4), but he also used it to render five other Latin words: *modus* (1.2, 2.3), *sermo* (7.3), *aliquid* (6.2), *esse* (3.4), and *dispositio* (8.3)! On the face of it, such variability appears quite surprising. Maintaining consistency of terminology throughout a discursive treatise would seem to be essential to developing a train of thought and constructing a rational argument, and indeed Galen's Greek, Hunayn's Arabic, and Gerard's Latin all manage to do this across the sequence of translations. David Caslari's inconsistency (or freedom) of language would presumably have made it hard for the Hebrew reader even to understand that a sequential argument was being worked out.

²³An excellent introduction to Galen's actual anatomical strategies, showing how he used animal dissections to make inferences about human anatomy, is J. Rocca, "The Brain beyond Kühn: Reflections on *Anatomical Procedures*, Book IX," in *The Unknown Galen*, ed. V. Nutton (London: Institute of Classical Studies, 2002), 87–100.

How might we explain this? At the outset we need to admit that Caslari's "freedom" was by no means unique to him. A century or so earlier, in translating Maimonides' *Guide to the Perplexed* from Arabic into Hebrew, Samuel ibn Tibbon, too, had used the word 'inyan to translate six different Maimonidean terms.²⁴ One might imagine that early thirteenth-century Hebrew had not been yet rich enough to find a supple range of equivalents for the elements in a more developed Arabic vocabulary, yet at the end of the century, we find Zerahyah ben Isaac ben She'altiel Ḥen doing exactly the same thing, using 'inyan to render six different Arabic terms in his translation of Maimonides' *Aphorisms*.

In David Caslari's case, at least, we can acknowledge that there were limits to his inconsistency, while agreeing that he was not as systematic a translator as Gerard of Cremona. We noted previously that Gerard seems to occasionally have searched for Latin synonyms for an Arabic word, perhaps to avoid repetitiveness, but this practice is by no means obtrusive, and it never prevents the Latin reader from following the course of an argument. With technical terms Gerard usually followed an invariable translation: for example, he always (eight times) rendered Ar. *ḥāl*, into Latin as *dispositio*. We have already commented on Caslari's inconstancy in translating *dispositio* as 'inyan, as *derek*, and as *teva*, but we should also recognize that these were unique occurrences and that, in most passages, he rendered Gerard's technical term with the word *tekunah* and thus made it possible to follow the chain of Galen's reasoning in Hebrew. Yet there remain the occasional passages—for instance, the sentence in 3.4 just commented on, in which he translated three different Latin terms as *teva*'—where his decisions as a translator were bound to stand in the way of the meaning of the text.

Perhaps we might wonder whether David Caslari could have been self-consciously attentive to features of literary quality and not always primarily concerned with scientific exactitude. His possible literary pretensions are implied by the reactions of his friend Abraham Bedersi, who once named him to a jury to judge a poetry competition,²⁵ and who wrote to him in the 1290s to ask for his views on a new poem. The letter takes for granted that Caslari shares Abraham's distaste for Spanish neologisms and Arabic literature, an old controversy in Jewish letters. Already in the tenth century Menahem ben Saruq and Dunash ben Labrat were famously debating the same issue. The letter also obviously takes for granted that Caslari will understand and appreciate Abraham's recondite allusions to the Bible and the Talmud. Here it is worth remarking on the very rare name given to David Caslari's grandson, Yahse'el b. Abraham Caslari, named for a son of Naftali mentioned obscurely once in Genesis and once in Numbers. Was it perhaps Yahse'el's grandfather rather than his father whose unusual familiarity with the Bible is suggested here?²⁶ Hence we might guess that David Caslari, not being a professional translator, sometimes chose his terminology in order to make his translation, in his view, more attractive as literature, without appreciating its cost to the meaning of Galen's argument. Yet this is not an entirely satisfactory answer, because it remains utterly perplexing why, on the other hand, he should sometimes have abandoned preexisting variety in favor of misleading uniformity, which would have worked against its quality as literature. In the end, all we can say is that it is by no means clear what "translation" meant to him and why he made the decisions that he did.

²⁴I. Efros, *Philosophical Terms in the Moreh Nebukim* (New York: Columbia University Press, 1924), 95–96.

²⁵J. Schirman, "Studies on the Poems and Letters of Abraham Bedresi," in *Yitzhak F. Baer Jubilee Volume on the Occasion of His Seventieth Birthday*, ed. S. W. Baron et al. (Jerusalem: Historical Society of Israel, 1960), 154–173, at 173.

²⁶Later Caslaris continued to give the name Yahse'el to their sons; Gross, *Gallia Judaica*, 620–621.

c. *Matters of vocabulary*

In translating Galen, Caslari also had to deal with a problem that confronted every medieval translator of scientific texts into Hebrew: the need to find verbal equivalents for the technical or philosophical terms in the target language, whether Arabic or Latin. In the twelfth century, Hebrew was still primarily a religious language whose vocabulary was almost entirely biblical, talmudic, or rabbinic, although a corpus of Hebrew scientific and philosophical literature was already beginning to take shape. With a few exceptions, however, a specifically medical Hebrew terminology really only began to develop in the thirteenth century.²⁷

Considerable attention has been given by historians to the many medieval translations from Arabic into Hebrew in this period, but comparatively little to the *Latin*–Hebrew translations that were made with increasing frequency during the fourteenth century in southern France and Catalunya, as Jewish scholars lost their familiarity with Arabic at the same time that they were coming to appreciate the growing sophistication of Latin academic medicine.²⁸ Lola Ferre was the first person who tried seriously to consider broad issues of technique, style, and competence in these translations from the Latin, and she herself has commented that, for the moment, the principal obstacle to such studies is the limited number of works for which both Latin and Hebrew editions currently exist. She had to base her pioneering study of 1991 on three brief translations of the fourteenth century with only a restricted medical range: one a set of medical aphorisms, and the other two treatises on medicines and their properties. Here she usefully called attention to a number of ways in which Jewish translators dealt with the problem of converting Latin medical terminology into Hebrew equivalents: (a) by giving existing biblical or rabbinic words a new medical significance; (b) by offering a semantic calque on a Greek or Latin original; (c) by using a periphrastic construction, that is, unpacking the meaning of a single Latin term into a longer explanatory Hebrew phrase; and (d) by transliterating the Latin term (or, as commonly in the case of medicines, the Romance equivalent for that term) into Hebrew characters.²⁹

More recently, Gerrit Bos has studied Hillel ben Samuel's Hebrew translation (1254) of Bruno Longoburgo's *Chirurgia*, identifying very similar kinds of new coinages or extensions of meaning, well over a hundred in all, in a new medical field, surgery. Such new coinages included semantic borrowings from the original Latin, broadening of meaning of biblical and rabbinic terms, and Hebrew transcriptions of Latin words.³⁰ Whether these words were commonplaces of a newly emerging Hebrew technical vocabulary or were unique to Hillel remains an open question, for Bos also considers contemporary Hebrew

²⁷For the translation movement of philosophical and scientific texts from Latin and Arabic into Hebrew, see A. S. Halkin and A. Sáenz Badillo, "Translation and Translators," in *Encyclopaedia Judaica*, 2nd ed. (Detroit: Macmillan, 2007), vol. 20, 94–102; D. Romano, "La transmission des sciences arabes par les Juifs en Languedoc," in *Juifs et judaïsme de Languedoc*, ed. M.-H. Vicaire and B. Blumenkranz (Toulouse: Privat, 1977), 363–386; G. Freudenthal, "Les sciences dans les communautés juives médiévales de Provence: Leur appropriation, leur rôle," *Revue des Etudes Juives* 152 (1993): 29–136; idem, "Arabic and Latin Cultures as Resources for the Hebrew Translation Movement," in *Science in Medieval Jewish Cultures*, ed. G. Freudenthal (Cambridge: Cambridge University Press, 2011), 74–105; M. Zonta, "Medieval Hebrew Translations of Philosophical and Scientific Texts: A Chronological Table," *ibid.*, 17–73.

²⁸L. García Ballester, L. Ferre, and E. Feliu, "Jewish Appreciation of Fourteenth-Century Scholastic Medicine," *Osiris*, 2d ser., 6 (1990): 85–117.

²⁹L. Ferre, "La terminología médica en las versiones hebreas de textos latinos," *Miscelánea de estudios árabes y hebraicos* 40 (1991): 87–107.

³⁰G. Bos, "Novel Medical and General Hebrew Terminology from the Thirteenth Century," *Journal of Semitic Studies* Supplement 27 (Oxford, 2011): 9–46.

translations of medical works from Arabic and shows that, for example, anatomical entities such as wrist, diaphragm, and armpit were expressed differently by different Hebrew translators, as though a unified anatomical terminology had not yet emerged. David Caslari was translating Galen fifty years or so after Hillel was active. How does his terminology compare?³¹

Galen's *Peri anomalou dyskrasias* was a work at the intersection of a number of medical fields that we might anachronistically call physiology, anatomy, and pathology, and it required the specialized vocabularies of all three in order to express its conclusions. This was, of course, just as true of the Hebrew version as of the Greek original. For all these vocabularies, Caslari could draw on a wide variety of Hebrew translations that had been produced since the second half of the twelfth century and were distributed to a lesser or greater extent in Jewish circles. For example, he could have found much broadly physiological language newly coined in the early thirteenth-century translations of Maimonides' *Guide to the Perplexed* from Arabic into Hebrew by Samuel b. Judah ibn Tibbon (d. 1232) and Judah al-Harizi (d. c. 1230). Both men composed glossaries to their translations of the *Guide* that contained a number of philosophical terms relevant to Caslari. They included words like *eykut* ("quality"), *hayayah* ("being"), *mezeg* ("compound"), *miqreh* ("accident"), *teva'* ("nature"), *tekunah* ("essence"), and *taklit* ("terminus"), all of which (with many others) thus became available for Caslari to deploy in his Galen translation two generations later.

The anatomical terminology used by Caslari in his translation overlaps with that used by thirteenth-century translators, and he employed it knowledgeably and intelligently, but it is still not clear how far this terminology had become standardized by Caslari's day and how far his uses arose out of his own specific intellectual formation. Of course, the names for many anatomical features were established in biblical language, and he normally used them, although at least once he used a nonbiblical term where a biblical one would have served him perfectly well. Latin *viscera*, for example, he translated as *'avarim pnimiyyim* ("interior members," an instance of Ferre's periphrastic constructions), even though *gravayim* ("entrails," as in, e.g., Exodus 29.13) would certainly have been familiar to him and had been employed by major translators like Nathan ha-Me'ati (fl. 1280) and Zerahyah ben Isaac ben She'altiel Hen (fl. 1290) for the Arabic equivalent *ahṣa'*.³²

But many human structures are never mentioned in the Bible, and terms for them had to be created. Consider the Hebrew word *qerum*, for example, which was being used by Nathan ha-Me'ati and Zerahyah Hen to translate Arabic *gašā'* ("membrane"). Hillel of Verona used a different word, *beqed*, to translate the Latin equivalent *panniculum* in Bruno's statement that "Sunt enim velamina cerebri duo panniculi, quorum unus dicitur dura mater et alias pia mater." In Caslari's translation of Gerard's Latin Galen, he renders *panniculum* as *qerum* and later translates the Latin phrase "duabus matribus [i.e., the pia and dura mater] cerebri" simply as *ha-shnei qerumim*, "the two membranes [of the brain]." In the same passage, he expands the Latin word *siphac* as "the *qerum* which is called *sifac*"; medieval anatomical Latin had adopted the word *siphac* as a transliteration of Arabic *sifāq*, denoting the peritoneum (above, pp. 14–15). Nathan and Zerahyah, translating from Arabic, sometimes rendered *sifāq* as *qerum* and sometimes simply transliterated it as Caslari would do; once, indeed, Nathan equated the two terms just as Caslari did: הקְרֻום הַנִּקְרָא צְפָק.

³¹For an account of Caslari's terminology more detailed than the general considerations that follow, see Bos, *Novel Terminology*, Volume 2, 165–170.

³²Cf. *ibid.*, 165–166.

This particular example, taken in conjunction with others, suggests that Caslari was well acquainted with existing translation terminology, even if Hebrew anatomical language was not yet fully standardized at the beginning of the fourteenth century.³³

As for Caslari's language for pathology, we have as yet relatively little comparable material by which to assess it. Yet, pathology and nosology were at the heart of *Peri anomalou dyskrasias*—the classification of fevers above all. The names of the continued fevers that are so important a feature in Galen's work were often passed on in Greek forms through the Arabic and Latin translations, and these continued to be transliterated by Caslari (e.g., *efiala*, *etika*, *shinoqa*), but to some extent he seems to have coined his own terminology in this area, above all in his efforts to create different equivalents for Gerard of Cremona's recurrent phrase *febris fixa* (translating Ar. الحمى الثابتة, "hectic fever").³⁴ When he refers to the four humors (*leħah*) whose imbalance is a cause of illness, his language is distinctive, although not necessarily original. *Colera rubea* (choler, red bile) is simply rendered as *adumah* "the red," and melancholia as *sheħorah* "the black"³⁵; the adjective "flegmatica" is translated *leħiyit*, as one might say "humor-ish."³⁶ For most other Latin disease names, he was able to find Hebrew equivalents in the Bible (*lepra* = צְרֻעָת) or earlier Hebrew medical literature (*ydropisis* = שִׁקְוֵה, *formica* = נַמְלָה),³⁷ and occasionally he would fall back on transliteration (*qaqrene* ["gangrene"], *herpes estiomenos*). Curiously, when Caslari first came upon Latin *cancer* in 1.1, he chose to transliterate it, but when the word came up again at the end of the work, in 9.1, he rendered it instead with the commonly used term *ṣarfan*, "crab." When his son's *Green Leaf* is edited, we may have a better idea as to whether Caslari's pathological terminology was to any extent idiosyncratic.

³³Cf. *ibid.*, 169.

³⁴*Ibid.*, 168–169.

³⁵*Ibid.*, 170.

³⁶*Ibid.*, 167.

³⁷Cf. Bos, *Novel Terminology* (n. 32), 32, 170.

II. THE TEXTS

A. The Arabic Text

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ¹

مَقَالَةٌ² فِي سُوءِ الْمَزَاجِ الْمُخْتَلِفِ لِجَالِيَّنُوسَ

تَرْجِمَةٌ³ حَنْينُ بْنُ اسْحَاقَ⁴

(Ch. 1)

١. قال جالينوس إن سوء المزاج المختلف ربما كان في البدن كله من الحيوان كالذى يعرض له من ذلك في النوع من الاستسقاء المعروف باللحمي وفي الحمى التي يجد صاحبها فيها الحر والبرد في حال واحدة ويسمى بها اليونانيون انفياليس⁵ وفي جل الحمىات الآخر خلا الحمى المعروفة بالثابتة⁶ المسماة باليونانية اقطيقوس.

٢. وقد يكون سوء المزاج المختلف في عضو واحد من الأعضاء أي عضو كان عند ما يعرض فيه الترهل وهو الورم البلغمي أو يحدث فيه الورم⁷ الدموي الحار⁸ وهو المعروف بقلغمونى أو⁹ يصير في حد ما قد أخذ في طريق الفساد والموت وهو الورم الذي يعرفه

١. الرحيم: اللهم صل على محمد وآلـهـ add. E عونك اللهم <...> add. B صلـى اللهـ عـلـىـ أـنـبـيـاءـ وـعـلـىـ أـلـهـ(ـ)ـ add. C رب يسر خيرا برحمتك يا أرحم الراحمين P

٢. مقالة في سوء المزاج المختلف لجالينوس: كتاب جالينوس في سوء المزاج المختلف BE كتاب جالينوس في سوء المزاج C

٣. ترجمة حنين بن اسحاق: نقل أبي زيد حنين بن اسحاق A

٤. اسحاق: المتطلب add. E

٥. انفياليس: انثياليس A¹ without punctuation بفياليس B انتياليس P ηπάλος g

٦. بالثابتة المسماة باليونانية اقطيقوس: بلاقطيقوس وهي الحمى الثابتة P

٧. الورم: الآخر add. B

٨. الحار وهو المعروف بقلغمونى: om. BEP

٩. أو: وهو أن B إلى أن C أو يصير في حد ما قد أخذ في طريق الفساد والموت وهو الورم الذي يعرفه

اليونانيون بغيرينا¹⁰ ويحدث¹¹ فيه الورم الآخر المعروف بالحمرة¹² والورم¹³ الآخر المعروف بالسرطان والجذام أيضاً من هذا الجنس وكذلك الأكلة والنملة إلأ¹⁴ أنَّ هذه العلل كلَّها لا تخلو من أن يكون معها فضل ينصب¹⁵ إلى العضو الذي تحدث فيه. وقد يكون من سوء المزاج المختلف صنف آخر من غير أن ينصب إلى الأعضاء فضل لكن تتغيَّر كيفيتها¹⁶ فقط عندما يغلب عليها¹⁷ الحرُّ أو البرد من الشمس أو¹⁸ عند رياضة تتجاوز المقدار الذي¹⁹ ينبغي أو²⁰ عند حفظ ودعة تجاوزان²¹ مقدار القصد أو غير ذلك مماً أشبهه. وقد يحدث²² سوء المزاج المختلف²³ في أبداننا أيضاً من الأشياء التي تلقاها من خارج بأن تسخن من²⁴ تلك الأشياء أو تبرد أو تجفَّ أو ترطب. وهذه

اليونانيون بغيرايا: γαγγούμενον g

10. بغيرينا: E بعنقراء >...< B بعنقراء C بعنقراء(?)

بعقربياً يعني فرحة الأكلة A بغيرايا P بغيرايا

without punctuation

11. ويحدث فيه الورم الآخر المعروف بالحمرة: om. BE

12. بالحمرة والورم الآخر المعروف: C

13. والورم الآخر المعروف: أو يحدث فيه الورم الآخر المعروف B أو يحدث فيه الأورام الآخر المعروفة E

14. إلا أنَّ هذه: BC

15. ينصب إلى العضو الذي تحدث فيه: g

16. كيفيتها: كيفيته B كلها

om. A

17. عليها: g

18. أو عند رياضة تتجاوز المقدار: أو رياضة مجاوزة للقدر BE

19. الذي ينبغي: om. BCE

20. أو عند حفظ ودعة تجاوزان مقدار القصد: E أو يغلب عليها البرد من مقاربة شيء بارد مثل الجمد أو

الجليد أو هواء شديد البرد BC

21. تجاوزان مقدار القصد: g <πάντως>

22. يحدث: B²

23. المختلف: B¹

om. BE

الأربعة²⁵ الأصناف من سوء المزاج بسيطة مفردة كما قد بيّنت في كتابي في المزاج.
 ٣. ومنه أيضاً أربعة أصناف آخر مركبة تكون إذا سخن البدن ورطب معاً أو²⁶ سخن وجفّ معاً أو برد ورطب معاً أو برد وجفّ معاً. ومن البَيِّن أنَّ هذه الأصناف من سوء المزاج إنَّما²⁷ تخالف أصناف سوء²⁸ المزاج المستوى لأنَّها ليست في جميع أجزاء البدن²⁹ الذي يفسد مزاجه موجودة. ففرضي في هذا الكتاب أنَّ أَخْبَر³⁰ كيف يكون تولَّد جميع³¹ أصناف سوء المزاج المختلف. وكِيْمَا يَكُون قولي في ذلك واضحاً فقد يَنْبَغِي أنْ أَذْكُر³² بحال³³ الأعضاء كلَّها وأبْتَدِي بذكر أَكْبَرِها التي³⁴ يَعْرَفُها من لِيْسَ عِنْدَه معرفة بالطَّبِّ فإنَّ الْيَدِينَ وَالرِّجْلِينَ وَالبَطْنَ وَالصَّدْرَ وَالرَّأْسِ لِيْسَ مَمَّا يَذْهَبُ أَمْرُهَا عَلَى أَحَدٍ.

(Ch. 2)

١. فلنعد إلى واحد منها فنقسمه إلى أقرب الأجزاء التي هو منها مركب حتى نقسم الرجل في المثل إلى الفخذ والساقي والقدم ونقسم³⁵ اليد إلى العضد والساعد والكفّ

om. AE. الأربعة 25

أو سخن وجفّ معاً: 26

إنَّما: g <μόνον> 27

om. P. سوء: 28

29. البدن الذي يفسد مزاجه موجودة: g τοῦ δυσοχράτως διακειμένου σώματος

أَخْبَر: ذَكَر B

31. جميع: BCE

32. أَذْكُرَكَ: ذَكَر BP

33. بحال: P.

34. التي يَعْرَفُها: الذي يَعْرَفُه B الذي يَعْرَفُها EP

35. ونقسم اليد إلى العضد والساعد والكفّ: B

ونقسم أيضاً³⁶ الكف إلى الأعضاء التي تخصّها وهي الرسغ والمشط والأصابع ونقسم الأصابع أيضاً إلى الأجزاء التي³⁷ تخصّها وهي مؤلّفة منها وهي العظام والغضاريف والرباطات والعصب والعروق الضوارب وغير الضوارب والأغشية واللحم والوتّرات والأظفار والجلد والشحّم.

٢. وأما هذه الأعضاء التي ذكرناها باخّرة فليس يمكن قسمتها إلى نوع³⁸ آخر بعد³⁹ لكنها أعضاء متشابهة للأجزاء أولية خلا⁴⁰ العروق الضوارب وغير الضوارب فإنَّ هذين مركّبان⁴¹ من الليف والأغشية كما قلت في كتابي في علاج التشريح. وقد وصفت أيضاً في ذلك الكتاب أنَّ بين الأعضاء الأولى المتشابهة للأجزاء فرجاً كثيرة وأكثر منها وأعظم في ما بين الأعضاء المركبة الآلية وربما وجدنا مثل تلك الفرج في⁴² الواحد من الأعضاء المتشابهة للأجزاء كما قد نجد ذلك في العظم وفي⁴³ الجلد. إلا أنَّ ما كان من الأعضاء لدينا فإنَّ بعض أجزائه ينطبق⁴⁵ على بعض فتخفي عن الحسَّ الفرج التي في ما بينها. وأما ما كان من الأعضاء صلباً يابساً⁴⁶ فإنَّك تدرك ما فيه من الفرج والخلل

36. أيضاً (αὖ): om. BCE

37. التي تخصّها وهي: BCE

38. نوع: CP

39. بعد: بعدها BCEP

40. خلا... مركّبان: *>...< אֲנוֹ אֶלְעָרוֹק אֶלְצָ'וָרְב >וְגַיְרָ אֶלְצָ'וָרְב מְרַכְבֵּן לִשְׁתָּ מַן אֶל עַצְּאָא אֶלְמַתְשָׁבָהָה' אֶלְגַּזְזָא'*

41. مركّبان: BEP

42. في الواحد: καθ' ἐν ὄτιοῦν g

43. وفي الجلد: A¹

44. الجلد: καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς ἐγγειορήσεσιν εἰρηται add. g

45. ينطبق على بعض: ἀλληλοις ἐπιπλόντα g

46. يابسا: جافا؟ B

بالحسٍ كما قد نجد في المشاش⁴⁷ من العظام. وفي خلل⁴⁸ تلك⁴⁹ المشاش⁵⁰ من العظام رطوبة بالطبع غليظة بيضاء أعدت للعظام لتفتدي بها. وأمّا المسامُ التي في الجلد فقد بيّنت في كتابي في المزاج كيف تحدث. فهذا ما كان يحتاج إلى الإذكار به ضرورة ليُضَع به ما أنا واصفه في ما بعد.

٢. وقد ينبغي الآن أن نقصد قصد سوء المزاج المختلف فنصف ما طبيعته وعلى كم ضرب يحدث. وقد قلنا في ما تقدّم إنَّه ليس يكون في أجزاء الجرم الذي يعرض فيه سوء المزاج المختلف مزاج واحد لأنَّ⁵¹ هذا أمر عامٌ مشترك لكلِّ سوء⁵² مزاج مختلف. وأمّا أصنافه فتابعة لطبيائع الأجرام التي تحدث فيها. فإنَّ حدوث سوء المزاج المختلف في اللحم المجرد⁵³ غير حدوثه في العضلة كما هي وكلِّ⁵⁴ واحد منها يكون على غير الجهة التي يكون عليها الآخر.

(Ch. 3)

١. من ذلك إنَّه إذا انصبَّ إلى عضلة فضل⁵⁵ حارَ فإنَّ ما⁵⁶ فيها من العروق التي هي

47. المشاش: المسام² B²

48. خلل: om. E

49. تلك: om. A

50. المشاش: المسام² B²

51. لأنَّ: om. LP

52. سوء: om. BCE

53. المجرد: المفرد: om. P

54. وكلَّ واحد منها يكون على غير الجهة التي يكون عليها الآخر: om. g

55. فضل: g

56. ما فيها من: om. g

أعظم عروقها الضوارب منها⁵⁷ وغير الضوارب تمتليء أولاً وتتمدد ثم من بعد ذلك العروق التي هي أصغر⁵⁸ ولا يزال كذلك⁵⁹ يسري حتى يبلغ إلى أصغر العروق. فإذا⁶⁰ غاص⁶¹ ذلك الفضل في تلك العروق فلم تضبوه ندر⁶² منه شيء من أفواه تلك العروق ورشع منه شيء فخرج من⁶³ نفس أبدان العروق. فإذا كان ذلك امتدات الفرج التي في ما بين الأعضاء الأول من⁶⁴ ذلك الفضل حتى يعرض لها أن تسخن وتبتل من جميع جهاتها من تلك الرطوبة المحيطة بها. وأعني بالأعضاء الأول في هذا الموضع العصب والرباطات والأغشية واللحم وقبل هذه نفس العروق الضوارب وغير الضوارب التي قد يعرض فيها خاصةً أولاً الوجع على أنحاء شتى. وذلك أن الفضل من داخلها يسخنها ويمدّها ويصدّعها والفضل من خارجها يسخنها ويزحمها⁶⁶ ويضغطها ويثقلها. وأما سائر الأعضاء فبعضها إنما تؤلمه السخونة فقط وبعضها⁶⁷ إنما يؤلمه الضغط⁶⁸ وبعضها يؤلمه الأمران جميعاً.

٢. ويقال لهذه العلة عند اليونانيين فلغموني وهي الورم الحار وهو سوء مزاج مختلف

om. BCE. منها: 57

add. L العرق: 58

ذلك: 59 LP

فإذا فاض: 60 g

غاص: 61 A¹ BCE فاض

62. ندر: AP ندر بمعنى سقط من جوف شيء A¹ بـز BCE¹ بـز CL

63. من نفس أبدان العروق: من نفس بدن العروق BCE من نفس تلك العروق L

διὰ τῶν χιτώνων g(K) διὰ τῶν κινούντων αὐτὸς χιτώνων g

64. من ذلك الفضل: om. A

65. بالأعضاء: ذكر الأعضاء الأول <...> A¹

66. ويزحمها ويضغطها: 0λιβονται g

om. L الضغط: 67

68. الضغط: الرطوبة B² فقط add. BC

يعرض في العضلة. وذلك أنَّ الدم⁶⁹ الذي⁷⁰ فيها يكون قد سخن وحدث له شبيه بالغليان ثمَّ تسخن بسخونته أولاً خاصَّةً أبدان⁷¹ العروق الضوارب وغير الضوارب ثمَّ جميع ما هو خارج عنها مما⁷² تفيض عليه حتَّى يستغرقه. ولا بدَّ من أن يقول الأمر في ذلك إلى إحدى خلَّتين: إماً أن يغلب الفضل الذي ينصب إلى العضلة فيفسد الأجسام التي يغلب عليها وإماً أن يغلب ذلك الفضل فتعود⁷⁴ العضلة إلى حالها الطبيعية. فائزَل⁷⁵ أولاً أنَّ الفضل غُلِبَ إذ كان الابتداء بما⁷⁶ هو أَحْمَد⁷⁷ وأولى⁷⁸ فاقول⁷⁹ إنَّ البرء يكون⁸⁰ عند ذلك على أحد ضرَّبين إماً بأنَّ تتحلَّ جميع تلك الرطوبة التي انصبَّت إلى العضلة وإماً بأنَّ تنضج. وأَحْمَد البرئين ما كان بالتحلَّ. وأَمَّا النضج فيلحة⁸² أمران ضرورة: أحدهما تولَّد المدة والأخر الجمع⁸³ والجمع ربَّما كان إلى أعظم الفرج⁸⁴ القريبة من

69. الدم: الورم C

70. الذي: التي A

71. أبدان: $\chiατώνας$ g

72. مما: بما E

73. خلَّتين: حالتين om. g LP

74. فتعود: فيعيد E

75. فائزَلْ: $\deltaή$ $\kappa\alpha\iota$ g

76. بما: إنَّا ALP

77. أَحْمَد: جيد BCE

78. وأولى: وأَحْمَد add. BC

79. فاقول: أن أقول A أقول BCE

80. يكون: α^{\wedge} g

81. بأن: أن L

82. فيلحة: فيحدث منه L

83. الجمع: $\alpha\piόστασις$ g

84. الفرج: القروح L

الموضع وأقلها⁸⁵ خطرا وهذا أحمد ما يكون من الجمع. وربما كان إلى أعظم الفرج⁸⁶ القريبة لكن تلك الفرجة⁸⁷ لا تكون بقليلة الخطر أو يكون في فرجة⁸⁸ قليلة الخطر لكنها لا⁸⁹ تكون أعظم الفرج⁹⁰ ولا⁹¹ قريبة.

٣. فإن كان ذلك في نواحي المعدة فلأحمد الجمع ما كان في⁹² الفضاء الذي في داخلها وإليه⁹³ في أكثر الأمر تنفجر المدة.⁹⁴ وأما الجمع⁹⁵ إلى ما دون الصفاق فردي. وإذا كان ذلك في نواحي الدماغ والجمع في التجويفين المقدمين منه محمود والجمع⁹⁶ تحت أمي الدماغ وفي التجويف الذي في مؤخر الدماغ مذموم ردئ. وأما في الخراجات⁹⁷ التي تكون في نواحي الأضلاع فانفجارها يكون إلى فضاء الصدر والخراءات التي تكون في العضل فانفجارها يكون نحو⁹⁸ الجلد. وأما الخراءات الحادثة في⁹⁹ الأحشاء

85. وأقلها خطرا: *άκυροτάτην* g

86. الفرج: *القروح* L

87. الفرجة: *القرحة* L

88. الفرجة: *القرحة* LP

89. لا تكون أعظم الفرج ولا قربية: *οὐ μεγίστην δέ* g

90. الفرج: *القرح* L

91. ولا قربية: *om. g*

92. في: *إلى* A¹LP

93. وإليه في أكثر الأمر تنفجر المدة: *g*

94. المدة: *om. g*

95. الجمع: *ما ينفجر AP الذي* C add.

96. والجمع: *om. A*

97. الخراءات: *άποστάσεις* g

98. نحو: *ύπο* g

99. في: *نحو* BE

فانفجارها يكون إما¹⁰⁰ إلى العروق التي¹⁰¹ فيها الضوارب منها¹⁰² وغير الضوارب وإنما نحو الغشاء الذي يحيط بها وهو لها بمنزلة الجلد.

4. فإن غلب الفضل على¹⁰³ الأعضاء فيبين¹⁰⁴ أنه يبلغ¹⁰⁵ من غلبة سوء المزاج المختلف¹⁰⁶ عليها أن يبطل فعلها ويفسد¹⁰⁷ على طول المدة. وأول سكون الألم عنها يكون إذا شبّهت بالشيء الذي يحيطها ويغيرها وذلك أنَّ الأعضاء ليس¹⁰⁸ إنما يعرض لها الألم¹⁰⁹ عندما يكون مزاجها قد استحال وفرغ لكن في حال الاستحاله كما وصف من أمرها العجيب أبقراط حين قال إنَّ الأوجاع إنما تكون في الأعضاء في حال¹¹⁰ تغييرها وفسادها وخروجها عن طبائعها. وإنما يتغير¹¹¹ كلَّ واحد من الأعضاء عن

100. إما: B¹.

101. التي فيها: فمنها E

102. منها: om. BCE

103. على: om. ABE في P

104. فيبين: فيقزن(?) L

105. يبلغ: ينبغي ABCE

106. المختلف: om. AP

107. ويفسد: ويعسر BCE

108. ليس: om. LP

109. الألم: لا add. P

110. في حال تغييرها وفسادها وخروجها عن طبائعها: διαλλασσομένοισι καὶ διαφθειρομένοισι g
111. يتغير: يخرج BCE

طبيعته ويفسد¹¹² إماً بأن يسخن وإماً¹¹³ بأن يبرد وإنما¹¹⁴ بأن يجف وإنما¹¹⁵ بأن يرطب وإنما¹¹⁶ بأن يتفرق اتصاله¹¹⁷. وإنما في سوء المزاج المختلف فمن قبل أن العضو يسخن أو يبرد خاصةً وذلك أن هاتين الكيفيتين أقوى الكيفيات فعلاً وقد¹¹⁸ يكون ذلك من¹¹⁹ قبل أن العضو يجف أو يرطب وإنما في الجوع والعطش فيعرض¹²⁰ الألم لفقد الجوهر اليابس في حال الجوع ولفقد الجوهر¹²¹ الرطب في حال العطش وإنما¹²² عند تأثير¹²³ ما يؤثر في العضو مما¹²⁴ ينخسه¹²⁵ أو يأكله أو يمدده أو يضغطه أو يفسخه فحدث¹²⁷ الألم يكون بسبب تفرق الاتصال.

.112. ويفسد: ويعسر BCE

.113. وإنما بأن: أو BCE

.114. وإنما بأن: أو BCE

.115. وإنما بأن: أو BCE

.116. وإنما بأن: أو BCE

.117. اتصاله: أيضاً له L

.118. وقد يكون ذلك من قبل: g ήδη δὲ καὶ διὰ

.119. من قبل أن العضو يجف أو يرطب: g τὸ ξηραίνεσθαι τε καὶ ὑγραίνεσθαι

.120. فيعرض الألم: g om. BCE: الرطوبة

.121. وإنما عند تأثير ما يؤثر في العضو ما ينخسه: g εν δὲ τῷ τιτρώσκεσθαι

.122. تأثير: om. BCE: BCE

.123. مما: ما ABCE

.124. ينخسه: يسخنه(?) C

.125. أو يفسخه: om. B

.126. فحدث الألم يكون: g om. BCE: BCE

.127. .127

(Ch. 4)

١. ومتى كانت حرارة الدم الذي¹²⁸ في العضو الوارم حرارة هادئة¹²⁹ وكان الدم الذي¹³⁰ يحويه البدن كله معتدل المزاج لم يك¹³¹ يعرض له أن يسخن بسخونة العضو العليل. ومتى¹³² كانت الحرارة من الدم الذي في العضو الوارم حرارة قوية أسرخن¹³³ البدن بقوه غليانه إن¹³⁴ كان الدم الذي¹³⁵ يحويه البدن كله قد غالب عليه المرار فإنه لا يلبث أن يسخن كله¹³⁶ سخونة مفرطة وأحرى أن يكون ذلك¹³⁷ متى ما¹³⁸ اجتمع الأمران¹³⁹ حتى¹⁴⁰ يكون الدم الذي في العضو الوارم قوي الحرارة والدم الذي في البدن قد غالب عليه المرار.

٢. وأول¹⁴¹ ما يسخن من الدم حتى تفرط عليه السخونة الدم الذي في العروق الضوارب من قبل أنه في طبيعته أسرخن وأقرب إلى طبيعة الروح ثم من بعده الدم الذي في العروق غير الضوارب. فإن كان العضو الوارم مجاوراً لبعض الأحشاء الغزيرة الدم كانت

128. الذي: التي BCE

129. هادئة: هادئ g

130. الذي: التي A

131. يك: يكن AL أن add. EL

132. ومتى كان الحرارة من الدم الذي في العضو الوارم حرارة قوية أسرخن البدن بقوه غليانه: [τοι δὴ] [τοι δὴ]

133. أسرخن البدن: σφοδρότερον g

134. وإن: أو إن A إن L

135. الذي: التي A

136. كله سخونة مفرطة: سخونة مفرطة كله BCE

137. ذلك: كذلك C ذلك كذلك BE

138. ما: BCELP om.

139. الأمران: جميعاً C

140. حتى: g

141. وأول ما يسخن من الدم حتى تفرط عليه السخونة: ἔκθερμαίνεται g

الحرارة منه تلجم إلى الدم الذي يحويه البدن كلّه أسرع. وبالجملة فإنّ أول ما يسخن من قبل كلّ شيء ما كان سريعاً إلى الاستحالة أو كان في طبيعته حاراً. وكذلك أول ما يبرد من قبل أنّ¹⁴² الشيء الذي يبرد إنّما¹⁴³ هو ما كان سريعاً إلى الاستحالة أو كان في طبيعته بارداً. وأسرع ما في البدن إلى الاستحالة الروح من قبل أنّه ألطفها¹⁴⁴ وأرقّها. وأسخن ما في¹⁴⁵ البدن المرة الصفراء وأبرد ما فيه¹⁴⁶ البلغم. وأمّا سائر الأخلاق فالدلم منها حارٌ بعد المرة¹⁴⁷ الصفراء والمرة السوداء باردة بعد البلغم. والمرة¹⁴⁸ الصفراء تستحيل بسهولة وسرعة¹⁴⁹ من كلّ ما يعمل فيها. وأمّا السوداء فيك¹⁵⁰ وشدة ما تستحيل. وبالجملة كلّ ما كان¹⁵¹ لطيفاً رقيقاً فهو سريع الاستحالة وكلّ¹⁵² ما كان ثخيناً غليظاً فبطيء¹⁵³ الاستحالة.

٣. فيجب من ذلك أن تكون الاستحالة الحادثة من الأورام مختلفة كثيرة الاختلاف لاختلاف حال الأجسام. أمّا أول الأمر فإنّ الخلط الذي يحدث عنه الورم إما أن يكون

أنّ الشيء الذي: كلّ ما L. 142

يبرد: أيضاً add. and deleted A add. BCE. 143

إنّما: om. BCE om. L. 144

ألطفها وأرقّها: λεπτομερέστατον g. 145

في البدن: φύσει g. 146

فيه: في البدن LP. 147

المرة: om. BCE. 148

المرة: om. BCE. 149

وسرعة: om. g. 150

فيك وشدة: δυσκόλως g. 151

كان لطيفاً رقيقاً: λεπτομερές g. 152

وكلّ... الاستحالة: om. P. وكلّ ما كان ثخيناً غليظاً: παχυμερές g. 153

فبطيء: فهو بطيء E فإنه بطيء L. 154

أزيد حرارة وإما¹⁵⁵ أن يكون أنقص حرارة. ثم من بعد ذلك فإنَّ عفونته إنما يكون بحسب طبيعته وبحسب¹⁵⁶ فضل لحوجه أو قلة لحوجه. فإنَّ ما لا تنفس له تكون العفونة إليه أسرع وذلك موجود في جميع الأشياء الخارجية. فإذا اتفق مع ذلك أن يكون مزاجها حاراً رطباً كان¹⁵⁷ ذلك أعنون على سرعة العفونة إليها. والعضو¹⁵⁸ الذي يحدث فيه الورم أيضاً إما أن يكون بالقرب من الأحشاء الغزيرة الدم وإما بالبعد منها. فإنَّ¹⁵⁹ الدم كلَّه¹⁶⁰ إنما تغلب عليه الصفراء¹⁶¹ والسوداء أو البلغم أو الريح وجميع¹⁶² هذه الأحوال تختلف في¹⁶³ القلة والكثرة. فيجب ضرورة أن تكون الاستحالة مختلفة كثيرة الاختلاف إذا قيس الواحد¹⁶⁴ إلى غيره وإذا قيس بنفسه.

(Ch. 5)

١. وهذه¹⁶⁵ كلَّها تكون¹⁶⁶ أسباباً لسوء المزاج المختلف وذلك أنَّ أغلب ما تكون

155. وإما أن يكون أنقص حرارة: وإما أنقص BE وإما أن يكون أنقص C

156. وبحسب: g: οὐχ ἥκιστα δὲ καὶ

157. كان ذلك أعنون على سرعة العفونة إليها: g: τότε δὴ καὶ μάλιστα

158. والعضو: وان كان add. A وان كان العضو P وان العضو L

159. منها: عنها BCE

160. كلَّه، إنما: كلَّه أيضاً BE أيضاً كلَّه C

161. الصفراء والسوداء: المرار الأصفر والمار الأسود LP المرة الصفراء والسوداء C

162. وجميع هذه الأحوال تختلف بالقلة والكثرة: g: καὶ ταῦτα σύμπαντα μᾶλλόν τε καὶ ἥπτον

163. في: ب- LP

164. الواحد: add g <σωματος>

165. وهذه كلَّها: وكلَّها BCE

166. تكون أسباباً: g: γίγνονται

الحرارة على الدم الذي هو في العضو¹⁶⁷ الوارم ثم من بعده على الدم الذي في الأحشاء¹⁶⁸ وخاصة¹⁶⁹ على الدم الذي في القلب ومن هذا خاصةً ما في تجويفه الأيسر فإنك إن عمدت إلى هذا التجويف من¹⁷⁰ القلب والحيوان بعد حيّ ولم تعرّض له بعد¹⁷¹ حمّى فأندخلت فيه إصبعك كما وصفت في كتابي في علاج التشريح أحسست منه¹⁷² بأقوى ما يكون من الحرارة. فليس بالبعيد متى كان البدن كله قد سخن سخونة خارجة عن الطبع أن يبلغ ذلك¹⁷³ التجويف خاصةً من القلب غاية الحرارة. وممّا¹⁷⁴ يعين على ذلك أنَّ فيه من الدم أرقه وأقربه من طبيعة الروح ويتحرّك أيضاً حركة دائمة.

٢. إلا أنه يوجد في أمثال هذه من الحميات الدم كله قد¹⁷⁵ استحوذت عليه السخونة وقبل تلك الحرارة الخارجية عن المجرى الطبيعي المتولدة عن عفونة الأخلاط قبولاً¹⁷⁶ مستحكماً. وأمّا أبدان¹⁷⁷ العروق الضوارب وغيرها من الأجسام التي تجاورها وتحيط

العضو الوارم:	167
الأحشاء:	168
وخاصة:	169
من القلب:	170
بعد:	171
منه:	172
ذلك التجويف خاصةً من القلب	173
وممّا يعين على ذلك:	174
قد استحوذت عليه السخونة:	175
قبولاً مستحكماً:	176
أبدان:	177

بها فليس يوجد قد ¹⁷⁸ تغير مزاجها ¹⁷⁹ وفرغ تغيراً تماماً ¹⁸⁰ مستحکماً ¹⁸¹ لكنها تكون بعد هوندا ¹⁸² تستحيل وتتغير إلى ¹⁸³ السخونة. وإن دام ذلك بها مدة طويلة صارت إلى حد تكون فيه قد غلت واستحالت أصلاً حتى ¹⁸⁴ لا تكون عند ذلك في حد ما هوندا يسخن فيه لكن تكون في حد ما قد سخن وفرغ من ¹⁸⁵ سخونة خارجة عن الأمر الطبيعي. وحد الاستحالة في كل واحد من الأعضاء هو ضرر الفعل. ¹⁸⁶ وأمام العرض كله الذي ¹⁸⁷ منذ أول الأمر إلى أن ينتهي إلى هذا الحد فإنما هو طريق الخروج إلى الحال الخارجة عن الأمر الطبيعي ممزوج ¹⁸⁸ مشترك متوسط في ما بين الضدين أعني بين الحال التي هي بالحقيقة طبيعية وبين الحال التي هي خارجة عن الطبيعة أصلاً. ففي هذه المدة كلها من الزمان يكون بالجسم الذي يسخن من الوجع بمقدار ¹⁸⁹ ما يناله من الاستحالة.

.178 قد: فيه L

.179 مزاجها: مزاجه AL

.180 تماماً محکماً: teλέως g

.181 مستحکماً: A¹ محکماً ABCE

.182 هوندا: مدة BCE

.183 إلى السخونة: g θερμανόμενα

.184 حتى لا تكون عند ذلك في حد ما هوندا يسخن فيه لكن تكون في حد ما قد سخن وفرغ من سخونة خارجة عن الأمر الطبيعي: οὐδὲ τεθερμάνται παρὰ φύσιν g μηκέτι θερμαίνεσθαι μόνον, ἀλλά ἡδη

.185 من: om. BEP

.186 الفعل: فعله BCEP

.187 الذي: om. A

.188 ممزوج: وأمر ممزوج C أمر ممزوج οἴον ἐπίμικτον g L

.189 بمقدار ما يناله من الاستحالة: g ποσῷ τῆς ἀλλοιώσεως ἀνάλογον

٢. فإذا سخن جميع الأعضاء الأصلية¹⁹⁰ من البدن السخونة التامة¹⁹¹ المستحكمة قيل لتلك الحمى اقطيقوس¹⁹² وهي¹⁹³ الثابتة وذلك أنَّ قوامها عند ذلك ليس يكون بالرطوبات¹⁹⁴ والروح فقط لكنه¹⁹⁵ يكون مع ذلك في الأجسام التي لها ثبات وليس¹⁹⁶ مع هذه الحمى ألم ولا وجع ويظنَّ صاحبها أنَّه لا حمى به أصلاً وذلك¹⁹⁷ أنَّ صاحبها لا يحسَّ بحرارتها لأنَّ أعضاءه كلَّها تكون قد سخنت سخونة مستوية¹⁹⁸ على حال واحدة. وقد اتفق على هذا أصحاب النظر في أمر الطبائع عند نظرهم في أمر الحواسَ من أنَّ الحسَ ليس يكون بغير¹⁹⁹ استحاللة ولا يكون الألم²⁰⁰ والوجع في ما قد استحال وفرغ. ولذلك صارت كلَّ حمى²⁰¹ من هذا الجنس الذي ذكرناه قبل المسمى اقطيقوس ليس معها ألم ولا وجع ولا يحسَّ بها صاحبها أصلاً وذلك إنَّه ليست حال الأعضاء منه حال ما يكون بعضها يفعل وبعضها ينفع إذ كانت كلَّها²⁰² قد صارت بحال واحدة وصار

الأصلية: g. 190

التامة المستحكمة: g. 191

اقطيقوس: ايطيقوس A without punctuation. 192

وهي الثابتة: om. g. 193

بالرطوبات: في الرطوبات LP. 194

لتكن: لكن BCE. 195

وليس مع هذه الحمى ألم ولا وجع: g. 196

وذلك أنَّ صاحبها: لأنَّ BCE. 197

مستوية على حال واحدة: g. 198

بغير استحاللة: إلا بالاستحاللة BCE. 199

الألم والوجع: g. 200

كلَّ حمى من هذا الجنس الذي ذكرناه قبل المسمى اقطيقوس: g. 201

ليس معها ألم ولا وجع: g. 202

كلَّها: A¹. 203

مزاجها مزاجا²⁰⁴ واحدا متفقا.

(Ch. 6)

١. وإن كان أيضا بعضها أزيد سخونة وبعضها أزيد ببردا²⁰⁵ فإن ليس يبلغ من فضل سخونة ما هو منها أحسن على ما هو منها أبред أن يؤذى ما يجاوره بسخونته. ولو كان الأمر كذلك لقد كانت الأعضاء سبباً لبعضها البعض وهي بالحال الطبيعية فإن الأعضاء في²⁰⁶ تلك الحال أيضاً مختلفة في مزاجها. وذلك أنَّ اللحم عضو حارٌ والعظم عضو بارد إلا أنَّ اختلاف²⁰⁷ هذه وغيرها²⁰⁸ مما²⁰⁹ أشبهها ليس معه وجع ولا ألم من قبل قلة²¹⁰ التفاضل بينها في الحر والبرد. من ذلك أنَّ الهواء المحيط بالأبدان ليس يؤذنها دون أن يستحيل حتى يفرط عليه الحر أو البرد. وأما أصناف اختلافه في ما بين إفراط الحر وإفراط البرد على كثرتها وبيان التفاضل²¹¹ بينها فإنَّ الأبدان²¹² تحسنها بلا أذى بها.
٢. فتكاد²¹³ النفس²¹⁴ على هذا القياس أن²¹⁵ تسكن إلى ذلك²¹⁶ القول الذي قيل كما

204. مزاجا: om. BCE.

205. ببردا: ببرودة E.

206. في تلك الحال: om. g.

207. اختلاف: ἀνωμαλία g.

208. وغيرها: om. BCE.

209. مما أشبهها: وما شاكلها B وما شابلها CE.

210. قلة التفاضل بينها في الحر والبرد: τῷ μετρίῳ τῆς ὑπεροχῆς g.

211. التفاضل: ὑπεροχὴ g.

212. الأبدان تحسنها: αἰσθανόμεθα g.

213. فتكاد النفس على هذا القياس أن تسكن إلى القول الذي قيل: κινδυνεύει τοι γαρ οὖν ἐκ τῶνδε.

214. النفس: A <...>.

215. أن: om. A.

216. ذلك: om. A.

قال أبقراط في²¹⁷ بعض كتبه إنَّ جميع الأمراض إنَّما هي قروح. وذلك أنَّ القرحة إنَّما هي تفرق الاتصال والحرارة المفرطة والبرد المفرط يكاد أن يفرقان الاتصال. أمَّا الحرارة الشديدة²¹⁸ فمن قبل أنَّها تفرق وتنقطع اتصال الجوهر الذي²¹⁹ تغلب عليه وأمَّا البرد المفرط فمن قبل أنَّه يجمع ويعصر²²⁰ الجوهر الذي²²¹ يغلب عليه إلى داخل حتى يندر²²² منه شيء فيخرج ويضغط²²³ ما يبقى منه ويفسخه. وإن جعل جاعل هذا هو الحد في إفراط الحر والبرد فخليق²²⁴ أن يكون غير بعيد من أن يتوجه عليه أنَّه قد أصاب. إلا أنَّه إن كان هذا²²⁵ هو الحد في²²⁶ الإفراط وإن كان الحد في²²⁷ ذلك غيره فالأمر على حال بين أنَّ كلَّ إفراط²²⁸ إنَّما يفهم على طريق الإضافة إلى شيء. وذلك أنَّه ليس الذي ينال كلَّ بدن من الأشياء التي²²⁹ هي بحال واحدة من الحر والبرد شيء²³⁰ واحد.

.217 في بعض كتبه: g

.218 الشديدة: المفرطة A الشديدة المفرطة P

.219 الذي تغلب عليه: g

.220 ويعصر: ويقبض BCE

.221 الذي تغلب عليه: g

.222 يندر: يبرز B يبرز C يبدر P يتبدد¹ A يبدر L يندر منه شيء فيخرج: g

.223 ويضغط ما يبقى منه ويفسخه: g

.224 فخليق أن يكون غير بعيد من أن يتوجه عليه أنَّه قد أصاب: g
tάχ' ἀν οὐκ ἀπό τρόπου γιγνώσκειν δόξειεν g

.225 هذا: ليس BL add.

.226 في الإفراط: g

.227 في ذلك غيره: A¹ في غير ذلك A

.228 إفراط: g

.229 التي هي بحال واحدة: om. g

.230 شيء واحد: أمرا واحدا BC أمر واحد E

٣. ولذلك صار بعض الحيوان يوافق²³¹ ما فيه من الأخلاط بعضه بعضه وبعضه²³² ليس تلك الأخلاط بموافقة من البعض منه للبعض لكنها مع ذلك مفسدة²³³ قاتلة مثل الإنسان والأفعى فإنَّ لعاب كلَّ واحد منها للأخر قاتل. ومن هذا الطريق صار الإنسان إذا بزق²³⁴ على العقرب وهو على الريق قتلها وأمَّا الإنسان فليس يقتل إنساناً مثلاً إذا عضَّه ولا الأفعى تقتل الأفعى²³⁵ ولا²³⁶ الثعبان²³⁷ الثعبان. ولذلك أنَّ المثل موافق محبوب والضدَّ عدو مؤذ. وممَّا يدلُّ على ذلك أنَّ جميع ما ينمِي ويغتنمي إنما ينمِي ويغتنمي بمثله²³⁸ وشبيهه وكلَّ ما يعطب وينقض²³⁹ فإنما يعطب وينقض²⁴⁰ من ضده. ولذلك حفظ الصحة إنما يكون بالأشياء²⁴¹ المشاكلة المشابهة للأبدان الصحيحة والبرء²⁴² والشفاء من الأمراض إنما يكون بالأشياء المضادة لها إلَّا أنَّ الكلام في هذا غير ما نحن فيه.

.231. يوافق ما: موافقاً بما BCE

.232. وبعضه ليس تلك الأخلاط بموافقة من البعض منه للبعض: وبعضه <...> الأخلاط ليس يوافق من البعض

منه للبعض B وبعضه ليس الأخلاط يوافق البعض منه للبعض C وبعضه ليس الأخلاط موافقة من البعض منه

البعض E وليس الأخلاط بموافقة من البعض منه للبعض P

.233. مفسدة قاتلة: g φθαρτικούς

.234. بزق: بصدق BCE

.235. الأفعى: مثلاً BCE

.236. ولا الثعبان الثعبان: om. BCE

.237. الثعبان: g ἀσπίς

.238. بمثله وشبيهه: πρόδος τῶν ὁμοίων g

.239. : وينقض BCE

.240. وينقض: om. BCE

.241. بالأشياء المشاكلة المشابهة للأبدان الصحيحة: g διὰ τῶν ὁμοίων

.242. والبرء والشفاء: ἀναιρέσις g

٤. وأما تلك الحمى الثابتة التي²⁴³ تشبّث بالجوهر الثابت²⁴⁴ من جوهر الحيوان²⁴⁵ فإنّ صاحبها لا يحسّها وأما سائر الحمىّات فليس منها شيء لا²⁴⁶ يحسّ صاحبها إلا أنّ بعضها²⁴⁷ ما²⁴⁸ يحسّ صاحبها وتتأذى به أكثر وبعضها ما²⁴⁹ يحسّ أقلّ. ومن الحمىّات حميّات يكون معها نافض وهذا العارض أيضاً أعني النافض مثل كثير من غيره من الأعراض إنّما يكون عن سوء المزاج المختل. وليس يمكن أن أصف كيف يتولّد هذا العارض في هذا القول الذي أنا فيه دون أن أبين القوى الطبيعية كم هي وأيّ القوى هي وما²⁵¹ الذي من شأن كلّ واحدة منها أن تفعل. لكنني سأصف²⁵² أمر²⁵³ جميع الأعراض في كتابي في العلل والأعراض.

(Ch. 7)

١. وأنا راجع إلى أصناف سوء المزاج المختل. وقد قلت في ما تقدّم كيف يتولّد

التي تشبّث بالجوهر الثابت من جوهر الحيوان: g .243
الثابت: g .244

الحيوان: البدن B .245

لا: ليس ALP .246

بعضها ما يحسّ صاحبها وتتأذى به أكثر وبعضها ما يحسّ أقلّ: ἡττον̄ .247
ἀνιαροί τοις νοσούσιν g .248

ما: BCE .248

ما يحسّ: BCE .249

ومن الحمىّات حميّات: ومنها ما BCE .250

وما الذي من شأن كلّ واحدة منها أن تفعل: g .251

سأصف: أصف BCE .252

أمر جميع الأعراض: g .253

الحمى²⁵⁴ عن²⁵⁵ الورم الحار المسمى فلغموني وأن كلَّ ورم من هذا الجنس وكلَّ حمى²⁵⁶ خلا الحمى التي²⁵⁷ تعرف بالثابتة هي من الأمراض التي يكون فيها المزاج مختلفاً. وقد تكون حميات من عفونة الأحلاط فقط من²⁵⁸ غير ورم وذلك أنه ليس الذي يعفن²⁵⁹ هو ما قد لحقه وعده التنفس فقط لكن أسرع ما تكون العفونة إلى هذا وأقوى ما تكون عليه وقد²⁵⁹ تعفن أشياء أخر كثيرة مما هي متهدية لأن تعفن. وسنصف الأمر في تهيئة ما هو متهدية للعفونة في كتاب غير هذا.

٢. وقد يكون سوء المزاج المختلف على جهة أخرى في البدن كله وربما كان ذلك عند احتقان بخار حار فيه وربما كان تزييد الحرارة بسبب رياضة²⁶⁰ أكثر من المقدار الذي ينبغي وربما كان من قبل أنَّ الدم سخن²⁶¹ وعلى غلياناً مفرطاً بسبب غضب أو سخن سخونة مفرطة²⁶² بسبب²⁶³ لبث في شمس حارة. ومن بين عندي أنَّ جميع هذه الحميات الحادثة²⁶⁴ عن الأورام بحسب قوة السبب الفاعل في الأبدان²⁶⁵ وبحسب حال كلَّ واحد من الأبدان قد تكون الحمى في بعض الأبدان أقوى وفي بعضها أضعف

الحمى: g. 254 πυρετός ἄπας

عن الورم الحار المسمى فلغموني: g. 255 ἐπὶ φλεγμονῇ

التي تعرف: المعروفة BCE. 256

من غير ورم: g. 257 χωρίς φλεγμονής

يعفن: دائمًا add. A إنما add. L. 258

وقد: وقت AB. 259

رياضة: g. 260 ἥπόνων add. g.

سخن وغلي: g. 261 ζέσαντος

مفرطة: g. 262 ἔξωθεν add. g.

بسبب لبث في شمس حارة: g. 263 δι' ἔκκαυσίν τινα g.

الحادية عن الأورام: g. 264 ὕποπτο καὶ τῆς φλεγμονῆς ἔμπροσθεν ἐλέγετο

البدان: للأبدان(؟) للحيوان P². 265

وبعضها لا تحمّ أصلاً.

٣. ومن البَيْنَ أَنَّ سَوْءَ الْمَزَاجِ رِبَّمَا²⁶⁶ حَدَثَ فِي الرُّوحِ فَقَطْ وَرِبَّمَا تَجَاوزَهَا إِلَى الْأَخْلَاطِ أَيْضًا. وَمَمَّا لِيْسَ بِدُونِ ذَلِكَ فِي الْبَيَانِ أَيْضًا أَنَّ جَمِيعَ الْحَمَّيَّاتِ إِذَا تَطَاوَلَتْ قَدْ تَلَقَّهَا الْحَمَّى التَّثَابَةُ وَكَانَهُ²⁶⁷ قَدْ تَبَيَّنَ مِنْ هَذَا الْقَوْلِ أَنَّ سَوْءَ الْمَزَاجِ الْمُخْتَلِفُ رِبَّمَا حَدَثَ عَنْ رَطْبَوْيَّةٍ حَارَّةٍ أَوْ بَارِدَةٍ تَسِيلٍ إِلَى عَضُوٍّ مِّنَ الْأَعْضَاءِ كَمَا وَصَفَتْ مِنْ²⁶⁸ أَمْرِ الْأَعْضَاءِ الَّتِي يَحْدُثُ فِيهَا الْوَرَمُ. وَرِبَّمَا²⁶⁹ لَمْ يَكُنْ الْأَمْرُ كَذَلِكَ لَكِنَّهُ يَكُونُ عِنْدَ تَغْيِيرِ مَزَاجِ الْبَدْنِ فِي كَيْفِيَّتِهِ. وَإِنَّ بَعْضَ الْأَسْبَابِ الَّتِي تَغْيِيرَهُ تَهْبِيجُ مِنْ نَفْسِ الْبَدْنِ وَبَعْضُهَا تَأْتِيهِ مِنْ خَارِجِهِ. إِمَّا عَنْدَ حَدُوثِ الْحَمَّى عَنْ عَفْوَنَةٍ وَحْدَهَا إِمَّا عَنْ بَعْضِ الْأَوْرَامِ²⁷⁰ فَمِنْ²⁷¹ نَفْسِ الْبَدْنِ. أَمَّا عَنْدَ²⁷² حَدُوثِ الْحَمَّى عَنْ سُخُونَةِ الشَّمْسِ أَوْ عَنْ إِفْرَاطِ الرِّيَاضَةِ فَمِنْ خَارِجِهِ. وَسَأَصْفُ ذَلِكَ بِأَكْثَرِ مِنْ هَذَا الْقَوْلِ²⁷³ فِي كَتَابِنَا²⁷⁴ فِي²⁷⁵ أَسْبَابِ الْأَعْرَاضِ. وَكَمَا قَدْ تَحَدَّثُ²⁷⁶ الْحَمَّى عَنْ حَرَارَةِ الشَّمْسِ إِذَا اسْتَحَالَ مَزَاجُ الْبَدْنِ كَذَلِكَ قَدْ يَعْرُضُ لِبَعْضِ النَّاسِ مِنْ بَرْدَ الْهَوَاءِ كَثِيرًا أَنْ يَغْلِبَ عَلَيْهِمُ الْبَرْدُ غَلِيْةً قَوِيَّةً فِي الْبَدْنِ كَلَّهُ حَتَّى يَمُوتُ بَعْضُهُمْ. وَالْأَمْرُ

266. رِبَّمَا حَدَثَ فِي الرُّوحِ فَقَطْ وَرِبَّمَا تَجَاوزَهَا إِلَى الْأَخْلَاطِ: ποτὲ μὲν ταύτης τῆς πνευματώδους εἰνίοτε δ' ἀπτεται καὶ τῶν χυμῶν g καὶ g. 267. وَكَانَهُ: g.

268. مِنْ أَمْرِ الْأَعْضَاءِ الَّتِي يَحْدُثُ فِيهَا الْوَرَمُ: g.

269. πολλάκις: g.

270. الْأَوْرَامُ: g.

271. فَمِنْ: فَذَلِكَ لَا مَحَالَةٌ مِّنْ P.

272. عِنْدَ: BE.

273. الْقَوْلُ: الْوَصْفُ LP.

274. كَتَابِنَا: كَتَابٌ BCEP كَتَابِيٌّ P.

275. فِي: om. BCEP.

276. مِنْ بَرْدَ الْهَوَاءِ: om. BE.

في هؤلاء²⁷⁷ أيضا كلهم بين أنهم يعرض لهم الألم والوجع.

(Ch. 8)

1. وقد يعرض²⁷⁸ الألم والوجع أيضا لمن غالب عليه البرد غلبة قوية من قر²⁷⁹ شديد ثم رام أن يسخن بدنـه إسخانا سريعا بالاصطـلـاء. ²⁸⁰ وكثير²⁸¹ مـمن أصابـه ذلك لـما أدنـا بـدـنه²⁸² من النـار بـغـفـة أـحـسـ بـوجـع شـدـيد جـدـاـ في أـصـوـل الأـظـفـارـ. فـمـن يـقـدـم²⁸³ وـهـو يـرـى عـيـانـاـ فـي هـذـهـ الـحـالـ أـنـ السـبـبـ²⁸⁴ فـي الـأـلـمـ وـالـوـجـعـ إـنـمـاـ هـوـ سـوـءـ الـمـزـاجـ²⁸⁵ الـمـخـلـفـ أـنـ يـدـفـعـ ذـلـكـ فـي الـأـوـجـاعـ الـتـيـ تـعـرـضـ مـنـ دـاـخـلـ أـوـ²⁸⁶ يـتـعـجـبـ كـيـفـ يـعـرـضـ الـوـجـعـ كـثـيرـاـ لـلـنـاسـ مـنـ غـيـرـ وـرـمـ²⁸⁷ إـمـاـ فـيـ الـمـعـيـ²⁸⁸ الـذـيـ يـسـمـيـ قـوـلـونـ وـإـمـاـ فـيـ الـأـنـثـيـنـ²⁸⁹ وـإـمـاـ فـيـ غـيـرـهـاـ²⁹⁰ مـنـ سـائـرـ الـأـعـضـاءـ وـذـلـكـ أـنـ لـيـسـ شـيـءـ مـنـ هـذـاـ بـعـجـبـ. وـلـاـ كـيـفـ تـعـرـضـ الـحـمـىـ وـالـنـافـضـ لـعـضـ النـاسـ فـيـ حـالـ وـاحـدـةـ مـنـ قـبـلـ أـنـ إـذـاـ كـثـرـ فـيـ الـبـدـنـ الـخـلـطـ الـبـارـدـ

في هؤلاء أيضا: أيضا في هؤلاء .277
 يعرض الألم والوجع لمن: .278
 αλλούσιν g .279
 قر: فرط P بـرـدـ BCE
 بالاصـطـلـاءـ: om. g .280
 وكثير مـمن أصابـه ذلك: .281
 πολλοί γε αὐτῶν g .282
 τὰς χειρας g .283
 بـدـنهـ: يـقـدـمـ يـقـدـمـ LP A²...أنـ يـدـفـعـ ذـلـكـ: .284
 السـبـبـ فـيـ الـأـلـمـ وـالـوـجـعـ: .285
 BCE المـزـاجـ المـخـلـفـ: مـزـاجـ مـخـلـفـ .286
 أوـ يـتـعـجـبـ: أوـ يـعـجـبـ A¹P أوـ تعـجـبـ L .287
 وـرـمـ: φλεγμονής g .288
 المـعـيـ الـذـيـ يـسـمـيـ قـوـلـونـ: το κόλον g .289
 الأنـثـيـنـ: οδόντας g BCEL τοὺς ὄοχεις corr. g (following Hunayn) .290
 غيرـهـاـ: غيرـهـماـ LP

البلغمي الذي²⁹¹ يشبهه²⁹² فركساغورس بالزجاج والخلط²⁹³ الحر الذي من جنس
الصفراء²⁹⁴ حتى يغليا²⁹⁵ معا على البدن ويتحركا²⁹⁶ فيه²⁹⁷ وخاصة²⁹⁸ في
الأعضاء²⁹⁹ الحساسة فليس بعجب أن يحس من تلك حالة بالأمررين جميعا. فإنك إن³⁰⁰
عمدت إلى إنسان فاقمته في شمس حارة ثم رششت عليه ماء باردا فليس³⁰¹ من المحال
أن يحس معا³⁰² بحرارة الشمس وبرد الماء إلا أن هذين جميعا في³⁰³ صاحب هذه
الحال إنما تناله³⁰⁴ من خارج ويناله أيضا كل واحد منهما في أجزاء من بدن عظيمة.
٢. وأما الحمى التي يسميتها اليونانيون انفياليس³⁰⁵ فالذى³⁰⁶ يناله من الحر والبرد إنما

الذي يشبهه فركساغورس بالزجاج: الشبيه بالزجاج BCE الذي يشبه الزجاج L	.291
يشبهه: καλεῖ g	.292
والخلط الحر الذي من جنس المرار: και θερμὸς και πυρόχολος και θερμός g	.293
الصفراء: المرار BCE	.294
يغليا معا على البدن: يغليا عليه معا πλεονάζοιεν ἐν αὐτοῖς g BCE	.295
ويتحركا فيه: ويتحركا في البدن BL ويتحركان في البدن E	.296
فيه: om. g	.297
وخاصية: om. gP	.298
الأعضاء الحساسة... لا تتحققها حمى (٤): om. B	.299
إن عمدت إلى إنسان فاقمته: εἰ στήσας ἄνθρωπον g	.300
فليس من المحال أن يحس: οὐδένατον αὐτῷ τὸ μὴ οὐχ...αἰσθάνεσται g	.301
يحس: A ¹ om. CE	.302
في صاحب هذه الحال: om. g	.303
تناوله: يناله LP	.304
انفياليس: ήπιάλους A without punctuation	.305
فالذى يناله من الحر والبرد إنما يناله: om. g	.306

يناله من داخل³⁰⁷ ويناله أيضا كل واحد منها في أجزاء بدن الصغار حتى³⁰⁸ يكون الأول ليس³⁰⁹ من بدنها أجزاء عظيمة ينالها البرد إلا³¹⁰ إلى جانب كل واحد منها جزء عظيم يناله الحر ويكون الثاني ليس من بدنها جزء صغير يناله البرد إلا وإلى جانبه جزء آخر صغير يناله الحر ولذلك صار³¹¹ هذا الثاني يظن أنه يحس في بدن كله بالأمرتين جميعا وذلك لما كان كل واحد من المبرد والمسخن مبتوثا في³¹² أجزاء صغار جزء³¹³ بعد جزء ولا يكون بعدها في الصغر غاية لم يمكن أن يوجد جزء من هذه الأجزاء الصغار حسما فيه³¹⁴ واحد من البرد والحر دون الآخر.

٣. وبعض من يحم فقد³¹⁵ يعرض له في³¹⁶ أول أخذ الحمى له في³¹⁷ كل نوبة من نوائبها أن³¹⁸ يحس معا بالبرد المفترط والحر المفترط لكنه ليس يحس كل واحد منها

307. داخل: ويناله من خارج L add. L

308. حتى يكون الأول ليس من بدنها أجزاء عظيمة ينالها البرد إلا إلى جانب كل واحد منها جزء عظيم يناله الحر ويكون الثاني ليس من بدنها جزء صغير ينالها البرد إلا وإلى جانبه جزء آخر ضغير يناله الحر g om. ALP

309. ليس: om. ALP

310. إلا: om. ALP

311. صار هذا الثاني: g

312. في أجزاء صغار... ولا يكزن بعدها في الصغر: δι' ἐλαχίστου g

313. جزء بعد جزء: g

314. فيه واحد: ¹A في واحد A واحدا L

315. فقد يعرض له: om. g

316. في أول أخذ الحمى له في كل نوبة من نوائبها: κατὰ μέντοι τὴν εισβολὴν τῶν παραξυσμῶν g

317. في كل نوبة من نوائبها: om. g

318. أن يحس معا بالبرد المفترط والحر المفترط: أن يحس معها بالبرد والناقض وبالعطف لا بل يحس بالبرد المفترط والحر المفترط L أن يحس معها بالبرد والناقض المفترط والحر المفترط καὶ ὄγκωσι καὶ P πυρέττουσιν καὶ ἄμα ἀμφοτέρων αἰσθάνονται. ψύξεως ἀμέτρους καὶ θέρμης ὁμοῦ g

في الموضع الذي يحس فيه الآخر. لكن الذي يصيّبه ذلك³¹⁹ يقدر أن يفرق تفرقة بينة بين ما يسخن من أعضائه وبين ما يبرد منها وذلك أنه يحس بالحر من داخل في نفس أحشائه ويحس بالبرد في جميع ما في ظاهر بدنـه من الأعضاء. ومن الحمى حمى يسمـيـها اليونانيـون لـيفوريـاس³²⁰ لا³²¹ تزال دائـما على هـذه الحال وـكـذلك أـيـضا جـنس من الحـمـيات المـحرـقة قـتـالـ. فالـذـي³²² يـعـرـضـ في هـذهـ الـحـمـياتـ فيـ الـأـجـزـاءـ الـكـبـارـ هوـ الـذـيـ يـعـرـضـ فيـ الـحـمـىـ الـتـيـ يـسـمـيـهاـ الـيـونـانـيـونـ اـنـفـيـالـيـسـ³²³ فيـ الـأـجـزـاءـ الـصـغـارـ فـإـنـ سـوـءـ المـزـاجـ فيـ هـذـهـ الـحـمـياتـ أـيـضاـ مـخـتـلـفـ. وـهـوـ أـيـضاـ مـخـتـلـفـ فيـ مـنـ يـصـيـبـهـ التـافـضـ مـنـ غـيـرـ أـنـ يـلـحـقـ الـحـمـىـ. وـقـلـيلـ مـاـ يـعـرـضـ هـذـاـ الـعـارـضـ إـلـاـ أـنـهـ عـلـىـ³²⁵ حـالـ قدـ يـعـرـضـ لـبعـضـ النـسـاءـ وـبعـضـ الرـجـالـ. إـلـاـ أـنـهـ يـجـبـ لـمـحـالـةـ أـنـ يـكـونـ قدـ تـقـدـمـهـ تـدـبـيرـ خـفـضـ أوـ يـكـونـ صـاحـبـهـ قدـ أـدـمـنـ مـدـةـ طـوـيـلـةـ إـلـكـثـارـ مـنـ الطـعـامـ الـمـوـلـدـ خـلـطـاـ³²⁶ بـارـداـ نـيـئـاـ³²⁷ بلـغـمـيـاـ بـمـنـزـلـةـ³²⁸ الـخـلـطـ الـشـبـيـهـ بـالـزـجـاجـ وـيـشـبـهـ أـنـ يـكـونـ هـذـاـ الـعـارـضـ لـمـ يـكـنـ يـعـرـضـ

A¹: ذلك. .319

ليغورياس: emendation A without punctuation B(?) انورياس P .320

سرب و ماس (؟) E سرب دباس C ليغورياس g ...> P λειπυρίαι

لا تزال...انفيالس: L .321

فالـذـي...انـفـيـالـيـسـ: P¹ .322

انـفـيـالـيـسـ: ήπιάλ.οιـςـ A اـمـفـيـالـيـسـ(؟) C اـمـفـيـارـوسـ(؟) E without punctuation g P اـفـيـالـيـسـ .323

فيـ هـذـهـ الـحـمـياتـ: τόν συνθέτων πυρετών g .324

علىـ حالـ: add. g (following Hunayn) <κατـاـ τـηـνـ δـιـαـθـεـσـιـνـ> .325

خلـطاـ: ἀργός add. g .326

نيـئـاـ: om. EL .327

بـمـنـزـلـةـ الـخـلـطـ الـشـبـيـهـ بـالـزـجـاجـ: بـمـنـزـلـةـ الـذـيـ يـشـبـهـ بـعـضـ الـيـونـانـيـونـ بـالـزـجـاجـ L .328

فرـكـسـاعـورـسـ بـالـزـجـاجـ: όποιον τινα καὶ Πραξαγόρας ήγήσατο τὸν ύαλοδη g P .329

لأحد³²⁹ في المتقدم أصلًا³³⁰ لأنَّه لم يكن أحد من الناس يتذمَّر بهذا التذمُّر من الخفْض والإكثار من الطعام. ولذلك نجد القدماء³³¹ من الأطباء يحكِّمُون بِأَنَّه لا بدَّ من أن يلتحق النافض حمَّى. إِلَّا أَنَّا نحن قد رأينا كثِيرًا ورأى غيرنا من الحدث من الأطباء نافضًا قد حدث لم يلتحقها حمَّى.

٤. وأمَّا³³² الحمَّى التي يسمِّيها اليونانيون انفياليس³³³ فهي مركبة من هذا سوء المزاج الذي³³⁴ تحدث عنه النافض التي لا تلتحقها حمَّى ومن³³⁵ سوء المزاج الذي يكون في³³⁶ الحمَّى. ومتى³³⁷ قلت انفياليس³³⁸ فإنَّما³³⁹ أعني بهذا الاسم الحمَّى التي يعرض فيها الأمْرَان جميعًا دائمًا. وأمَّا الحمَّى التي يتقدَّمُها النافض ثمَّ يلتحقها الصالب كالذِي يعرض في الغب³⁴⁰ والربع فلست أسمِّيها انفياليس.³⁴¹ فقد³⁴² بَانَ أَنَّ

.329. لأحد: om. AL

.330. أصلًا: οὕτως g

.331. القدماء من الأطباء: BCE

.332. وأمَّا الحمَّى التي يسمِّيها اليونانيون انفياليس هي مركبة: g οὐνθετός δ' οὐνθέτιν

.333. انفياليس: انتيالس A without punctuation امفياليس C انفياليس E انتيالس L افياليس P

.334. الذي تحدث عنه النافض التي لا تلتحقها حمَّى: g

.335. ومن سوء المزاج الذي يكون في الحمَّى: g καὶ προσέτι τῆς τῶν πυρεττόντων

.336. في: BC?E

.337. ومتى: οὕτω g

.338. انفياليس: انتيالس B انتيالس L انفياليس P

.339. فإنَّما أعني بهذا الاسم: om. g

.340. الغب: الحمَّى الغب P

.341. انفياليس: امفياليس C انفياليس E انتيالس B انتيالس L افياليس P

.342. فقد بَانَ: g τὸν πυρετὸν ἐκεῖνον

.342. فقد بَانَ: g

الحمى³⁴³ التي تسمى انفياليس³⁴⁴ مركبة من ضربتين من سوء المزاج مختلفين وكذلك الحال في سائر الحميات خلا الحميات³⁴⁵ الثابتة.

(Ch. 9)

١. وكذلك أيضاً³⁴⁶ الأمراض التي تخص واحداً من الأعضاء مع ورم فكلها³⁴⁷ يكون عن سوء مزاج مختلف بمنزلة الورم³⁴⁸ ³⁴⁹الحار³⁴⁹ المعروف بفلغموني والورم³⁵⁰ الذي يعرف بالسرطان والورم³⁵¹ الذي يعرف بالحمرة³⁵² والبثر³⁵³ الذي يعرف بالنملة والورم³⁵⁴ المعروف بالترهل³⁵⁵ والورم³⁵⁶ المعروف بالأكلة الذي يسميه اليونانيون

343. الحمى التي تسمى انفياليس: $\delta\circ\pi\alpha\lambda\circ\varsigma$ g

344. انفياليس: A without punctuation

345. الحميات الثابتة وكذلك أيضاً الأمراض التي تخص واحداً خلا الحميات L

346. om. BE

347. فكلها: P فكلها يكون عن سوء مزاج مختلف: om. BCE

348. بمنزلة الورم الحار المعروف بفلغموني: $\pi\alpha\sigma\alpha\pi\eta\sigma\circ\omega\varsigma$ τῇ φλεγμονῇ g

349. الحار: A الحادث

350. والورم الذي يعرف بالسرطان: المعروف بالسرطان $\kappa\alpha\sigma\chi\iota\circ\varsigma$ g BCEP

351. والورم الذي يعرف بالحمرة: $\kappa\circ\sigma\sigma\iota\pi\tau\circ\lambda\circ\varsigma$ g والورم الذي يعرف بالحمرة والبثر الذي يعرف بالنملة

352. والبثر المعروف بالنملة والورم الذي يعرف بالحمرة B والمعروف بالنملة والبثر الذي يعرف بالحمرة CE والمعروف بالنملة والبثر الذي يعرف بالحمرة الصيفي P

353. بالحمرة: $\ddot{\alpha}\nu\theta\eta\alpha\ddot{\eta}$ add. g

354. والبثر الذي يعرف بالنملة: $\ddot{\epsilon}\circ\pi\eta\varsigma$ g

355. والورم المعروف بالترهل: $\circ\iota\delta\eta\pi\alpha$ g بالترهل: $\phi\alpha\gamma\acute{\epsilon}\delta\alpha\pi\alpha$ add. g

356. والورم المعروف: والمعروف BEP والورم المعروف بالأكلة الذي يسميه اليونانيون عنقرانا: γάγγραινα g

غنفرينا³⁵⁷ وهو العارض مع سلوك العضو في طريق الموت. فإنه يعم جميع هذه الأمراض أنها³⁵⁹ إنما تحدث عن رطوبة تنصب إلى³⁶⁰ بعض الأعضاء وتختلف فإن بعضها يحدث عن خلط بلغمي وبعضها يحدث عن خلط³⁶¹ من³⁶² جنس المرار الأصفر وبعضها³⁶³ يحدث عن خلط سوداوي وبعضها يحدث عن الدم.³⁶⁴ والذي³⁶⁵ يحدث منها عن الدم فبعضها يحدث عن دم حار رقيق يغلي وبعضها³⁶⁶ يحدث عن دم بارد غليظ وبعضها³⁶⁷ يحدث عن دم حالة حال أخرى. فإني سأستقصي تلخيص أصناف هذه العلل في كتاب غير هذا.

2. وأما في هذا الكتاب فاكتفي بأن أقول³⁷⁰ كيف كانت الحال³⁷¹ في الرطوبة التي تنصب إلى العضو وأحداثها ما تحدث من كل واحد من العلل التي ذكرنا أنها تكون على

357. غنفرينا : AP without punctuation L عن عربابا emendation eds.

عن عربابا BE

- .358. وهو العارض مع سلوك العضو في طريق الموت: om. g
- .359. أنها: A¹
- .360. إلى بعض الأعضاء: om. g
- .361. خلط من: om P
- .362. من جنس المرار الأصفر: χολώδους g
- .363. وبعضها يحدث عن خلط سوداوي: om P
- .364. يحدث عن خلط سوداوي: عن الأسود BCE
- .365. يحدث: om. BCEg
- .366. الدم. والذي يحدث منها عن الدم فبعضها يحدث عن: om P
- .367. والذي يحدث منها عن الدم فبعضها يحدث عن دم: g ήτοι g
- .368. وبعضها يحدث عن دم: g ή
- .369. وبعضها يحدث عن دم حالة حال أخرى: g ή πως ἄλλως διακειμένου γίγνεσθαι
- .370. أقول: بأن أقتصر أن أقول L
- .371. الحال في: om. g
- .372. التي تنصب إلى العضو: om. g

قياس ما³⁷³ وصفنا في ما تقدم من حدوث الورم³⁷⁴ المسمى فلغموني عن الخلط الحار الدموي وأن كلَّ واحد من الأعضاء المتشابهة الأجزاء البسيطة³⁷⁵ الأولى إذا³⁷⁶ غلت تلك الرطوبة عليه أدته³⁷⁷ إلى سوء المزاج³⁷⁸ المختلف وذلك أنه من³⁷⁹ ظاهره إما أن يسخن وإما أن يبرد وإما أن يجفَّ وإما أن يرطب بحسب ما عليه حال³⁸⁰ تلك الرطوبة التي³⁸¹ تجاوره وباطنه³⁸² لم يصر³⁸³ بعد إلى مثل تلك حال بعينها. فإن استحال كله عن آخره ظاهره³⁸⁴ وباطنه فصار كله بحال واحدة سكن عنه على المكان الوجع أصلًا إلا أنَّ علتَه عند ذلك تكون أغلظ³⁸⁵ وأعسر. ومن تقدم فعلم ما وصفت من هذا فهو

.373 ما وصفنا في ما تقدم: فيما ذكرنا أنها تكون P

.374 الورم المسمى فلغموني: g φλεγμονήν

.375 البسيطة الأولى: الأولى البسيطة P

.376 إذا غلت تلك الرطوبة عليه: g ύπό τοῦ όεύματος τοῦδε διατιθέμενον

.377 أدته: ألل أمره أيضا L ألل أمره P (= ألل) أمر <...> إلى سوء من A

.378 المزاج المختلف: مزاج مختلف AP

.379 من ظاهره: بين ظاهر AB

.380 حال: om. BCE

.381 التي تجاوزه: g

.382 وباطنه: وباطنه A وباطنه لم يصر بعد إلى مثل تلك حال بعينها: μέχρι δὲ τοῦ βάθους μήπω διακείμενον όμοίως g

.383 يصر: P² يصل

.384 ظاهره وباطنه فصار كله بحال واحدة: g. om.

.385 أغلفظ: وأليس BE add. om. g وأليس C: χαλεπωτέρα

عندی³⁸⁶ كاف³⁸⁷ حتی³⁸⁸ يفهم به كتابي في الأدوية³⁸⁹ ثم من بعده كتابي في حيلة البرء.

تم³⁹⁰ كتاب³⁹¹ جالينوس في سوء المزاج المختلف والحمد³⁹² لله على عونه وأحسانه
وصلی الله على محمد خاتم الأنبياء وسلم

om. BCE عندی: .386

كاف: له P .387

حتی يفهم به: toīc μέλλουσι...άκολουθήσειν g .388

الأدوية: المفردة add. A .389

تم... وسلم: تمت المقالة الرابعة من كتاب جالينوس في المزاج التي يذكر فيها سوء المزاج المختلف نقل

حنين بن اسحاق تفصيل أحمد بن محمد المعروف بابن الأشعث والله الحمد P

كتاب: مقالة C كتاب جالينوس في سوء المزاج المختلف: L om.

والحمد لله على عونه وأحسانه وصلی الله على محمد خاتم الأنبياء وسلم: والحمد لله كثيرا صلی الله على محمد وعلى آله B نقل حنين بن اسحاق بحمد الله وعونه وصلی الله على <...> E والحمد لله وحده والصلوة على محمد وآله L

B. The Arabic–English Translation

We provide here a literal English translation of Hunayn's text that tries to maintain the structure and order of the original as far as reasonably possible, in order to help the modern reader move more easily between the Arabic text and the Latin translation made from it in the twelfth century. Words and phrases in angle brackets have been supplied editorially to bring out the meaning of the text; those in square brackets provide alternative wording or phraseology.

In the name of God, the Merciful, the Compassionate.

Treatise on the anomalous dyscrasia by Galen. Translated by Hunayn ibn Ishaq.

(Chap. 1).

1. Says Galen: An¹ anomalous dyscrasia may occur in the entire body of the animal, like the one that occurs to it in the kind of dropsy known as “*<dropsy> of the flesh*,” or in the fever during which the patient suffers from heat and cold at the same time which is called “NPY’LYS” [= *epialos*]² by the Greeks, and in most other fevers except for the fever known as “hectic fever” which is called “QTYQWS” [= *hektilos*]³ in Greek.
2. An anomalous dyscrasia may also occur in any part of the body, whatever part it is, when it is affected by a swelling, that⁴ is a phlegmatic swelling, or⁵ is affected by a hot sanguine swelling which is known as “PLGMWNY” [= *phlegmonē*]⁶ or *<the affection>* reaches a degree where *<the part of the body>* starts to decay and die off. This is the swelling which the Greeks know as “GNGRYN” [= *gangraina*].⁷ It may also be affected by another swelling known as “erysipelas” and *<yet>* another swelling known as “cancer.” Elephantiasis also belongs to these kinds *<of swellings>*, likewise canker⁸ and

¹“An anomalous dyscrasia . . . or is affected by a hot sanguine swelling”; cf. Maimonides, *Medical Aphorisms*, Treatises 1–5, parallel Arabic–English edition ed., transl., and annot. G. Bos (Provo: Brigham Young University Press, 2004), 3.27, 39–40: “A varying bad temperament can occur in the whole body, as [in the case of] dropsy and in the case of all the fevers except for hectic fever. It can also occur in one part of the body, as [in the case of] a swelling of the flesh—that is, a phlegmatic swelling. 2. An anomalous dyscrasy may also occur in any part of the body, whatever part it is, when it is affected by a swelling, that is a phlegmatic swelling, or is affected by a hot sanguine swelling. Any swelling of this type contains a varying bad temperament.”

²That is, ἡπιάλος; see Galen, K7:733, 1.3; GN 142, 1.4. Note that the Arabic term is actually a transcription of the dat. plur. ἡπιάλοις. This and a number of other Arabic terms for pathological conditions have been transcribed in capital letters, without vocalization; since we no longer have any idea how these words were pronounced, we have thought it misleading to offer vocalized forms for them.

³That is, ἔκτικός; see Galen, K7:733, 1.4; GN 142, 1.5.

⁴“That is a phlegmatic swelling”: om. Galen.

⁵“Or is affected by a hot sanguine swelling which is known as ‘PLGMWNY’ [= *phlegmonē*]”: “or is affected by a sanguine swelling” MSS BE.

⁶That is, φλεγμονή (hot swelling); cf. Galen, K7:733, 1.6; GN 142, 1.5: φλεγμονῶν.

⁷That is, γάγραινα (gangrene); cf. Galen, K7:733, 1.6: γαγραινόμενον; GN 142, 1.5: γαγραινούμενον.

⁸That is, φρεδανα (cancerous sore, canker); Galen, K7:733, 1.7; GN 142, 1.8.

shingles.⁹ However, all these afflictions come with a residue streaming¹⁰ to the affected part. There is another kind of anomalous dyscrasia whereby no residue streams to the <affected> part but merely the quality <of that part> changes, <namely> when it is overcome by the heat of the sun or by cold or by immoderate exercise or by¹¹ immoderate idleness and restfulness or by other similar <afflictions>. An anomalous dyscrasia may also occur in our body because of that which affects it from the outside, when these things heat or cool or dry or moisten. These are the four kinds of <anomalous> dyscrasia that are simple, noncompound, as I explained in my book *On Temperaments*.

3. There are also four other compound kinds <of anomalous dyscrasia>, which occur when the body is both hot and moist, or hot and dry, or cold and moist, or cold and dry. It is clear that these kinds of anomalous dyscrasia differ from the uniform kinds of anomalous dyscrasia, because <these kinds> do not exist <in like manner¹² in all the parts of the body that has a corrupt temperament. My intention in this treatise is to inform <you> how all the different kinds of anomalous dyscrasia originate. In order that my words in this matter will be clear I must mention to you the disposition of all the parts of the body. I will begin with the largest <parts>, which are known <even> to those who do not have medical knowledge, for there is no one who forgets [does not know] what the arms and legs and belly and chest and head are.

(Chap. 2)

1. Let us take one part of the body and divide it into the most immediate parts it is composed of: for instance, the leg we divide into thigh, lower leg, and foot, and the arm into upper arm, forearm, and hand, and the hand again into the parts that are peculiar to it, namely wrist, metacarpus, and fingers, and the fingers again into the specific parts they are composed of, namely bones, cartilages, ligaments, nerves, pulsating and nonpulsating vessels, membranes, flesh, tendons, nails, skin, and fat.
2. These last-mentioned parts cannot be divided further into other <parts>, but they are homoiomeric, primary parts, except for the pulsating and nonpulsating vessels, since these are composed from fibers and membranes, as I said in my book *On Anatomical Procedures*. I also mentioned in that book that there are many spaces between the primary, homoiomeric parts, and that most and the largest of them are between the composite, instrumental parts. Sometimes we find such spaces in one <particular> homoiomeric part, as can be found in bones and in the skin.¹³ However, the soft parts of the body cover¹⁴ each other so that the spaces between them are hidden from the eye. But in the case of the hard and dry parts of the body one can discern the spaces and gaps with the senses, as we may find <them> in the marrow of the bones. The cavities of the bone marrow have by nature a thick and white fluid to feed them, prepared by the bones. As for the pores in the skin, I have explained how they come to be in my book

⁹"Shingles" (i.e., ἐρπης); see Galen, K7:733, l.8; GN 142, l.8 (trans. GN: "herpes").

¹⁰Om. Galen.

¹¹"By immoderate idleness and restfulness"; cf. Galen, trans. GN 143: "having been completely inactive." The term "completely" (Gr. πάντος) is an emendation by GN following Hunayn's تجاوزان مقدار القصد (immoderate).

¹²"In like manner": cf. Galen, K7:734, l. 12; GN 144, l.7: ὁσπάντως.

¹³Galen adds: "about all this has been told in *On Anatomical Procedures*" (trans. editors); "And of all of them, in the Anatomical Procedures, have been told" (trans. GN 147).

¹⁴Cf. Galen, trans. GN 147: "colliding into each other."

On Temperaments. It was necessary to mention these things so that my following words will be clear.

- Now I have to address <the matter of> the anomalous dyscrasia, and to describe its nature and in how many ways it occurs. I have said above that the parts of the body that are affected by an anomalous dyscrasia do not have <just> one humoral composition. For that is something that is common to and shared by every anomalous dyscrasia. Its different kinds follow the nature of the affected <parts>¹⁵, for the occurrence of an anomalous dyscrasia in the mere [simple] flesh is different from that in the muscle, on the whole. Every¹⁶ single <anomalous dyscrasia> is different from the others.

(Chap. 3)

- For instance, when a hot residue¹⁷ streams to a muscle, then the vessels there,¹⁸ that is the largest pulsating and nonpulsating ones, are first of all filled and stretch, then the vessels which are smaller, and this continues until <the residue> reaches the smallest vessels. And when¹⁹ that residue enters into those vessels and they can no longer contain it, part of it emerges from the openings of those vessels, and part of it exudes and streams forth from²⁰ the very body of those vessels. When this is the case, the spaces between the first parts are filled with that residue to such a degree that it happens to them that from every side they become hot and moist through the surrounding moisture. With "first parts" in this place I mean the nerves, ligaments, tunics, and flesh, and prior to these the pulsating and nonpulsating vessels themselves, which are first of all and above all affected by pain in various ways. This happens because the residue which is inside them heats them, stretches them, and causes them to split, while the residue that is outside them heats them, pushes²¹ against them, puts pressure on them, and bears them down. As for the other parts, some of them are merely hurt by the heat, others are hurt by the pressure, and yet others are hurt by both.
- This illness is called "PLGMWNY" [= *phlegmonē*] by the Greeks; it is an inflamed swelling, and it is an anomalous dyscrasia occurring in a muscle. For the blood in <the muscle> will have become hot and been affected by something similar to cooking; then through its heat the bodies²² of the pulsating and nonpulsating vessels become hot first of all and above all, and then <it will heat> everything over which it flows until it immerses them. And this must necessarily lead to one of two <things>²³: either the residue which streams to a muscle overpowers it and corrupts <the part> it overpowers, or the residue is overpowered and the muscle returns to its natural condition. Let it first

¹⁵Lit. "bodies"; see Galen, K7:736, l. 12. Cf. GN 149, l.1: σώματα; ibid., n. 4: "Galen sometimes uses the Greek word for body (σώμα) for referring to parts and even to humours."

¹⁶Every single <anomalous dyscrasia> is different from the others": om. Galen.

¹⁷Cf. Galen, trans. GN 149: "flux," adding in n. 8: "That is, the blood."

¹⁸"There": om. Galen.

¹⁹"And when that residue enters into those vessels": cf. MSS BCE: "when that residue abounds in those vessels"; cf. Galen, trans. GN 149: "when the flow gets violently constricted."

²⁰"From the very body": Galen (K7:737, l. 2) reads "through the tunics"; and Galen (GN trans. 149): "through the coats that move it."

²¹"Pushes against them, puts pressure on them": cf. Galen, trans. GN 149: "[they get] compressed."

²²Cf. Galen, trans. GN 151: "coats."

²³Arab. *halla*; cf. G.W.F. Freytag, *Lexicon Arabico-Latinum*, 2 vols. (Halle, 1830–1837), 1: 510, s.v. *halla*: "necessitas, res necessaria"; cf. MSS LP: "*hālatayn*" (conditions).

be posited that the residue is overpowered, since it is more appropriate to begin with what is better. I say that the healing should take place in one of two ways: either that the whole moisture [residue] that streamed to the muscle is dissolved, or that it is concocted. The best healing is the one through dissolution. Coction is necessarily followed by two things: one is the generation of pus, and the other is its concentration [collection].²⁴ A concentration sometimes occurs in the largest hollow space that is nearest to the <affected> spot and is the most unimportant [least dangerous], and this is the best <kind of> concentration; and sometimes <the concentration> occurs in the largest nearest hollow space, but that hollow space is quite important; or it occurs in a hollow space that is of little significance and is not the largest and not near.

3. If the [concentration] happens in the region of the stomach, the most laudable concentration is that which occurs in the empty space inside [the stomach]; in²⁵ most cases, pus is discharged therein [as well]. But the concentration into that which is below the peritoneum is bad. If it happens in the region of the brain, and the concentration occurs in its anterior ventricles, it is laudable; [but] the concentration in the meninges and the posterior ventricle of the brain is reprehensible and bad. As to the abscesses²⁶ forming in the region of the ribs, their eruption is in the hollow space of the chest, and abscesses in the muscles erupt [beneath] the skin. Abscesses occurring in the viscera erupt either in the vessels there, <that is,> the pulsating and nonpulsating <vessels>, or <in> the membrane that surrounds them and is to them like a skin.
4. If the residue overpowers the parts of the body, the domination of the anomalous dyscrasia over them will clearly have the effect that their activity is abolished and corrupted in the course of time. The pain will begin to ease in them when they become similar to that which transforms and transmutes them. For parts of the body are not affected by pain when the change of their temperament has been completed, but during the transmutation, as the marvelous Hippocrates explained when he said that pains only occur in parts of the body during²⁷ their transmutation and corruption and departure from their natures.²⁸ Every single part of the body transmutes from its nature and is corrupted because it is heated or cooled or dried or moistened or its continuity is dissolved. And in an anomalous dyscrasia <this is especially the case>, because the <affected> part of the body is extremely heated or cooled, and this is because these two qualities have the strongest effect. And then it may also happen because²⁹ the part of the body is dried or moistened. And³⁰ pain occurs because of the lack of a dry substance during hunger and because of a lack of moist substance during thirst. And³¹ when the part of the body is affected by something that stings or corrodes or stretches or squeezes or tears, pain³² occurs because the continuity is dissolved.

²⁴"Concentration" (*ȝam'*); cf. Galen, trans. GN 151: "deposit."

²⁵Cf. ibid.: "towards which most of them" (i.e., of the deposits) "break away together."

²⁶"Abscesses" (*khurāgāt*): cf. ibid.: "deposits."

²⁷"During . . . natures": cf. Galen, trans. GN 153: "in those (parts) being changed and destroyed in their nature."

²⁸Cf. Hippocrates, *Places in Man* 42, ed. and trans. P. Potter (Cambridge, MA: Loeb Classical Library, 1995), 84–85: "For in each thing that is altered with respect to its nature and destroyed, pains arise."

²⁹"Because the part of the body is dried or moistened": cf. Galen, trans. GN 153: "because of getting dry and humid."

³⁰"And pain occurs": om. Galen.

³¹"And . . . stings": cf. Galen, trans. GN 153: "when getting wounded."

³²"Pain occurs": om. Galen.

(Chap. 4)

1. And when the heat of the blood in the swollen member is quiet,³³ and the blood contained in the whole body is of a balanced temperament, it hardly ever happens that it [i.e., the blood] will be heated through the heat of the affected part. But³⁴ when the heat of the blood that is in the swollen part is a strong heat that heats the body through the strength of its boiling, or when the blood contained in the entire body is dominated by bile, it will not take long before all of it will be exceedingly hot, and this will be all the more likely when the two things come together, <namely> that the blood in the swollen part is very hot, and that the bile dominates the blood that is in the body.
2. The first blood to be heated until it becomes exceedingly hot is that in the pulsating vessels, because it is by nature hotter and closer to the nature of spirit; then after that, the blood that is in the nonpulsating vessels. If the swollen part is close to one of the intestines abounding in blood, the heat will flee rapidly to the blood contained in the entire body. In short, that which is heated first with regard to everything is that which changes fast or is hot by nature. The same holds good for that which gets cold first, because that which gets cold is that which is quick to change or which is cold by nature. And spirit is the fastest of all things in the body to change, because it is the³⁵ finest and thinnest. The hottest <thing> in³⁶ the body is the yellow bile and the coldest the phlegm. Of the other humors, blood is hot<est> after yellow bile, and black bile is cold<est> after phlegm. Yellow bile is changed easily and³⁷ quickly by everything that acts on it. Black bile is changed <only> by³⁸ exertion and strain. In short, everything that is fine³⁹ and thin is quick to be changed, and⁴⁰ everything that is thick and gross is slow to be changed.
3. Hence the change in swellings necessarily varies greatly according to the diversity of the disposition of the bodies.⁴¹ In the first place, because the humor from which the swelling arises is either hotter or less hot. After that, because its putrefaction is according to its nature, and⁴² according to the excess or paucity of its tightness [constrictedness]. For something that does not have perspiration⁴³ putrefies more quickly, and this can be found in all external things. And if it happens with this that its temperament is hot and moist, this⁴⁴ will contribute greatly to the rapidity of its putrefaction. Moreover, the part of the body in which the swelling occurs will either be close to the intestines which abound in blood or far from them, for yellow bile, black bile, phlegm, or ventosity are dominant over all the blood, and⁴⁵ all these dispositions vary to a smaller or larger extent. Hence, the alteration<s> necessarily vary very much, when one <humor> is compared to another or when it is compared to itself.

³³"Quiet"; cf. Galen, trans. GN 153: "adequate."³⁴"But . . . boiling"; cf. ibid.: "However, if it boiled harder."³⁵"Is the finest and thinnest"; cf. Galen, trans. GN 155: "is also thinnest."³⁶"In the body"; cf. ibid.: "by nature."³⁷"And quickly": om. Galen.³⁸"By exertion and strain"; cf. Galen, trans. GN 155: "with difficulty."³⁹"Fine and thin"; cf. ibid.: "formed by thin parts."⁴⁰"And everything that is thick and gross"; cf. ibid.: "whereas everything formed by thick parts."⁴¹"Bodies"; cf. ibid.: "humours"; ibid., n. 16: "In Greek, 'bodies'."⁴²"And according to": cf. ibid.: "not the least insignificant."⁴³"Perspiration" (Arab. *tanaffus*); lit. "breath." In the sense of perspiration, Arab. *tanaffus* is a semantic borrowing from Greek *διατρέπω*.⁴⁴"This will contribute greatly to the rapidity of its putrefaction"; cf. Galen, trans. GN 155: "then even much more so."⁴⁵"And . . . extent"; cf. ibid.: "and all of that to a more or lesser extent."

(Chap. 5)

1. And⁴⁶ all these things are the cause of an anomalous dyscrasia. This is because the heat is most dominating over the blood which is in the⁴⁷ swollen part of the body, then, after that, over the blood which is in the⁴⁸ intestines, and especially⁴⁹ over the blood which is in the heart, and, of that, especially that which is in its left ventricle. For if you approach this ventricle of the heart, while the animal is still alive and is not yet affected by fever, and you put your finger into it, as I have described in my book *On Anatomical Procedures*, you will feel the strongest heat there is. Therefore, it is not farfetched, when the whole body has been heated by an unnatural heat, that that ventricle of the heart especially should reach the highest degree of heat. Among⁵⁰ those things that contribute to this is that the blood therein is the thinnest and closest to the nature of spirit, and that it moves with a constant motion.
2. Moreover, in these types of fever one finds that the heat has overwhelmed all the blood, and that it [i.e., the blood] has firmly⁵¹ accepted the unnatural heat that originated from the putrefaction of the humors. The temperament of the bodies [membranes]⁵² of the pulsating vessels and other bodies that are nearby and surround them is not found to be altered completely, but it is still changing and altering towards⁵³ heat. And if this were to continue for a long time in them, they would come to the point that they would be fundamentally dominated and changed <by the heat>, so that then they do not fall under the definition of that which is being heated but under the definition of that which has fully attained an unnatural heat. The limit of change in any of the parts of the body is the harm to its functioning. The total range [latitude] from the beginning of the matter [i.e., the heating of a part] until it finally reaches this limit [i.e., when the functioning of a part is harmed] is the way [process] that leads to the unnatural disposition—mixed,⁵⁴ combined, <and> in the middle between two opposites, that is, between the disposition that is truly natural and the disposition that is fundamentally unnatural. During this entire period of time, there will be in the body that is heated a measure of pain <analogous> to the alteration which it undergoes.
3. When all the main⁵⁵ parts of the body are fully⁵⁶ and perfectly heated, that fever is called “QTYQWS” [= *hektilos*], which means fixed, and this because it does not only exist in moistures and in spirit but also in bodies that have firmness. And⁵⁷ there is neither suffering nor pain with this fever, and the patient thinks that there is no fever in him at all because he does not feel its heat, since all the parts of his body have become hot equally,⁵⁸ in like manner. Concerning this matter natural philosophers agree, in their study of the matter of sensation, that there is no sensation except through alteration, and

⁴⁶“And . . . dyscrasia”: cf. Galen, trans. GN 157: “All these anomalous *dyskrasias* of the body happen.”

⁴⁷“The swollen part of the body”: cf. ibid.: “inflammation.”

⁴⁸“The intestines”: cf. ibid.: “the rest of the viscera.”

⁴⁹“Especially”: om. Galen.

⁵⁰“Among those things that contribute to this”: cf. Galen, trans. GN 157: “for in fact.”

⁵¹“Firmly”: om. Galen.

⁵²“Membranes”: cf. Galen, trans. GN 157: “coats.”

⁵³“Towards heat”: cf. ibid.: “as they are becoming heated.”

⁵⁴“Mixed”: cf. ibid.: “like something mixed.”

⁵⁵“Main”: cf. Galen, trans. GN 159: “solid.”

⁵⁶“Fully and perfectly”: cf. ibid.: “completely.”

⁵⁷“And there is neither suffering nor pain with this fever”: cf. ibid.: “It is painless.”

⁵⁸“Equally, in like manner”: cf. ibid.: “in a similar way.”

that there is no suffering⁵⁹ or pain in that in which the alteration has already been completed. For this reason there is no suffering or pain with any⁶⁰ fever of this kind—which we called hectic shortly before—and the patient does not feel it at all, and this is because the disposition of the parts of his body is not one in which some of them act and others are acted upon, since all of them are of a single disposition and their temperament has become one and the same.

(Chap. 6)

1. And even though one of them is hotter and the other colder, the excess heat of the hotter part over the colder part is not such that it will harm the adjacent part with its heat. For if this were the case, the parts of the body would harm each other even though they are of a natural disposition, for in that disposition also⁶¹ the parts of the body differ in their temperament. For although the flesh is a hot part and the bone a cold one, their dissimilarity⁶² and that of the other⁶³ similar parts does not bring pain or suffering, because of the⁶⁴ small measure of disparity between them in heat and cold. In the same way also the air which surrounds the bodies does not harm them as long as it is not altered by extreme heat or cold. But the kinds of diversity <of the air> in that which lies between excessive heat and excessive cold, in spite of their frequent occurrence and their obvious disparity,⁶⁵ are⁶⁶ being felt by the bodies without any harm.
2. According⁶⁷ to this argument the mind would almost incline to rely upon the statement that has been made, just as Hippocrates did in⁶⁸ one of his books, that all illnesses are simply wounds.⁶⁹ And this is so because a wound is simply a dissolution of continuity, and excessive heat and cold nearly dissolve the continuity. Severe heat does so because it dissolves and cuts the continuity of the substance over⁷⁰ which it dominates, and excessive cold because it contracts and compresses the substance over⁷¹ which it dominates inwards until⁷² something protrudes and emerges, and⁷³ what remains in it is squeezed and torn apart by it. And if someone should make this the limit regarding the excess of heat and cold, it⁷⁴ is proper <to say> that the suggestion that he is right is not farfetched. However, whether this is the limit in excess⁷⁵ or whether the limit is different, it is clear

^{59a} "Suffering or pain"; cf. *ibid.*: "pain."

^{60a} "Any fever of this kind—which we called hectic shortly before"; cf. *ibid.*: "the *hektoi* fevers, all of them."

^{61a} "In that disposition also the parts of the body differ"; cf. *ibid.*: "for they are in fact different in their *krasis*."

^{62a} "Dissimilarity"; cf. *ibid.*: "anomaly."

^{63a} "Other similar parts"; cf. *ibid.*: "all the others."

^{64a} "The small measure of disparity between them in heat and cold"; cf. Galen, trans. GN 159–161: "because of the moderation of the excess."

^{65a} "Disparity"; cf. Galen, trans. GN 161: "excess."

^{66a} "Are being felt by the bodies"; cf. *ibid.*: "we perceive (them)."

^{67a} "According . . . made"; cf. *ibid.*: "In fact, on those grounds, that reasoning is probably appropriate."

^{68a} "In one of his books"; om. Galen.

^{69a} Cf. Hippocrates, *On Fractures* 31, trans. E. T. Withington, (Cambridge, MA: Loeb Classical Library, 1928), III, 171: "Unless one calls all maladies wounds, for this doctrine also has reasonableness, since they have affinity one to another in many ways."

^{70a} "Over which it dominates": om. Galen.

^{71a} "Over which it dominates": om. Galen.

^{72a} "Until something protrudes and emerges"; cf. Galen, trans. GN 161: "so that they squeeze out some matter."

^{73a} "And what remains in it is squeezed and torn apart by it"; cf. *ibid.*: "and crush some other."

^{74a} "It is proper <to say> that the suggestion that he is right is not farfetched"; cf. *ibid.*: "would seem not to err in his knowledge."

^{75a} "Excess"; cf. *ibid.*: "disproportion."

in <any> case that every excess⁷⁶ must be understood as in relation to something. This is so because not every body is affected in the same way by things which⁷⁷ have the same disposition of heat and cold.

3. For this reason, the humors that are in some animals are mutually fitting, while in other animals they are not [just] mutually incompatible, but also corrupting⁷⁸ and destroying <each other>, like man and viper, of which the saliva of each of them is fatal for the other. And thus when a man who has an empty stomach spits upon a scorpion, he kills it; but a man does not kill a man like himself when he bites him, nor a viper a viper, nor a serpent⁷⁹ a serpent, for the similar is fitting and beloved, but the opposite is hostile and harmful. Among the things which indicate this is that everything that grows and is nourished, only grows and is nourished by something that is similar to it and resembles it, while everything that is destroyed and annihilated, is only destroyed and annihilated by its opposite. For this reason, the preservation of health is achieved only by⁸⁰ things that are similar to and resemble healthy bodies; the⁸¹ healing and the cure of illness are only achieved by contrary things. But to discuss this is beyond our current subject.
4. But someone who suffers from the hectic fever that⁸² is inherent in the fixed substance of an animal will not feel it, while of all the other fevers, there is none that he will not feel; some⁸³ he will feel more and will suffer more harm from, others he will feel less. Some fevers are accompanied by rigor, and this symptom—that is, rigor—like many other symptoms, only arises from an anomalous dyscrasia. But I cannot explain in the current treatise how this symptom originates, unless I explain regarding the natural faculties how many there are, what sort of faculties they are, and⁸⁴ what it is of the property of each of them to effect. However, I will explain the matter of all the symptoms in my book *On the Causes and Symptoms <of Diseases>*.

(Chap. 7)

1. But let us return to the <different> kinds of an anomalous dyscrasia. I have already said in what preceded how fever arises from a⁸⁵ hot swelling, which is called "PLGMWNY" [= *phlegmonē*], and that every swelling⁸⁶ of this kind and every fever, except the fever known as hectic, arises from illnesses in which the temperament is anomalous. And some fevers arise only from the putrefaction of humors, without a swelling,⁸⁷ for what putrefies is not only that which is obstructed and does not breathe [exhale]—and its putrefaction is very fast and very strong—but also many other things disposed to putrefaction. I will explain the matter of the disposition of what is disposed to putrefaction in another book.

⁷⁶⁸⁴"Excess"; cf. ibid.: "disproportion."

⁷⁷⁸⁴"Which have the same disposition"; om. Galen.

⁷⁸⁸⁴"Corrupting and destroying <each other>"; cf. Galen, trans. GN 161: "destructive."

⁷⁹⁸⁴"A serpent"; cf. ibid.: "asps"; ibid., n. 22: "Egyptian cobra."

⁸⁰⁸⁴"By things that are similar to and resemble healthy bodies"; cf. Galen, trans. GN 163: "by means of similars."

⁸¹⁸⁴"The healing and the cure"; cf. ibid.: "the destruction."

⁸²⁸⁴"That is inherent to the fixed substance of an animal"; cf. ibid.: "which has already seized the permanent condition of the animal."

⁸³⁸⁴"Some . . . less"; cf. ibid.: "some are more, some are less painful to the patients."

⁸⁴⁸⁴"And what it is of the property of each of them to effect"; cf. ibid.: "and what each of them does according to nature."

⁸⁵⁸⁴"A hot swelling which is called 'phlegmonē': cf. ibid.: 'inflammation.'"

⁸⁶⁸⁴"Swelling of this kind": cf. ibid.: "inflammation."

⁸⁷⁸⁴"Swelling"; cf. ibid.: "inflammation."

2. An anomalous dyscrasia may also occur in another way in the entire body; sometimes this happens when a hot vapor is congested in it, and sometimes when the heat increases because of immoderate exercise,⁸⁸ and sometimes because the blood is⁸⁹ hot and boils excessively due to anger, or it is heated excessively⁹⁰ because⁹¹ it was for a long time in the hot sun. It is clear, in my opinion, that all these fevers that⁹² arise from swellings, are, according to the strength of the efficient cause in the body and according to the disposition of every singular body, stronger in some bodies and weaker in other [bodies], while some bodies will not be feverish at all.

3. It is clear that a dyscrasia sometimes occurs⁹³ in the spirit alone and sometimes also passes beyond it to the humors; it is not less clear that all fevers, when they are prolonged, are joined by hectic fever. And from this statement it is *<somehow>*⁹⁴ evident that an anomalous dyscrasia sometimes originates from hot or cold moisture which flows to some part of the body, just as I have explained in⁹⁵ the case of bodily parts in which a swelling occurs. And sometimes⁹⁶ it does not happen like this, but *<it happens>* when the temperament of the body changes in quality. Some of the causes which alter *<the temperament>* arise from the body itself, and some affect *<the body>* from the outside. When the fever arises from putrefaction alone or from some swelling,⁹⁷ *<in both cases>* it hails from the body itself. But when the fever arises from the heat of the sun or from excessive exercise, then it comes from the outside. I shall speak about this more elaborately in my book *On the Causes of Symptoms*. And just as fever sometimes arises from the heat of the sun when the temperament of the body is altered, so it sometimes happens to some men from the severe cold of the air that the cold dominates so strongly over their entire body that some of them die. It is clear regarding all these men that suffering and pain befall them.

(Chap. 8)

1. Suffering and pain may also happen to someone when he is totally overcome by an intense cold *<resulting>* from a severe chill and then tries to warm his body quickly by⁹⁸ bringing it close to the fire. And⁹⁹ many of those to whom this happens feel a very strong pain in the roots of their nails when they suddenly bring their body¹⁰⁰ close to the fire. Who, therefore, since in this case he sees with his own eyes that the cause of the suffering and pain is nothing else but the anomalous dyscrasia, would¹⁰¹ dare to reject such a thing in the case of pains that occur inside *<the body>*? Or would wonder how pain

⁸⁸"Exercise"; Galen, trans. GN 165: "gymnastic exercises or bodily exertion."

⁸⁹"Is hot and boils"; cf. ibid.: "boils."

⁹⁰"Excessively"; Galen, trans. GN 165, adds: "from the exterior."

⁹¹"Because it was for a long time in the hot sun"; cf. ibid.: "by heat-stroke."

⁹²"That arise from swellings"; cf. ibid.: "as upon inflammation it was told before."

⁹³"Occurs in the spirit alone and sometimes also passes beyond it to the humors"; cf. ibid.: "sometimes just attacks that pneumatic substance, at times the humours as well."

⁹⁴"Somehow"; ibid., for Greek πῶς.

⁹⁵"In the case of bodily parts in which a swelling occurs"; cf. ibid.: "in the case of a part getting inflamed."

⁹⁶"Sometimes"; cf. ibid.: "Many times."

⁹⁷"Swelling"; cf. ibid.: "inflammations."

⁹⁸"By bringing it close to the fire"; om. Galen.

⁹⁹"And many of those to whom this happens"; cf. Galen, trans. GN 167: "and many of them."

¹⁰⁰"Body"; cf. ibid.: "hands."

¹⁰¹"Would dare to reject such a thing"; cf. ibid.: "is still incredulous."

often affects men without any swelling,¹⁰² either in the¹⁰³ intestine called "colon," or in the testicles,¹⁰⁴ or in another part of the body? For nothing of this is amazing. Nor <is it amazing> how fever and rigor occur to some men at the same time, for if the cold phlegmatic humor which Praxagoras compares¹⁰⁵ to glass and the¹⁰⁶ hot humor which belongs to the same kind as yellow bile increase in the body until together they dominate¹⁰⁷ it and move¹⁰⁸ in it, especially in the sensitive organs, it is not amazing that someone who has this disposition senses both at once. For if you approach a man and let him stand in the hot sun, and then sprinkle cold water over him, it¹⁰⁹ is not impossible that he should feel the heat of the sun and the cold of the water together. But these two affect that¹¹⁰ man in that situation only from the outside, and each of them affects him <only> in the large parts of his body.

2. But in the fever which the Greeks call "NPY'LYS" [= *epialos*], heat and cold affect <the patient> from the inside, and each one of them may affect <the patient> <not only in the large parts> but also in the small parts of his body, to a degree¹¹¹ that in the first case [i.e., the patient affected in the large parts] there is no large part of his body affected by cold, unless next to it there is <another> large part affected by heat, and in the second case [i.e., the patient affected in the small parts] there is no small part affected by cold, unless next to it there is another small part affected by heat. Therefore, it happens in¹¹² the second case that <the patient> seems to sense both things together in his body. And this is because, as everything that cools and heats is scattered through small parts, one¹¹³ after the other (and there is no limit to their smallness), it is impossible that there can be one part among these small ones that has a single sensation of cold and heat without the other <half of the hot/cold pair.>
3. And¹¹⁴ sometimes it happens to some fever patients in the beginning of a fever attack, in every paroxysm, that they feel excessive cold and heat, but <they> do not feel each of them in the place where <they> feel the other. However, he to whom this occurs, can clearly distinguish between the parts which are heated and those which are cooled, for he feels the heat inside in his intestines themselves and feels the cold in every part that is at the outside of his body. And among the fevers, the fever which the Greeks call "LYPWRY'S" [= *leipurias*]¹¹⁵ is always of this disposition, and, likewise, a kind of ardent fever [that is] mortifying. And that which happens in these fevers in the larger

¹⁰²¹⁴ "Swelling"; cf. ibid.: "inflammation."

¹⁰³¹⁴ "The intestine called 'colon'"; cf. ibid.: "the colon."

¹⁰⁴¹⁴ "Testicles"; cf. ibid. The Greek text actually has "teeth" (cf. MSS BE), but was emended by GN following Hunayn. See above, p. 8, where we discuss the emendation in more detail.

¹⁰⁵¹⁴ "Compares to"; cf. ibid.: "calls."

¹⁰⁶¹⁴ "The hot humor which belongs to the same kind as yellow bile"; cf. ibid.: "and the bitter, bilious and hot" (i.e., humor).

¹⁰⁷¹⁴ "Dominate it"; cf. ibid.: "would . . . abound in them."

¹⁰⁸¹⁴ "Move in it, especially in the sensitive organs"; cf. ibid.: "move through the sensitive bodies."

¹⁰⁹¹⁴ "It is not impossible that he feels"; cf. ibid.: "(it is) impossible for him not to perceive."

¹¹⁰¹⁴ "That man in that situation": om. Galen.

¹¹¹¹⁴ "To a degree . . . another small part affected by heat": om. Galen.

¹¹²¹⁴ "In the second case": om. Galen.

¹¹³¹⁴ "One after the other": om. Galen.

¹¹⁴¹⁴ "And . . . heat": cf. Galen, trans. GN 169: "Nevertheless, in the attack of paroxysms, some of the feverish patients suffer *rhigos* and fever, and they perceive both of them: disproportionate cold and heat at the same time."

¹¹⁵¹⁴ "That is, *λειπυρια* (malignant intermittent fevers); cf. Galen, K7:750, 1.7; GN 168, 1.7; trans. GN 169: "lipyriai."

parts is what happens in the smaller parts in the fever that the Greeks call “NPY’LYS” [= *epialos*], for the dyscrasia that occurs in these¹¹⁶ fevers is also anomalous; it is also anomalous in someone affected by rigor, without being followed by fever, but this symptom occurs rarely, although it can happen to some women and men in¹¹⁷ <certain> conditions. But it is doubtless necessary that a regimen of ease of life preceded it, or that the patient applied himself for a long time to the consumption of a large quantity of food which produces a cold, crude, phlegmatic humor, like¹¹⁸ the humor similar to glass. And it seems that this symptom did not happen to anyone at¹¹⁹ all in the past, because no one followed this regimen of ease of life and the consumption of a large quantity of food. Therefore, we find that ancient physicians judge it to be necessary that rigor is followed by fever. But I personally have often seen, and other present-day physicians have seen, a rigor occurring without fever following it.

4. The fever which the Greeks call “NPY’LYS” [= *epialos*] is composed from that dyscrasia from¹²⁰ which a rigor occurs that is not followed by fever and¹²¹ from the dyscrasia that¹²² occurs during fever. And¹²³ when I say “epialos,” I mean by this term only that fever in which both always occur together. But the fever which is preceded by rigor and then followed by heat,¹²⁴ as happens in tertian and quartan fever, I do not call “NPY’LYS” [= *epialos*]. It is thus clear that the¹²⁵ fever which is called “NPY’LYS” [= *epialos*] is composed from two kinds of anomalous dyscrasia, and the same is the case with the remaining fevers, except for hectic fevers.

(Chap. 9)

1. And likewise the illnesses with a swelling that are peculiar to a single part of the body, for all of them originate from an anomalous dyscrasia, like the¹²⁶ hot swelling which is known as “PLGMWNY” [= *phlegmonē*], and¹²⁷ the swelling known as “cancer,” and¹²⁸ the swelling known as “erysipelas,”¹²⁹ and¹³⁰ the pustules known as “shingles,” and¹³¹ the swelling known as “tarahhul,”¹³² and¹³³ the swelling known as “canker,” which the

¹¹⁶“These fevers”; cf. ibid.: “the composed fevers.”

¹¹⁷“In [certain] conditions”; cf. ibid.: “according to their condition” (missing in Kühn’s Greek text, but added by GN following Ḥunayn’s Arabic text).

¹¹⁸“Like the humor similar to glass”; cf. MS P: “which Praxagoras compared to glass”; Galen, trans. GN 169: “such a humour was first introduced by Praxagoras as vitreous.”

¹¹⁹“At all”; cf. Galen, trans. GN 169: “this way.”

¹²⁰“From which a rigor occurs that is not followed by fever”; om. Galen.

¹²¹“And from the dyscrasia that occurs during fever”; cf. Galen, trans. GN 171: “and that of patients with fever.”

¹²²“That occurs during fever”; MSS BE translate: “from which fever arises.”

¹²³“And when I say ‘epialos,’ I mean by this term only that fever”; cf. Galen, trans. GN 171: “I call this way that fever.”

¹²⁴“Heat”; cf. ibid.: “fever.”

¹²⁵“The fever which is called “NPY’LYS” [= *epialos*]”; cf. ibid.: “*épialos*.”

¹²⁶“The hot swelling which is known as ‘phlegmonē’”; cf. ibid.: “inflammation.”

¹²⁷“And the swelling known as ‘cancer’”; cf. ibid.: “cancer.”

¹²⁸“And the swelling known as ‘erysipelas’”; cf. ibid.: “erysipelas.”

¹²⁹“Erysipelas”; Galen, trans. GN 171, adds: “*anthrax*” (carbuncles).

¹³⁰“And the pustules known as ‘shingles’”; cf. ibid.: “herpes.”

¹³¹“And the swelling known as ‘tarahhul’”; cf. ibid.: “swelling.”

¹³²“Tarahhul” (i.e. Arab. *tarahhul* [swelling]); cf. Galen, K7:751, l.16; GN 170, l.13: οἰδημα. Galen adds: φορέδοανα, trans. GN: “phagedaina.”

¹³³“And the swelling known as ‘canker,’ which the Greeks call ‘GN̄GRYN’” [= *gangrāina*]; cf. Galen, trans. GN 171: “gangrāina.”

Greeks call "GN̄GRYN" [= *gangraina*], and¹³⁴ it occurs with the affected part proceeding on the path of death. For all these illnesses have in common that they originate from a moisture that streams to¹³⁵ a part of the body, and they differ because some of them originate from a phlegmatic humor, some from a¹³⁶ humor that is of the variety of yellow bile, and some of them from black <bile>, and some of them originate from blood. And¹³⁷ <of> those that originate from blood, some of them originate from hot, thin blood <and> boiling, and¹³⁸ some originate from cold, thick blood, and¹³⁹ some originate from blood that is of another disposition. I will give a detailed explanation of the different kinds of these diseases in another book.

2. In this book I am content with what I said about the¹⁴⁰ disposition of the moisture that¹⁴¹ streams to a part of the body, and its afflictions, each of the mentioned illnesses which it causes which occurs in accordance with the earlier description of the occurrence of the swelling called "PL̄GMWNY" [= *phlegmonē*] from a hot, bloody humor. And that every single homoiomeric part, simple and primary, when¹⁴² that moisture dominates it, is brought to an anomalous dyscrasia; for at the outside, it is heated or cooled or dried or moistened according to the disposition of that moisture that¹⁴³ is close to it, while¹⁴⁴ its interior parts have not yet gotten into the same condition. If¹⁴⁵ both its exterior and interior were altered entirely and completely and it were made of one disposition totally, it would immediately and completely be relieved from pain, although the illness¹⁴⁶ would be more¹⁴⁷ hard and more difficult. If¹⁴⁸ someone has previous knowledge of this <account>, it will be sufficient for him, in my opinion, to understand my book *On Drugs*, and then, after that, my book *On the Therapeutic Method*.

This is the end of Galen's treatise *On the Anomalous Dyscrasia*. Thanks be to God for his help and his benefactions, may God bless Mohammed, the seal of the prophets, and grant him salvation.

¹³⁴"And it occurs with the affected part proceeding on the path of death": om. Galen.

¹³⁵"To a part of the body": om. Galen.

¹³⁶"A humor that is of the variety of yellow bile": cf. Galen, trans. GN 171: "the bilious . . . humor."

¹³⁷"And <of> those that originate from blood, some of them originate from": om. Galen.

¹³⁸"And some originate from cold, thick blood": cf. Galen, trans. GN 171: "or cold and thick."

¹³⁹"And some originate from blood that is of another disposition": cf. ibid.: "or in any other state."

¹⁴⁰"The disposition of": om. Galen.

¹⁴¹"That streams to a part of the body": om. Galen.

¹⁴²"When that moisture dominates it": cf. Galen, trans. GN 173: "being affected by this flux."

¹⁴³"That is close to it": om. Galen.

¹⁴⁴"While . . . condition": cf. Galen, trans. GN 173: "on the other hand, it will not yet be in an homogeneous state up to its depth"; ibid., n. 30: "i.e., completely."

¹⁴⁵"If . . . totally": cf. ibid.: "However, if the whole of it would wholly change and be altered."

¹⁴⁶"Illness": cf. ibid.: "condition."

¹⁴⁷"More hard and more difficult": cf. ibid.: "more difficult."

¹⁴⁸"If . . . my book": cf. ibid.: "That seems to me enough to be known in advance by those who are going to follow the thread of the study."

C. The Latin Text

SIGLA AND ABBREVIATIONS

A = Paris, BN n.a.l. 343, fols. 37–39v

H = London, British Library Harl. 5425, fols. 53v–56v

O = Vatican City, BAV Ottob. 1158, fols. 86v–88v

E = Erfurt, Amplon. F. 249, fols. 234rb–236vb

F = Paris, BN lat. 6865, fols. 152–154v

P = Cambridge, Peterhouse 33, fols. 23v–25

V = Vatican City, BAV Palat. Lat. 1095, fols. 51v–53v

Ar. = Arabic text, ed. G. Bos

Heb. = Hebrew text, ed. J Shatzmiller

add. = *addidit*

corr. = *correxit*

del. = *delevit*

eras. = *erasit*

illeg. = *illegibilis*

ins. = *inseruit*

m. r. = *manu recentiore*

mg. = *in margine*

om. = *omisit*

scr. = *scripsit*

scrips. = *scripsi*

tr. = *transtulit, transposuit*

Incipit liber Galieni De malitia complexionis diverse¹

(1.1) Malitia² complexionis diverse quandoque in toto animalis corpore existit, sicut quod ei accidit inde³ in specie ydropisis, notione⁴ carnosa; et in febre in qua eger calorem et frigus in una invenit⁵ dispositione, quam greci epialam⁶ vocant, et in plerisque febribus aliis, preter febrem fixam dictam grece ethicam. (1.2) Malitia quoque⁷ complexionis diverse in uno⁸ membrorum erit,⁹ quodcumque fuerit, cum in eo accidet mollicies que est apostema flegmaticum; aut fiet¹⁰ in ipso apostema sanguineum calidum ad terminum tendens,¹¹ secundum quod erit¹² in semita corruptionis et mortis, et est apostema quod¹³ greci nominant¹⁴ cancrene; aut fit in ipso apostema aliud¹⁵ erisipila¹⁶ nominatum; et aliud apostema notione¹⁷ cancer. Lepra quoque huius generis est, et similiter estiomenus¹⁸ et formica. Omnes autem egritudines iste non evanescunt quin cum eis sit superfluitas membro infusa in quo fiunt.

Est tamen malitia¹⁹ complexionis diverse modus alius absque infusione superfluitatis in membris, sed ipsorum qualitates tantum alterantur, cum in ipsis superat calor aut frigus ex sole, aut cum exercitium transcendit mensuram que²⁰ est decens, aut cum quies et tranquillitas pertransirent quantitatem intentionis, aut alia huius similia. In corporibus quoque nostris fit malitia complexionis diverse ex rebus que eis²¹ exterius²² occurunt, si calefaciunt res ille aut infrigidant aut desiccant²³ aut humectant. Et hec quidem species malitia complexionis²⁴ sunt simplices et singulares, quemadmodum ostendi in libro de complexionibus.

(1.3) Eius quoque sunt aliae quatuor species composite, que fiunt cum calefit corpus et humectatur simul, aut calefit et desiccatur simul, aut infrigidatur et humectatur simul, aut infrigidatur et desiccatur simul.²⁵ Et manifestum quidem est quod species iste²⁶ malitia

¹incipit liber G. de malitia complexionis diverse O Liber G. de malitia complexionis diversa A om. H

²add. O etiam

³inde AHO (Ar.) *om. EFPV (Heb.)*

⁴notione AO vocatione H, *corr. H ad vocatio tamen non in omni sed in EFPV (Heb.)*

⁵in una invenit AO invenit nimia H *sustinet in una EFPV (Heb.)*

⁶epilium H

⁷quoque AH etiam O

⁸uno AHO (Ar.) *unoquoque EFPV (Heb.)*

⁹in . . . erit AO erit in uno membrorum H

¹⁰fuerit O

¹¹add. O *mg. m. r. caliditatis*

¹²erat H

¹³quam H

¹⁴nominant AO vocant H

¹⁵aliud apostema H

¹⁶trisipila H

¹⁷notione AHO *nominatum EFPV (Heb.)*

¹⁸estiomenus AHO *herpes estiomenus E herpestiomenus FPV (Heb.)*

¹⁹malitia AH

²⁰quod H

²¹*om. O*

²²extrinsecus O

²³resiccant H

²⁴malitia complexionis AO *tr. H*

²⁵aut calefit et desiccatur . . . simul *om. H*

²⁶ille HO

complexionis diverse non diversificantur a speciebus malitie complexionis equalis nisi quoniam ipse non consistunt²⁷ in omnibus partibus corporis cuius corruptitur²⁸ complexio.

Mea igitur intentio (A37rb) in hoc libro²⁹ est enunciare quomodo fiat³⁰ generatio omnium specierum malitie complexionis diverse. Ut sit sermo meus in illo manifestus, iam ergo oportet ut te³¹ recordari faciam dispositionis³² membrorum omnium; et incipiam recordari maiorum³³ eorum, que nota sunt ei apud quem³⁴ medicine notitia³⁵ non existit. Manus enim³⁶ et pedes et venter et pectus et caput non sunt ex eis quorum esse secundum aliquem³⁷ evanescat.³⁸ (2.1) Ad unum³⁹ igitur ipsorum perveniamus et ipsum⁴⁰ in propinquiores partes ex quibus componitur dividamus. Exempli itaque causa:⁴¹ pedem in coxam et crus⁴² et pedem dividamus; et manum in⁴³ adiutorium et ulnam et palmam sequestremus; ipsam quoque palmam in membra sibi propria dividamus,⁴⁴ que sunt rasceta⁴⁵ et pecten et digitus. Et digitos etiam⁴⁶ dividamus in partes ex quibus sunt compositi,⁴⁷ et sunt ossa et⁴⁸ cartillagines et ligamenta et nervi et vene pulsatiles et non pulsatiles⁴⁹ et panniculi⁵⁰ et caro et corde et ungues et cutis et adeps.

(2.2) Hec ergo⁵¹ membra que postremo nominavi non est possibile⁵² dividere in speciem aliam post istam,⁵³ sed ipsa quidem sunt⁵⁴ membra similium partium prima—preter venas pulsatiles et non pulsatiles, nam hec duo composita sunt ex villis et panniculis,⁵⁵ sicut dixi in libro de medicatione⁵⁶ anathomie. Et in illo etiam libro⁵⁷ narravi

²⁷ consistunt AHO introduce sunt E vincte sunt F vincentes sunt PV (Heb.)

²⁸ corruptitur *scrips.*: alteratur AHO, *mg.* A in alio corruptitur

²⁹ est in hoc libro H

³⁰ sit H

³¹ te AH (Ar.) *om.* OEFP (Heb.) *mg.* V

³² dispositiones H

³³ *om.* H

³⁴ apud quem: quam H

³⁵ nocentia H

³⁶ etenim O

³⁷ aliquem A aliquam H aliquod O

³⁸ add. et O

³⁹ unum AHO (Ar.) unumquodque EFPV (Heb.)

⁴⁰ del. O prosequamur

⁴¹ cum O

⁴² et pedem AHOE *om.* FPV (Heb.)

⁴³ manum in: manus O

⁴⁴ add. O in partes ex quibus sunt composita

⁴⁵ rasceta A rascepta O rascheta H

⁴⁶ quoque O

⁴⁷ composita O, *corr.* A ex composita

⁴⁸ et *om.* A

⁴⁹ et non pulsatiles HEFPV *om.* A (Heb.) *mg.* O

⁵⁰ panniculus O

⁵¹ ergo AHO

⁵² possibile est O

⁵³ ista A

⁵⁴ sunt *ins.* A

⁵⁵ et panniculis: panniculosis O

⁵⁶ medicatione AOEV medicamine H meditatione F iudicatione in al. medicatione P

⁵⁷ libro AHO (Ar.) *om.* EFPV (Heb.)

quod inter membra prima⁵⁸ similiū partium sunt foramina plura, et ex eis plura et⁵⁹ maiora existunt inter membra composita officialia. Quandoque tamen invenimus simile illis foraminibus in aliquo⁶⁰ membrorum similiū partium, quemadmodum invenimus illud in osse et in cute. Verumtamen quodcumque⁶¹ membrorum fuerit molle⁶², quedam⁶³ partes ipsius⁶⁴ alias cooperient⁶⁵ et occultabuntur⁶⁶ sensui foramina que sunt inter eas; sed quodcumque membrorum fuerit durum et siccum, tu consequeris quicquid est in eo ex foraminibus et scissuris⁶⁷ sensu, sicut⁶⁸ reperimus in vacuitatibus ossium; et in illis quidem vacuitatibus ossium existit humiditas, natura⁶⁹ grossa,⁷⁰ alba, preparata⁷¹ ossibus ut nutriantur ipsa. Quomodo autem pori qui⁷² in cute sunt proveniant, iam ostendi in libro de complexionibus.

Hec ergo sunt quorum necessario⁷³ fuit rememorandum, ut per ipsa⁷⁴ verificetur quod in⁷⁵ sequentibus narrabo.

(2.3) Nunc autem oportet ut ad intentionem malitie complexionis diverse perveniamus et narremus que sit eius⁷⁶ natura et⁷⁷ secundum quot modos proveniat. Et⁷⁸ nos iam⁷⁹ quidem⁸⁰ in hiis que sunt premissa⁸¹ diximus quod⁸² in partibus corporis in quo accidit malitia complexionis diverse, non est complexio una, (A37va) quoniam hoc est⁸³ commune et participativum⁸⁴ omni malitie complexionis diverse; eius autem species sequuntur naturam corporum in quibus sunt.⁸⁵ Eventus namque malitie⁸⁶ complexionis diverse in carne nuda

⁵⁸om. H

⁵⁹ex eis plura et *scrips.*: in plura tamen et A et eis plura et H et ex eis parva et O

⁶⁰illo H

⁶¹*add.* EFPV (Heb.) illorum

⁶²molle fuerit H

⁶³quedam AHO quod EFPV

⁶⁴*corr.* A ex illius

⁶⁵cooperient AH cooperiendo O

⁶⁶occultabunt H

⁶⁷sissuris H

⁶⁸sensu sicut AHO (Ar.) sicut sensu EFPV (Heb.)

⁶⁹humiditas natura: humidas H

⁷⁰crossa A, *corr. m. rec.* ad crassa

⁷¹temperata H

⁷²qui AH *om.* O

⁷³necessaria H

⁷⁴ipsam O *corr.* A ex ipsam

⁷⁵in *om.* H

⁷⁶sit eius *tr.* H

⁷⁷*ins.* O

⁷⁸proveniat et AO permanet H

⁷⁹*om.* O

⁸⁰iam quidem *tr.* A

⁸¹sunt premissa *tr.* H

⁸²*del.* H sequitur naturam corporum

⁸³hoc est *mg.* O

⁸⁴participativum AHOEV, *corr.* A ex participate [eras.] principatum P, *mg.* P *m. rec.* vel participatum participatum F “proprium(?)” Heb.

⁸⁵sunt H fiunt O fuerit A

⁸⁶malitie *om.* H

est preter eventum ipsius in lacerto sicut est;⁸⁷ et unusquisque eorum existit secundum modum alium a modo secundum quem alter existit.

(3.1) Inde est quod, cum in⁸⁸ musculo calida effunditur superfluitas, tunc maiores⁸⁹ vene que in ipso sunt, pulsatiles et non pulsatiles, implentur primo et extenduntur; deinde, post illud, ille que sunt minores. Et incessanter procedit⁹⁰ sic⁹¹ donec ad minores perveniantur⁹² venas. Cum ergo superfluitas illa in illis redundat⁹³ venis et eam non continent, effluit aliquid eius⁹⁴ ex orificiis illarum venarum et resudat⁹⁵ ex ea aliquid et egreditur ex ipso corpore venarum. Postquam ergo fuerit illud, implentur foramina que inter prima existunt membra illa superfluitate, adeo donec⁹⁶ eis accidat calefieri et⁹⁷ humectari undique ex illa⁹⁸ humiditate quam continent.

Per membra autem⁹⁹ prima in hoc loco volo intelligi¹⁰⁰ nervos et ligamenta et panniculos et carnem; et ante hoc,¹⁰¹ ipsas venas pulsatiles et non pulsatiles, in quibus iam proprie¹⁰² dolor primo accidit secundum modos diversos, et illud ideo quoniam superfluitas, que in interioribus earum continetur, calefacit eas et extendit et disrumpit;¹⁰³ et superfluitas que est¹⁰⁴ extra eas calefacit ipsas¹⁰⁵ et constringit et coartat et gravat.¹⁰⁶ Aliorum vero¹⁰⁷ membrorum, quedam non egrotare facit nisi calefactio tantum, et quedam non facit pati nisi coartatio tantum, et quedam eorum egrotare¹⁰⁸ faciunt utreque¹⁰⁹ res simul. (3.2) Et hec quidem egritudo dicitur apud grecos flegmon,¹¹⁰ que¹¹¹ est apostema calidum, et est malitia complexionis diverse accidens¹¹² lacerto, et illud ideo quoniam sanguis, qui est in ipso, iam calefactus est et evenit¹¹³ ei similitudo ebullitionis. Deinde calefiunt primo proprie¹¹⁴ eius

⁸⁷sicut est AH sic O

⁸⁸om. H

⁸⁹maioris A

⁹⁰procedunt H

⁹¹sic om. O

⁹²perveniantur AH perveniantur O

⁹³redundat? O

⁹⁴eius om. O

⁹⁵desudat H

⁹⁶post donec del. H ad maiores perveniantur venas. cum ergo superfluitas illa in illis redundaret

⁹⁷huius del. H, tr. H humectari post undique

⁹⁸ipsa O

⁹⁹add. H propria

¹⁰⁰intelligere O

¹⁰¹et ante hoc AH (Ar.), et corr. A mg. ad post [reads ante as autem] post hoc autem O EFPV “post” Heb.

¹⁰²om. O

¹⁰³disrumpit et extendit H

¹⁰⁴om. H

¹⁰⁵ipsas AO eas H

¹⁰⁶aggravat O

¹⁰⁷vero autem O

¹⁰⁸om. O

¹⁰⁹utrumque O

¹¹⁰flemon O

¹¹¹quod H

¹¹²tr. H post lacerto / add. O in

¹¹³corr. A ex venit

¹¹⁴primo proprie: A eras. [illeg.], scr. m. rec. proprie

calefactione corpora¹¹⁵ venarum pulsatilium et non pulsatilium;¹¹⁶ postea omnia que sunt extra eas ex eis in quibus continetur,¹¹⁷ donec ipsum submergant.¹¹⁸

Et impossibile quidem est quin res ad unum duorum modorum perveniat: aut ut¹¹⁹ vincat superfluitas que in¹²⁰ lacerto effunditur,¹²¹ et corrumpat¹²² corpora in quibus vincit; aut vincatur illa superfluitas et redeat lacertus ad dispositionem suam naturalem. Pono itaque ut superfluitas vincatur, cum incipere ab eo quod est bonum sit melius et laudabilius. Dico quod¹²³ sanitas erit tunc¹²⁴ secundum unum duorum modorum: aut ut¹²⁵ resolvantur omnes humiditates que effuse sunt in lacerto, aut ut¹²⁶ decoquantur. Sed laudabilius du(A37vb)abus sanationibus¹²⁷ est que resolutione erit.¹²⁸ Decoctionem vero consequuntur¹²⁹ due res necessario, quarum una est generatio sanie et altera collectio. Et collectio¹³⁰ quidem quandoque in maiore foraminum¹³¹ est vicinore loco et minoris timoris, et¹³² hec est collectio laudabilius. Et quandoque est in maiore¹³³ foraminum¹³⁴ propinquio,¹³⁵ sed foramen illud non est parvi timoris; aut est in foramine parvi timoris,¹³⁶ sed non est maius foraminum¹³⁷ neque propinquum.

(3.3) Quod si fuerit illud¹³⁸ in partibus stomachi, laudabilius erit collectio que erit in amplitudine que in interioribus eius existit, et ad quam secundum plurimum fit¹³⁹ sanie eruptio; collectio vero que fit sub siphac est mala. Et cum fuerit illud¹⁴⁰ in partibus cerebri, tunc collectio in duabus ventriculis eius anterioribus erit laudabilis,¹⁴¹ sed collectio sub duabus matribus cerebri¹⁴² et in ventriculo qui est in posterioribus cerebri facta est illaudabilis et mala. Exiaturarum autem que fiunt in partibus costarum, eruptio erit ad amplitudinem pectoris, et¹⁴³

¹¹⁵corpus O

¹¹⁶et non pulsatilium *om.* H

¹¹⁷continetur A continet HO

¹¹⁸submergant A submergat H submergatur O

¹¹⁹ut *ins.* A *om.* H

¹²⁰in: est in O / add. H eo

¹²¹et funditur O

¹²²corrumpit H

¹²³add. H ad

¹²⁴tunc *om.* H

¹²⁵*ins.* O

¹²⁶*om.* H

¹²⁷duarum sanationum O

¹²⁸giuntur(?) O

¹²⁹decoctionem . . . consequuntur *om.* O, mg. O decoctionem vero secuntur

¹³⁰et collectio: *ins.* O

¹³¹foramine H

¹³²et *om.* H

¹³³minore A

¹³⁴foramine O

¹³⁵et quandoque est in minore foraminum et remotiore a loco exitus et est maioris periculi add. V (Heb.) mg. F (maiori F) add. V mg. in alio loco vacat

¹³⁶aut in . . . timoris *om.* H

¹³⁷foramen H

¹³⁸illud fuerit H

¹³⁹fit *om.* H

¹⁴⁰fuerit illud: facit illud H / illud *ins.* A

¹⁴¹laudabilius H

¹⁴²*om.* O

¹⁴³exiturarum autem . . . et *om.* O

exiturorum que fiunt in lacertis eruptio erit versus cutem; sed¹⁴⁴ exiturorum¹⁴⁵ que fiunt in visceribus eruptio erit aut¹⁴⁶ ad venas¹⁴⁷ que sunt in eis¹⁴⁸ pulsatiles et¹⁴⁹ non pulsatiles, aut versus panniculum qui continet ea et est eis¹⁵⁰ sicut cutis.

(3.4) Quod si superfluitas vincat¹⁵¹ membra, tunc manifestum est quod oportet ex domino malitie complexionis in eis ut ipsorum destruatur operatio et corruptatur secundum temporis longitudinem.¹⁵² Sed principium quietis egritudinis ab eis erit cum similabuntur¹⁵³ rei que resolvit ea et transmutat;¹⁵⁴ et illud est¹⁵⁵ quoniam membris non accidit dolor cum ipsorum complexio iam integre transmutata est, sed in dispositione permutationis eius—sicut¹⁵⁶ iam narravit¹⁵⁷ de esse eius mirabilis Ypocras, ubi dixit quod dolores non fiunt in membris nisi in dispositione alterationis eorum¹⁵⁸ et corruptionis et¹⁵⁹ exitus ipsorum¹⁶⁰ a naturis suis. Et unumquodque¹⁶¹ membrorum non alteratur et egreditur a natura sua et corruptitur, nisi calefiat aut infrigidetur aut desicetur aut humectetur aut eius continuitas solvatur. In malitia autem¹⁶² complexionis diverse, propterea quod membrum calefit aut infrigidatur, proprie; et illud ideo quoniam¹⁶³ hee due qualitates sunt fortioris operatio-
nis quam alie qualitates. Sed¹⁶⁴ iam fit¹⁶⁵ illud propterea quod membrum desiccatur aut humectatur in fame et siti; et¹⁶⁶ accidit passio propter penuriam substantie sicce in fame et¹⁶⁷ propter penuriam humiditatis in dispositione sitis. Cum autem in membro fit¹⁶⁸ operatio ab eo quod ipsum pungit aut corredit aut extendit aut coartat aut disrumpit, (A38ra) tunc eventus passionis est propter solutionem continuatatis.

(4.1) Cumque calor sanguinis qui est in membro apostemoso fuerit calor quietus, et fuerit sanguis quem¹⁶⁹ totum continet corpus equalis complexionis, forsitan non accidet ei ut calefactione membra infirmi calefiat.¹⁷⁰ Et cum caliditas sanguinis qui est in membro

¹⁴⁴exiturorum que . . . sed mg. O (est O)

¹⁴⁵add. O etiam

¹⁴⁶aut om. HO

¹⁴⁷ad venas om. Q

¹⁴⁸que sunt in eis tr. HO post non pulsatiles

¹⁴⁹aut H

¹⁵⁰ei O

¹⁵¹vincat om. O, ins. supra vincit

¹⁵²ipsius longitudinem H

¹⁵³assimilabuntur H

¹⁵⁴add. O ea

¹⁵⁵est om. O

¹⁵⁶sed H

¹⁵⁷narravi H

¹⁵⁸eorum AHO (Ar.) corporis EFPV (Heb.)

¹⁵⁹et AO quia H

¹⁶⁰eorum AO

¹⁶¹add. H quidem, add. et eras. A [illeg.]

¹⁶²tamen H

¹⁶³quoniam AO quod H

¹⁶⁴si A

¹⁶⁵iam fit: eras. [illeg.] A, scr. m. r. autem fiat

¹⁶⁶et om. H

¹⁶⁷et om. O

¹⁶⁸fit AHOEFP, eras. A, ins. A m. rec. deficit deficit V (Heb.)

¹⁶⁹qui O

¹⁷⁰totum corpus add. P (Heb.)

apostemoso fuerit caliditas fortis, calefiet corpus fortitudine ebullitionis eius;¹⁷¹ et cum fuerit ut sanguini, quem¹⁷² totum continet¹⁷³ corpus, dominetur colera, tunc non stat quin calefactione eius superflua calefiat totum¹⁷⁴—et quanto plus si¹⁷⁵ fuerit illud cum utreque res aggregantur,¹⁷⁶ scilicet ita¹⁷⁷ ut sit sanguis qui est in membro apostemoso fortis caliditatis, et in sanguine qui est in corpore¹⁷⁸ dominetur¹⁷⁹ colera.

(4.2) Primum vero quod¹⁸⁰ ex¹⁸¹ sanguine¹⁸² calefit, cum in eo superfluit calefactio,¹⁸³ est sanguis qui est in venis pulsatibus, propterea quod in natura sui est¹⁸⁴ calidior et propinquior nature spiritus; deinde, post ipsum, sanguis qui est in venis non pulsatibus. Si ergo membrum apostemosum propinquum fuerit aliquibus visceribus sanguine¹⁸⁵ habundantibus quem continent, erit caliditas eius¹⁸⁶ recurrens ad sanguinem velociter quem totum corpus continet.¹⁸⁷ Et universaliter dignius¹⁸⁸ est ut calefiat ante¹⁸⁹ omnis res que velox est ad resolvendum, aut in natura sua est calida, et similiter¹⁹⁰ primum quod¹⁹¹ infrigidatur ante res etiam¹⁹² est que¹⁹³ velox est¹⁹⁴ ad resolvendum aut est in natura sua frigida. Velocius autem ad resolvendum eis que in corpore sunt est¹⁹⁵ spiritus, propterea quod est subtilior eis¹⁹⁶ et tenuior; et calidius quod¹⁹⁷ in corpore est est¹⁹⁸ colera rubea, et frigidius¹⁹⁹ quod est in eo est flegma. De reliquis vero humoribus, sanguis calidus²⁰⁰ est post coleram, et melancolia frigida²⁰¹ post flegma. Et colera quidem²⁰² facile resolvitur et velociter ab omni

¹⁷¹om. O

¹⁷²qui O

¹⁷³continet tr. HO post corpus

¹⁷⁴totum AO totum corpus H

¹⁷⁵si om. EFPV (Heb.)

¹⁷⁶augeantur O

¹⁷⁷scilicet ita tr. H

¹⁷⁸post corpore add. O cui

¹⁷⁹del. A corpore

¹⁸⁰mg. O

¹⁸¹vero quod ex om. H

¹⁸²sanguine AHO (Ar.) eo EFPV (Heb.)

¹⁸³add. H a primus sanguis qui calefit adeo ut in eo superfluat

¹⁸⁴om. H

¹⁸⁵sanguinem O

¹⁸⁶caliditas eius om. H

¹⁸⁷continet corpus O

¹⁸⁸corr. A ex dignus dignus O

¹⁸⁹tantum H

¹⁹⁰sit H

¹⁹¹quasi H

¹⁹²et H

¹⁹³ins. O

¹⁹⁴velox est tr. H

¹⁹⁵om. H

¹⁹⁶eam H

¹⁹⁷quod AO quam H

¹⁹⁸in corpore est est A in corpore est HO

¹⁹⁹feb' H

²⁰⁰calidus AH calidior O

²⁰¹frigida H frigidior mg. AO

²⁰²quoque O

quod in eam agit,²⁰³ melancolia²⁰⁴ autem laboriose et violenter resolvitur. Et universaliter quidem omne quod est subtile et tenuerit est velocis resolutionis, et omne quod est²⁰⁵ spissum et grossum est tarde resolutionis. (4.3) Quapropter oportet ut sit veniens²⁰⁶ apostematum resolutio plurimum diversa propter diversitatem dispositionis corporum: primo autem quoniam humor a quo provenit apostema aut erit augmentata caliditatis aut diminuta. Deinde post illud, quoniam putrefactio eius non erit nisi²⁰⁷ secundum naturam ipsius, et secundum superfluitatem retentionis²⁰⁸ eius aut parvitatem retentionis eius,²⁰⁹ in interioribus scilicet.²¹⁰ Nam illius putrefactio quod expirationem non habet²¹¹ velox erit,²¹² et illud quidem²¹³ in omnibus rebus²¹⁴ extrinsecis invenitur.

Quod si convenerit cum hoc ut sit eius complexio calida et humida, erit illud²¹⁵ magis adiuvans²¹⁶ ad hoc ut eius²¹⁷ putrefactio sit velox. Et membrum etiam²¹⁸ in quo fit²¹⁹ apostema, aut erit propinquum vi(A38rb)sceribus sanguine habundantibus²²⁰ aut ab eis remotum, nam et²²¹ in sanguine toto etiam²²² superhabundat colera aut melancolia aut flegma aut ventositas. Et omnes iste quidem²²³ dispositiones diversificantur paucitate et multitudine. Oportet ergo necessario ut sit resolutio²²⁴ plurime diversitatis, cum unum comparatur²²⁵ alii et cum comparatur²²⁶ sibi ipsi.

(5.1) Et hec quidem omnia sunt causa malitie²²⁷ complexionis diverse. Et illud ideo quoniam in eis vincens²²⁸ caliditas que est in sanguine est²²⁹ in membro apostemoso; deinde post ipsum²³⁰ in sanguine qui est in visceribus, et proprie sanguine qui est in corde et ex hoc

²⁰³ea ait O

²⁰⁴melancolie A

²⁰⁵om. H

²⁰⁶veniens HO evenies A eventus EFPV

²⁰⁷ins. O m. r.

²⁰⁸resolutionis H

²⁰⁹eius H del. A om. O

²¹⁰in interioribus scilicet ins. A mg. tamen minoribus scilicet H in interioribus O om. Ar.

²¹¹illius putrefactio que expirationem non habet (putrefactio . . . habet m. r. over erasure) A quod expirationem non habet putrefactio O illius quod experimentum non habet petrefactio H

²¹²velox erit tr. O

²¹³quem H

²¹⁴rebus AHO (Ar.) interioribus rebus et EFPV (Heb.)

²¹⁵om. O

²¹⁶adiuvans magis H

²¹⁷om. H

²¹⁸etiam AO et H

²¹⁹om. H

²²⁰sanguinem habentibus H

²²¹add. O si mg. A in alio et si in sanguine toto etiam

²²²om. O

²²³quidem iste O

²²⁴resolutione H

²²⁵aperitur H

²²⁶cum comparatur: comparatur H

²²⁷causa malitie AO cause H

²²⁸vincet O

²²⁹om. O

²³⁰ipsam A

proprie qui est in ventriculo eius sinistro. Nam si ad hunc²³¹ veneris²³² ventriculum, dum animal adhuc vivit et nondum accidit ei febris, et intromiseris digitum tuum, sicut narravi in libro de medicatione anathomie, senties²³³ ex eo fortiorum²³⁴ caliditatem que est. Non est ergo longe, cum²³⁵ corpus totum²³⁶ calefactione naturam supergrediente²³⁷ calefactum fuerit, quin perveniat ventriculus ille proprie²³⁸ cordis ad finem²³⁹ caliditatis. Et ex eis quidem²⁴⁰ que²⁴¹ ad hoc²⁴² iuvant²⁴³ est quod in ipso est sanguis²⁴⁴ subtilior et nature spiritus vicinior et movetur etiam²⁴⁵ motu assiduo.

(5.2) Verumtamen in huiusmodi febribus totum sanguinem invenitur comprehendisse²⁴⁶ iam calefactio,²⁴⁷ et recipit illam caliditatem egredientem cursum naturalem, generatam²⁴⁸ a putrefactione²⁴⁹ humorum, receptione perfecta. Corporum²⁵⁰ vero venarum pulsarium et²⁵¹ aliorum corporum complexio que eis sunt vicina et continent ea, non invenitur adhuc perfecte²⁵² et integre alterata, sed sunt adhuc²⁵³ habentia²⁵⁴ resolutionem et alterationem tendentem ad calefactionem.²⁵⁵ Et si illud perseveraverit in eis²⁵⁶ spatio longo, pervenient ad terminum in quo iam erunt²⁵⁷ victa et resoluta penitus, ita ut tunc non sint in²⁵⁸ termino in quo calefiant sed²⁵⁹ sint in termino in quo iam integre²⁶⁰ consecuta²⁶¹ sunt calefactionem a natura egredientem. Resolutionis autem terminus in unoquoque membrorum est

²³¹ad hunc A adhuc HO

²³²veneris *scrips.*: veniens A innueris O, corr. O ad inveneris circuitueris H

²³³sentiens A

²³⁴foramine H

²³⁵cum AO et H

²³⁶tuum H

²³⁷supergrediente A super egrediente O egrediente H

²³⁸corr. A m. r. ad prius

²³⁹calefactum . . . finem mg. O

²⁴⁰corr. O m. r. ex qui

²⁴¹ins. A

²⁴²ad huc H

²⁴³iuvat H

²⁴⁴sanguinis H

²⁴⁵etiam A om. O et H

²⁴⁶amph' vidiisse H

²⁴⁷calefactio A caliditas O calefacto H

²⁴⁸generatam HO generata A

²⁴⁹putredine O

²⁵⁰corpore H

²⁵¹etiam H

²⁵²perfecte adhuc H

²⁵³adhuc om. H

²⁵⁴habentia AHO (Ar.) contrahencia EFPV, in al. habentia mg. P

²⁵⁵add. integrum V (Heb.)

²⁵⁶eo H

²⁵⁷e't A erant P om. H

²⁵⁸ins. A

²⁵⁹tunc non sint . . . sed AOH (Ar.) tunc non E tunc iam F(Heb.) iam P tunc V, add. mg. V non sint in termino in quo calefiant sed

²⁶⁰integre O integrum AH

²⁶¹consecuta HO c'secuta A

nocumentum operationis eius.²⁶² Tota autem intentio que est²⁶³ apud principium rei²⁶⁴ ad hoc ut perveniat ad hunc terminum, non est²⁶⁵ nisi via exeundi ad²⁶⁶ dispositionem²⁶⁷ egredientem a re naturali commixta, communis, media inter duo contraria,²⁶⁸ scilicet inter dispositionem que vere²⁶⁹ est natura eius²⁷⁰ et inter dispositionem que a²⁷¹ natura penitus est egressa.²⁷² In toto ergo²⁷³ hoc temporis²⁷⁴ spatio inerit²⁷⁵ corpori quod a dolore²⁷⁶ cal-efit quantitas resolutionis que ipsum sequitur.²⁷⁷ (5.3) Cum autem prima omnia²⁷⁸ corporis membra integre et perfecte sunt calefacta, dicitur febris illa ethica,²⁷⁹ que est fixa, et illud ideo quoniam eius essentia tunc non existit in humiditatibus et spiritu²⁸⁰ tantum, sed est preter hoc in corporibus quibus adest fixio.

Et²⁸¹ cum hac febre non est²⁸² passio neque dolor, et estimat²⁸³ patiens eam quod nullo modo²⁸⁴ sit in eo febris, quoniam non (A38va) sentit eius caliditatem, nam membra eius iam omnia²⁸⁵ calefacta sunt²⁸⁶ equaliter²⁸⁷ secundum dispositionem unam. Et iam quidem²⁸⁸ convenerunt super hoc speculatores naturarum, apud considerationes suas²⁸⁹ de sensibus, quod sensus non est²⁹⁰ nisi²⁹¹ alteratione et non fit passio neque dolor in his²⁹² que iam²⁹³ integre alterata sunt. Quapropter fit ut cum nulla febre²⁹⁴ huius generis (quam paulo ante

²⁶² eius tr. H post autem

²⁶³ om. H

²⁶⁴ rei: ipsum rei O

²⁶⁵ add. O enim

²⁶⁶ ad om. H

²⁶⁷ a dispositione O

²⁶⁸ duo contraria AHO (Ar.) **hec duo EFPV (Heb.)**

²⁶⁹ vere AO vera H

²⁷⁰ natura eius: naturalis O

²⁷¹ ins. A

²⁷² add. O et

²⁷³ om. O

²⁷⁴ hoc temporis H corporis AO

²⁷⁵ invenerint O

²⁷⁶ dolore AHO (Ar.) **calore tali EFPV (Heb.)**

²⁷⁷ que ipsum sequitur om. O

²⁷⁸ omnia AO, tr. O ante prima om. H

²⁷⁹ ethica A ectica O

²⁸⁰ spiritu AH spiritibus O

²⁸¹ om. O

²⁸² ins. H

²⁸³ existimat H extimat AO

²⁸⁴ om. H

²⁸⁵ iam omnia tr. AH omnia O

²⁸⁶ sunt calefacta O

²⁸⁷ add. O calefactione

²⁸⁸ corr. O m. r. ex qui

²⁸⁹ om. O

²⁹⁰ sit O fit AH

²⁹¹ nisi A nisi ab O om. H

²⁹² ab his O

²⁹³ om. O

²⁹⁴ om. H

ethicam nominari diximus)²⁹⁵ sit passio neque dolor neque patiens eam penitus sentiat.²⁹⁶ et illud ideo quoniam membrorum eius dispositio non est dispositio qua quedam ipsorum²⁹⁷ agant²⁹⁸ et quedam patiantur, cum omnia iam²⁹⁹ facta sint dispositionis unius, et facta sit eorum complexio una conveniens—(6.1) etsi sint quedam augmentata³⁰⁰ calefactionis³⁰¹ et quedam³⁰² augmentatae infrigidationis,³⁰³ nam ex superfluitate calefactionis eorum que ex eis sunt calidiora non pervenit³⁰⁴ eis³⁰⁵ que ex³⁰⁶ eis sunt frigidiora ut impediatur que vicina sunt calefactione. Quod si res ita³⁰⁷ esset,³⁰⁸ membra se ad³⁰⁹ invicem impediunt naturali³¹⁰ dispositione. Membra namque in illa etiam dispositione³¹¹ in³¹² complexione sua diversificantur, et illud est quoniam caro est membrum calidum³¹³ et os est³¹⁴ membrum frigidum, verumtamen cum³¹⁵ diversitate³¹⁶ horum et similium non est dolor neque passio, propter parvitatem comparationis inter ea in³¹⁷ caliditate et frigiditate. Inde est quod aer corpora³¹⁸ circundans³¹⁹ non impedit ea, antequam alteretur³²⁰ eo,³²¹ usque³²² superfluat in ipso calor aut frigus. Species autem diversitatis eius inter superfluitatem caloris et inter³²³ superfluitatem³²⁴ frigoris sunt secundum multitudinem³²⁵ eorum et manifestationem comparationis³²⁶ inter ea, nam corpora ipsum³²⁷ sentiunt et non ab eo impediuntur.

²⁹⁵ ethicam nominari diximus H diximus nominari ethicam A nominavimus ethicam O

²⁹⁶ sentit O

²⁹⁷ ipsarum O

²⁹⁸ agunt H

²⁹⁹ iam ins. A m. r. et del. post sint

³⁰⁰ augmentata A augmentationis HO, tr. O post calefactionis

³⁰¹ calefactionis AO caliditatis H

³⁰² et quedam om. O

³⁰³ augmentatae infrigidationis A infrigidationis O augmentaris frigiditatis H

³⁰⁴ provenit A

³⁰⁵ eis mg. A

³⁰⁶ om. O

³⁰⁷ om. O et ins. post esset

³⁰⁸ esset A essent O erunt H

³⁰⁹ ad se H

³¹⁰ add. A entia add. H essentia add. EF essentia et add. PV (Heb.) et essentia

³¹¹ membra . . . dispositione mg. A

³¹² om. H

³¹³ calidum membrum H

³¹⁴ om. H

³¹⁵ etiam O

³¹⁶ del. A rerum

³¹⁷ om. H

³¹⁸ add. P (Heb.) nostra

³¹⁹ corpora circundans A corpora dans H corpus circundans O

³²⁰ alteretur A alterentur O alterantur H

³²¹ eo ins. m. rec. O

³²² usque AH quoque O, add. HO donec

³²³ om. H

³²⁴ caloris . . . superfluitatem om. O, add. O mg. m. rec. et inter superfluitatem caliditatis post frigoris

³²⁵ multitudinem AH similitudinem O

³²⁶ comparationum H

³²⁷ ipsas H

(6.2) Ergo forsitan anima secundum hanc ratiocinationem acquiescat³²⁸ sermoni illi qui dictus³²⁹ est, quemadmodum dixit Ypocras in quibusdam libris suis, quod omnes eritudines non sunt nisi ulcera; et illud³³⁰ ideo quoniam ulcus non est³³¹ nisi continuitatis solutio, et caliditas superflua et frigus superfluum fortasse continuitatem solvunt—caliditas quidem fortis, propterea quod solvit et secat continuitatem substantie in qua vincit; et frigiditas quidem superflua, propterea quod adunat et constringit substantiam³³² in qua vincit ad interiora, donec exuberet ex ea aliiquid et³³³ egrediatur³³⁴ et³³⁵ coartat³³⁶ quod remanet ex eo³³⁷ et disrupit. Quod si aliquis ponat hunc terminum in superfluitate frigiditatis et³³⁸ caliditatis,³³⁹ dignum est³⁴⁰ ut sit non³⁴¹ longe quod estimetur³⁴² de eo quod iam adinvenit. Verum tamen³⁴³ si hoc³⁴⁴ non est terminus in superfluitate, sed terminus³⁴⁵ in illo est aliud,³⁴⁶ tunc secundum manifestam dis(A38vb)positionem est quod omnis superfluitas non intelligitur nisi secundum semitam relationis ad³⁴⁷ aliiquid. Et illud ideo quoniam quod omni corpori advenit ex rebus que sunt unius dispositionis caliditatis et frigiditatis, non est res una.

(6.3) Quapropter³⁴⁸ fit ut humores qui sunt in quibusdam animalibus ad invicem sint³⁴⁹ convenientes et quorundam humores non ad invicem³⁵⁰ convenient, sed preter³⁵¹ hoc corrumpant se et interficiant³⁵², sicut homo et vipera, cuiusque cui eorum³⁵³ saliva alterum perimit. Et ex hoc³⁵⁴ quidem fit ut cum homo³⁵⁵ super scorpionem expuit³⁵⁶ dum est iejunus interficiat³⁵⁷ ipsum; homo autem hominem sibi similem non interficit cum eum mordet, neque³⁵⁸

³²⁸quiescens est O, corr. O ad adquiescens

³²⁹dicens O

³³⁰add. est H

³³¹non est ulcus H

³³²substantia O

³³³aliiquid et H aliiquid A quidem O mg. add. AO et

³³⁴egreditur O

³³⁵et om. H

³³⁶coburat O

³³⁷ex eo ins. A

³³⁸ins. O

³³⁹caliditatis et frigiditatis H

³⁴⁰est dignum H

³⁴¹ut non sit H

³⁴²existimetur H

³⁴³verum O

³⁴⁴si hoc mg. O

³⁴⁵tunc H

³⁴⁶est aliud H aliud AO, ins. O est ante aliud

³⁴⁷om. O, ins. O m. r.

³⁴⁸quoniam propter H

³⁴⁹sint adinvicem H

³⁵⁰adinvicem non H

³⁵¹preter AO propter H

³⁵²corrumpunt . . . interficiunt H

³⁵³cui eorum A ei (ins.) ipsorum O hec eorum H

³⁵⁴ex hoc: om. O, ins. O hoc

³⁵⁵et vipera . . . homo: mg. A

³⁵⁶expuit OH om. A, mg. A expuit

³⁵⁷interficiat A interficit HO

³⁵⁸om. H

vipera sibi similem neque draco draconem, et illud ideo quoniam simile est conveniens et amicum, et contrarium est³⁵⁹ inimicum³⁶⁰ impediens. Et ex eis quidem que hoc significant est quod omnia que augmentantur et nutriuntur, non augmentantur et nutriuntur³⁶¹ nisi suo simili et sibi convenienti, et omne quod³⁶² moritur et minuitur, non moritur et minuitur nisi suo contrario. Et propter hoc conservatio³⁶³ sanitatis non fit nisi³⁶⁴ rebus convenientibus et similibus corporibus sanis; sanitas quoque et curatio ab egritudinibus non fit³⁶⁵ nisi a rebus sibi³⁶⁶ contrariis. Verumtamen loqui de³⁶⁷ hoc est preter illud in quo³⁶⁸ sumus.

(6.4) Illam autem febrem³⁶⁹ fixam que substantie animalis³⁷⁰ fixe inheret non sentit qui ea laborat. Nulla vero reliquarum³⁷¹ febrium existit quam eam patiens non sentiat; verumtamen quasdam earum sentit et³⁷² ab eis impeditur plus et quasdam³⁷³ minus. Earum preterea sunt quedam cum quibus est tremor, et hoc etiam³⁷⁴ accidens, tremor scilicet,³⁷⁵ sicut et plura³⁷⁶ alia accidentia, non fiunt³⁷⁷ nisi ex³⁷⁸ malitia complexionis diverse. Et neque quidem possibile est ut narrem qualiter³⁷⁹ hoc accidens generetur³⁸⁰ in hoc sermone in quo sumus, nisi ostendam de virtutibus naturalibus quot sint, et que sint,³⁸¹ et quid sit illud³⁸² quod uniuscuiusque earum³⁸³ proprium est³⁸⁴ efficere.³⁸⁵ Ego autem narrabo esse omnium accidentium in libro de morbis et accidentibus.

(7.1) Redeamus autem ad species malitiae complexionis diverse. Iam quidem dixi in hiis³⁸⁶ que sunt premissa³⁸⁷ qualiter generetur febris ab³⁸⁸ apostemate calido quod flegmon

³⁵⁹ et contrarium est AO contrarium autem est H

³⁶⁰ add. O et

³⁶¹ non . . . nutriuntur mg. A

³⁶² quidem H, ins. H quod

³⁶³ generatio H

³⁶⁴ add. H ex

³⁶⁵ fiunt O

³⁶⁶ a rebus sibi A rebus sibi H a rebus O

³⁶⁷ ins. A

³⁶⁸ illud in quo A id in O

³⁶⁹ febrem autem H

³⁷⁰ ins. O

³⁷¹ corr. m. r. H ex vel

³⁷² sentit et AHO cum sentit EFPV (Heb.)

³⁷³ quasdam AHOF a quibusdam EPV (Heb.)

³⁷⁴ om. H

³⁷⁵ tremor scilicet AO tr. HEFV om. P (Heb.)

³⁷⁶ plurima O

³⁷⁷ fit A sit H fiunt O

³⁷⁸ a AO om. H, ins. H a

³⁷⁹ qualiter: equaliter unde O

³⁸⁰ add. O et

³⁸¹ et que sint om. H

³⁸² illud A id O om. H

³⁸³ eorum H

³⁸⁴ proprium est A tr. HO

³⁸⁵ efficitur H

³⁸⁶ eis O

³⁸⁷ del. A s.

³⁸⁸ ex O

nominatur, et quod omne apostema huius generis et omnis febris, preter febrem fixam nominatam,³⁸⁹ sunt ex³⁹⁰ egritudinibus in quibus complexio est diversa. Et iam quidem fiunt febres ex putrefactione humorum tantum absque apostemate, et illud ideo quoniam non quod³⁹¹ putrefit est illud³⁹² quod iam adheret vel retentum est³⁹³ et privatur expiratione³⁹⁴ tantum, sed velocissime fit in hoc³⁹⁵ putrefactio et fortissime;³⁹⁶ et iam quidem putrefiunt res alie multe que sunt preparate ad putrefiendum.³⁹⁷ Sed narrabo esse preparationis³⁹⁸ eius quod preparatum³⁹⁹ est⁴⁰⁰ putrefactioni in alio libro ab isto. (7.2) Et malitia quidem complexionis diverse fit⁴⁰¹ secundum modum alium in corpore toto: et⁴⁰² quandoque quidem est illud, cum vapor calidus in ipso (A39ra) constrictione⁴⁰³ retinetur; et quandoque est propter⁴⁰⁴ augmentum caliditatis causa⁴⁰⁵ exercitii pluris⁴⁰⁶ mensura⁴⁰⁷ que conveniens est,⁴⁰⁸ et quandoque est propterea⁴⁰⁹ quod sanguis calefit et fervet ebullitione superflua propter iram aut calefit⁴¹⁰ superflue propter moram in sole calido. Et manifestum quidem est apud me quod omnes febres iste provenientes ab apostematis, sunt secundum virtutem cause operantis⁴¹¹ in corpore et secundum dispositionem cuiusque corporum; erit febris in quibusdam corporibus fortior et in quibusdam debilior et quedam eorum⁴¹² penitus non febriunt.

(7.3) Et manifestum etiam est⁴¹³ quod malitia complexionis quandoque provenit in spiritu tantum et quandoque⁴¹⁴ pertransit eum⁴¹⁵ etiam usque ad humores. Et ex eis quidem †que non sunt inferiora⁴¹⁶ illo in declaratione⁴¹⁷ est† quod omnes febres, cum prolongantur,

³⁸⁹ nominata O

³⁹⁰ ex ins. A

³⁹¹ quod H quod iam O eras. A

³⁹² est illud O est H eras. A

³⁹³ vel retentum est OH mg. A

³⁹⁴ expiratione H experitationem A respiratione O

³⁹⁵ in hoc: h' H

³⁹⁶ et fortissime om. H

³⁹⁷ putrefaciendum O putrefiendum A putrefiunt H

³⁹⁸ preparationis AH putrefactionis O

³⁹⁹ apparatum O

⁴⁰⁰ est om. H

⁴⁰¹ fit diverse H

⁴⁰² etiam O

⁴⁰³ constitutione O

⁴⁰⁴ per H

⁴⁰⁵ causa om. O

⁴⁰⁶ pluris AO plura nihil H

⁴⁰⁷ mensura A measure O gurtur H

⁴⁰⁸ est conveniens H

⁴⁰⁹ quandoque est propterea A quandoque est propter O propterea quandoque est H

⁴¹⁰ calefit A

⁴¹¹ virtutem cause operantis AHO (Ar.) esse virtutum (virtutum esse V) operantium EFPV "esse virtutis cause operantis" Heb.

⁴¹² corr. A ex eo

⁴¹³ etiam est AH est etiam O

⁴¹⁴ ins. O m. rec.

⁴¹⁵ eum AHO cum hoc EFPV (Heb.)

⁴¹⁶ inferiores O

⁴¹⁷ declaratione corr. A m. rec. ex [illeg.] declinatione HO

consequitur⁴¹⁸ eas febris fixa. Et ex hoc quidem sermone quasi iam declaratum est⁴¹⁹ quod malitia complexionis diverse quandoque provenit ab humiditate calida aut frigida⁴²⁰ currente ad aliquod membrorum, quemadmodum narravi de esse membrorum in quibus fiunt apostemata; et quandoque non est res⁴²¹ ita, sed est cum alteratur complexio corporis in qualitate sua; et quod quedam occasiones⁴²² que alterant ipsum⁴²³ consurgunt⁴²⁴ ex ipso corpore, et quedam eveniunt⁴²⁵ exterius. Cum febris quidem⁴²⁶ fit⁴²⁷ a putrefactione solum,⁴²⁸ et cum quedam⁴²⁹ a quibusdam apostematisbus, ex ipso corpore. Et eventus quidem febris⁴³⁰ a calefactione solis⁴³¹ aut a⁴³² superfluitate exercitii, exterius. Et illud quidem narrabo latius quam in hoc sermone in libro de causis accidentium.⁴³³

Et⁴³⁴ quemadmodum febris accidit a caliditate solis cum alteratur complexio corporis, similiter accidit⁴³⁵ quibusdam hominibus ex frigore⁴³⁶ aeris multotiens ut vincat in eis vehementer frigus in toto corpore donec moriantur quidam eorum.⁴³⁷ Et res quidem in hiis etiam omnibus⁴³⁸ manifesta est quod⁴³⁹ accidit eis⁴⁴⁰ passio et dolor. (8.1) Et⁴⁴¹ passio et dolor etiam accidit ei⁴⁴² cui⁴⁴³ dominatur frigus vehemens ex forti frigore; deinde nititur calefacere⁴⁴⁴ corpus suum velociter⁴⁴⁵ approximando ipsum⁴⁴⁶ igni. Et multi illorum⁴⁴⁷ quibus evenit illud, cum appropinquant corpora sua igni⁴⁴⁸ subito, sentiunt dolorem vehementissimum⁴⁴⁹

⁴¹⁸consequuntur H

⁴¹⁹declinatum est *del. A et post scr.* declaratum est

⁴²⁰aut frigida *mg. O*

⁴²¹res non est O

⁴²²occasiones A alterationes O, *mg. O* al. occasiones secationes H

⁴²³alterant ipsum AO *tr. H*

⁴²⁴consurgent H

⁴²⁵eveniunt quidem O

⁴²⁶*corr. A m. rec. ad* quedam

⁴²⁷quidem fit: que sit H

⁴²⁸putrefactione solum AH (Ar.) **calefactione solis** (solius O) OEFPV (Heb.)

⁴²⁹quibus (*del.*) quidam A

⁴³⁰exterius cum febris... febris AH febres O

⁴³¹solum H solius O

⁴³²ex O

⁴³³*add. O* eorum

⁴³⁴*om. O*

⁴³⁵*add. H* in

⁴³⁶frigiditate O, *add. O* solius

⁴³⁷corum quidam H

⁴³⁸hiis etiam omnibus A omnibus hiis etiam H hiis omnibus O **hiis hominibus** EFPV (Heb.)

⁴³⁹et H

⁴⁴⁰*corr. A ex ei*

⁴⁴¹passio et dolor et *om. O*

⁴⁴²passio et dolor etiam accidit AHO(Ar.), *mg. V* (**accidunt V**) *om. EFP* (Heb.)

⁴⁴³cui AHO, *corr. A m. rec. ad* cum eis

⁴⁴⁴calefactione H

⁴⁴⁵*om. O*

⁴⁴⁶ipsi approximando H

⁴⁴⁷aliorum H

⁴⁴⁸*ins. O*

⁴⁴⁹vehementem O

in radicibus unguium.⁴⁵⁰ Quis ergo, cum sensibiliter videat⁴⁵¹ in hac dispositione quod causa passionis et doloris non est nisi malitia complexionis diverse, audeat respondere illud⁴⁵² in doloribus qui intrinsecus accidunt? Et miretur qualiter accidat dolor multotiens⁴⁵³ hominibus absque apostemate, aut in intestino⁴⁵⁴ quod nominatur colon, aut in⁴⁵⁵ extremo testiculorum, aut in reliquis membris, et illud ideo quoniam nichil horum est mirabile.

Et neque etiam⁴⁵⁶ qualiter accidat febris et tremor in⁴⁵⁷ quibus(A39rb)dam hominibus in dispositione una, propterea quod⁴⁵⁸ multiplicatur in corpore⁴⁵⁹ humor frigidus flegmaticus similis vitro, et humor calidus qui est de genere colere,⁴⁶⁰ donec in ipso simul⁴⁶¹ dominentur⁴⁶² et moveantur⁴⁶³ in corpore, et proprie in membris sensibilibus, non est mirandum si sentiat cuius hec⁴⁶⁴ est⁴⁶⁵ dispositio utraque⁴⁶⁶ simul. Nam si⁴⁶⁷ ad hominem veneris⁴⁶⁸ et in sole calido eum⁴⁶⁹ stare⁴⁷⁰ feceris, deinde super ipsum⁴⁷¹ aquam frigidam effunderis,⁴⁷² non erit inconveniens si sentiat caliditatem solis et frigiditatem aque. Verumtamen hec duo simul habenti⁴⁷³ hanc dispositionem non adveniunt nisi exterius, et advenit ei etiam unumquodque eorum⁴⁷⁴ in partibus corporis sui magnis.

(8.2) In febre autem⁴⁷⁵ quam greci nominant⁴⁷⁶ epialam, quod advenit ei⁴⁷⁷ ex calido et frigido⁴⁷⁸ non advenit⁴⁷⁹ ei nisi intrinsecus,⁴⁸⁰ et advenit ei etiam⁴⁸¹ unumquodque eorum in

⁴⁵⁰ lignum H

⁴⁵¹ videat O vid' at A om. H, ins. H viderat

⁴⁵² respondere illud AO illud respicere H respicere illud F respuere illud EPV (Heb.)

⁴⁵³ om. O

⁴⁵⁴ aut in intestino O aut intestina A aut intestino H

⁴⁵⁵ om. H

⁴⁵⁶ add. mirabile est P (Heb.)

⁴⁵⁷ om. A

⁴⁵⁸ add. cum HEFV (Heb.)

⁴⁵⁹ in corpore tr. O post humor

⁴⁶⁰ qui est . . . colere om. O

⁴⁶¹ simul om. A et ins. ante in ipso / simul in eo O

⁴⁶² dominatur simul H

⁴⁶³ dominetur et moveatur O

⁴⁶⁴ si sentiat cuius hec: cum O

⁴⁶⁵ est hec H

⁴⁶⁶ utrorumque O

⁴⁶⁷ si: cum O

⁴⁶⁸ veneris *scrips.*: vieri(?) A inveris O vehementer hanc dispositionem *del.* H, meris H

⁴⁶⁹ in . . . eum A eum in sole calido O in sole calido H

⁴⁷⁰ constare H

⁴⁷¹ ipsam H

⁴⁷² effunderis AH infunderis O

⁴⁷³ habenti AO habent H

⁴⁷⁴ ins. A

⁴⁷⁵ om. O

⁴⁷⁶ nominant O vocant H vocant vel nominant A

⁴⁷⁷ ei AHO, *scr. supr.* A id est patientis

⁴⁷⁸ ex calido et frigido AH ex calido et ex frigido O

⁴⁷⁹ advenienti H

⁴⁸⁰ extrinsecus H

⁴⁸¹ ei etiam tr. O

partibus corporis sui⁴⁸² parvis. Et ita fit ut non sint partes magne corporis primi⁴⁸³ quibus adveniat frigus,⁴⁸⁴ nisi⁴⁸⁵ ad latus cuiusque earum⁴⁸⁶ sit pars magna cui adveniat calor; et non sit pars parva corporis secundi cui⁴⁸⁷ adveniat frigus, nisi et ad latus eius sit alia⁴⁸⁸ pars parva cui⁴⁸⁹ adveniat⁴⁹⁰ calor. Et propter hoc fit ut iste secundus⁴⁹¹ estimet⁴⁹² se sentire utraque simul in suo corpore. Et illud ideo⁴⁹³ quoniam cum unumquodque quod infrigidat et⁴⁹⁴ calefacit sit sparsum in partibus parvis, quarum una est post aliam, et non⁴⁹⁵ sit post eas⁴⁹⁶ in parvitate ultima,⁴⁹⁷ non est possibile ut inveniatur pars⁴⁹⁸ ex istis parvis in qua sit sensus unus⁴⁹⁹ caloris et frigoris⁵⁰⁰ absque alia.⁵⁰¹ (8.3) Et cuidam eorum⁵⁰² qui⁵⁰³ febriunt accidit,⁵⁰⁴ cum primo⁵⁰⁵ febris eum invadit, in unaquaque accessionum suarum, ut sentiat cum ea frigus superfluum et calorem superfluum, sed nullum eorum sentit in loco in quo sentit alterum. Ille tamen⁵⁰⁶ cui illud⁵⁰⁷ advenit potest discernere manifeste inter membra sua que calefiunt et inter ea⁵⁰⁸ que infrigidantur, et illud ideo quoniam sentit calorem⁵⁰⁹ quod⁵¹⁰ interius est in ipsis suis⁵¹¹ visceribus et sentit frigus in omnibus membris que sunt in manifesto⁵¹² sui corporis.

⁴⁸²sui om. O⁴⁸³primi tr. H ante corporis⁴⁸⁴calor O⁴⁸⁵add. A et⁴⁸⁶eorum O⁴⁸⁷adveniat . . . cui om. O⁴⁸⁸alia sit AO⁴⁸⁹cum H⁴⁹⁰adiuvat O⁴⁹¹secundus AHE (Ar.) partes O sensus FPV⁴⁹²estimet *scrips.*: existimet AH extimant O⁴⁹³ins. O⁴⁹⁴aut O⁴⁹⁵om. O⁴⁹⁶eam O⁴⁹⁷add. et O⁴⁹⁸add. aliqua FP⁴⁹⁹unus P⁵⁰⁰add. F simul add. V et⁵⁰¹pars . . . alia FP (Heb.) mg. A (A add. *apud principium in alio*), mg. V / post alia add. AHOEFP aliqua (aliquam AH altera F aliquando EP om. V) harum (om. HO) minimarum partium sensus (sensu O aliquando sensus V) in aliquo (alio H quo sit EFPV) frigido et calido (frigus et calor simul F calor et frigus P frigus et calor EV) absque alia⁵⁰²cuidam eorum: eiusdem earum H⁵⁰³que H⁵⁰⁴accidit A accident H om. O⁵⁰⁵primo AOP (Ar.) prius H post EFV (Heb.)⁵⁰⁶tantum O⁵⁰⁷om. H⁵⁰⁸membra H⁵⁰⁹calidum H⁵¹⁰ins. O⁵¹¹om. H⁵¹²sub manifesto H

Et ex febribus preterea est febris quam greci vocant⁵¹³ synochum numquam remota ab hac dispositione, et similiter est genus febrium adurentium⁵¹⁴ mortificantium.⁵¹⁵ Et illud quidem quod accidit in hiis febribus in partibus maioribus est quod accidit in febre quam greci vocant epialam in partibus minoribus, malitia namque complexionis in his febribus etiam est diversa, et est etiam diversa in eo cui advenit tremor, preter quod ipsum sequatur febris. Hoc autem accidens raro accidit; sed tamen secundum dispositionem accidit quibusdam mulieribus et quibusdam viris. Verumtamen oportet proculdubio ut ipsum iam precesserit regimen quietis, aut patiens⁵¹⁶ spatio⁵¹⁷ longo assidue sit usus multitudine cibi generantis humorem frigidum crudum flegmaticum sicut humor⁵¹⁸ similis vitro. Et videtur quidem quod accidens hoc⁵¹⁹ non accidit ante⁵²⁰ alicui penitus quoniam non fuit aliquis hominum usus hoc regimine quietis et multi(A39va)tudinis cibi. Et propter hoc invenimus antiquos medicorum iudicantes quod necesse est ut tremorem consequatur febris. Nos tamen⁵²¹ iam vidimus multo tiens et viderunt⁵²² alii novorum medicorum tremorem provenire⁵²³ quem postea febris non est consecuta.⁵²⁴

(8.4) Febris autem quam greci vocant⁵²⁵ epialam est composita ex hac malitia complexionis a qua provenit tremor quem non sequitur febris, et ex malitia complexionis a qua⁵²⁶ provenit febris. Cum autem dico epialam, nolo intelligi per hoc nomen nisi febrem in qua utraque semper⁵²⁷ accidunt. Febrem vero quam tremor precedit et quam postea⁵²⁸ sequitur calor, sicut accidit in tertiana et quartana, non nomino⁵²⁹ epialam. Iam igitur⁵³⁰ manifestum est quod febris⁵³¹ que epiala⁵³² nominatur est composita⁵³³ ex duobus modis⁵³⁴ malitia complexionis diverse, et similiter est dispositio in reliquis⁵³⁵ febribus preter febres fixas.

(9.1) Et similiter sunt⁵³⁶ egritudines que sunt proprie alicui membrorum cum apostemate: omnes enim⁵³⁷ fiunt a⁵³⁸ malitia complexionis diverse, sicut apostema quod nominatur flegmon et

⁵¹³vocant AHO

⁵¹⁴add. H et

⁵¹⁵mortificativum A

⁵¹⁶om. H

⁵¹⁷tempore O .

⁵¹⁸homī H

⁵¹⁹accidens hoc tr. O

⁵²⁰ante A (Ar.) inde H om. OFVEP (Heb.)

⁵²¹autem O

⁵²²videtur O

⁵²³provenire HO pervenire A

⁵²⁴consecuta est O

⁵²⁵vocant AO nominant H

⁵²⁶add. H non

⁵²⁷add. et del. H est

⁵²⁸post H

⁵²⁹voco O

⁵³⁰ergo O

⁵³¹quod febris om. O

⁵³²epialos A

⁵³³composita est O

⁵³⁴mg. A

⁵³⁵omnibus O

⁵³⁶ins. A

⁵³⁷autem A

⁵³⁸cum H

nominatur⁵³⁹ cancer et nominatur formica, et pustule que per erisipilam noscuntur,⁵⁴⁰ et apostema nominatum⁵⁴¹ mollices et nominatum estiomenus et illud quod nominant greci⁵⁴² cancrene,⁵⁴³ et est⁵⁴⁴ accidens perducens⁵⁴⁵ membrum in semitam mortis. Omnibus enim egritudinibus istis est commune quod ab humiditate proveniunt⁵⁴⁶ ad aliquod membrorum effusa; et diversificantur quoniam quedam eorum⁵⁴⁷ proveniunt⁵⁴⁸ ab humore flegmatico, et quedam ab humore qui est de genere colere rubee,⁵⁴⁹ et quedam eorum a colera nigra, et quedam⁵⁵⁰ a sanguine; et eorum que proveniunt⁵⁵¹ a sanguine, quedam fiunt a sanguine calido subtili ebulliente et quedam proveniunt⁵⁵² a sanguine frigido spisso⁵⁵³ et quedam fiunt a sanguine cuius dispositio est alia.

Perscrutabor igitur subtilissime ut exponam species harum egritudinum in libro alio. (9.2) In hoc autem libro contentus sum ut dicam qualiter sit dispositio in humiditate que ad membrum effunditur et⁵⁵⁴ eventu suo, quo provenire⁵⁵⁵ facit unamquamque egritudinum quas⁵⁵⁶ nominavimus; quod est secundum ratiocinationem quam in eis que premissa sunt narravimus de proventu apostematis quod nominatur flegmon ab humore calido sanguineo. Et quod unumquodque membrorum similium partium, simplicium, primorum,⁵⁵⁷ cum in eo vincit humiditas illa, provenit⁵⁵⁸ ad malitiam complexionis diverse; et illud ideo quoniam manifestum est et apprens quod calefit aut infrigidatur aut desiccatur aut humectatur secundum quod in ipso dominatur illa humiditas que ei appropinquat, eius vero interiora nondum conversa sunt ad similem⁵⁵⁹ illius eiusdem dispositionis. Quod si totum resolvatur ab ultimo exterius sive interius⁵⁶⁰ et fiat totum dispositionis unius, sedabitur ab eo subito dolor penitus; egritudo tamen tunc⁵⁶¹ erit spissior et difficilior et siccior.

Et qui antecedit quidem et scit quod narro⁵⁶² de hoc,⁵⁶³ sufficit ei donec intelligat librum meum de medicinis; deinde, post ipsum, librum de ingenio sanitatis.⁵⁶⁴

⁵³⁹ nominatur O nominatum AH

⁵⁴⁰ noscuntur A (Ar.) nascuntur HOFEPV (Heb.)

⁵⁴¹ nominatum AH quod nominatur O

⁵⁴² greci vocant O

⁵⁴³ cancrena A

⁵⁴⁴ est om. A

⁵⁴⁵ producens A

⁵⁴⁶ proveniunt: om. O, ins. O procedunt

⁵⁴⁷ eorum AO earum H

⁵⁴⁸ ad aliquod membrorum . . . proveniunt om. H

⁵⁴⁹ rubeo H

⁵⁵⁰ add. H enim

⁵⁵¹ del. H ab humore flegmatico et quedam ab humore

⁵⁵² om. O

⁵⁵³ frigido spisso A tr. O spisso H

⁵⁵⁴ et AH om. O

⁵⁵⁵ provenire O pervenire AH

⁵⁵⁶ quam O

⁵⁵⁷ priorum H

⁵⁵⁸ provenit OH pervenit A

⁵⁵⁹ similem AH simile O

⁵⁶⁰ exterius sive interius AO exterius sive et interius H exteriorum suorum et interiorum EFPV (Heb.)

⁵⁶¹ adhuc O

⁵⁶² quod narro AH quod narratio O

⁵⁶³ de hoc tr. H post ei

⁵⁶⁴ add. A completus est liber G. de malitia complexionis diversa [sic] add. O deo gratias ammen

D. The Hebrew Text

Editorial Policies and Conventions

The edition we offer of this text is based on a study of a digitized copy made for us by the Bodleian Library, Oxford; our transcription of the text has been informed but not constrained by simultaneous reference to the text of the prior Latin translation. We have also examined the manuscript itself, in the Bodleian Library, in order to try to clear up a few remaining problems in our reading. Yehiel of Genzano's semicursive script is not particularly difficult to read, but the ink with which he wrote has occasionally penetrated through the paper page and caused problems with particular words; other words have been corrected and made hard to read as a result. He framed his text with lines at the top and bottom and at either side of the page, and when he wrote over these lines, his text is again sometimes not entirely clear.

We had originally expected to publish the text of the Bodleian manuscript as it stood, and to point out omissions, offer corrections, and suggest additions in footnotes, but there proved to be too many problems with the text to make this feasible; as written, it is often impossible to understand, and sometimes can only be understood in a sense opposite to what Galen wrote. Some of these problems have arisen in the process of copying, as scribes slipped in their writing to another similar word further on in the text; others are likely to have originated with the translator himself. Ideally, we would like to offer a text that would represent as closely as possible the version that David Caslari himself completed, without disguising the fact of that version's probable corruption in the nearly two hundred years that separate it from its only surviving copy, in the process conveying to present-day readers a sense of the difficulties that medieval readers of Hebrew medical texts were likely to encounter.

We have tried to meet these two goals with the following compromise. Misunderstandings and omissions that are likely to have originated with the translator and his collaborator have been left as they stand in the text and identified in the notes. On the other hand, when there was reason to attribute the errors to the scribes who copied and recopied the text over the course of its history (such as casual misspellings), we have corrected them in the text itself and have given the actual reading of the manuscript in the notes. A few words that seem to be textual intrusions (i.e., they are not necessary to sense and have no correspondence to the Latin) have been left in the text but set off in square brackets. Editorial additions to the text, whether to expand abbreviations or to supply words we felt were needed for sense, have been placed in angle brackets. Ellipses in angle brackets (thus: < . . . >) indicate the omission in the Hebrew text of significant passages from the Latin original; the missing Latin is supplied in the notes and translated into Hebrew. (Minor divergences from the Latin have not been signaled; they will in any case appear in a close comparison of the two texts.) The copyist occasionally indicated the proper vocalization for Hebrew words, and whenever he did so, we have reproduced his vocalizations. It should thus be possible to read the Hebrew text essentially as it appears on the page.

Two other editorial interventions in the text should be acknowledged. We have of course maintained the chapterization of the Hebrew text, but we have also continued the division

of the text into the arbitrary chapters and numbers introduced editorially into the Arabic version and maintained in the Latin translation. These numbers, placed within parentheses, should facilitate a comparison of the three versions of Galen's treatise. We have also given the folio numbers of the Bodleian manuscript in boldface type, both recto and verso, and placed them in square brackets at the corresponding place in our edition.

SIGLA AND ABBREVIATIONS

N = MS Oxford, Bodl. Opp. Add. Fol. 18, fols. 19v-27r

¹N = N note in the margin of MS

L = Galen, *De malitia complexionis diverse*, tr. Gerard of Cremona,
ed. Michael McVaugh

add. = added by

del. = deleted by

ditt. = dittography

om. = omitted by

[...] = conjectural deletion

<...> = conjectural addition

(!) = corrupt reading

(?) = doubtful reading

ספר רוע מזג מתחלף לגליאינוס

העתיקת החכם ר' דוד ביר אברהם הקשורי מלשון נוצרי אל לשון הקודש

[19r] פרק ראשון שישיים בו חילוק רוע מזג מתחלף. אמר גלייאינוס רוע מזג מתחלף לפעמי' יהיה

בכל הגוף כמו מה שקרה לאיזה איש באחד מימי השיקוי, לא בכל שיקוי אלא באחד מימיו ר"ל בבראי ובאותה¹ הקדחת שיסבול החולה קור וחום בתכונה אחת שקורין היוונים¹ איפוא
 ובהרבה מהקדחות אחרות זולת הקדחת הנקבעת הנקרה שידפון. (1.2) ורוע מזג מתחלף יהיה בכל אחד ואחד מן האיברים, אי זה יהיה, כמו שהוא לו רכות שהוא מורסא לחיות, או שתיה מורסא דמיית חמה הולכת אל הקץ באותו שהוא בדרך הפסד מוות והוא מורסא שקורין הנוצרים קקריבי,
 או שתיה בו מורסא אחת שקורין איריסיפילא או מורסא אחת שקורין קרנקו ובאמת צרעת היא מזוה הסוג וכן אישפירטי אומינוש ונמלה. והנה אלו החלים אינם מורקים עד שלא יהיה עליהם מותר נקבע באבר אשר הם בו. ויש עניין אחר מרוע מזג מתחלף שהוא ללא שפיכת מותר באיברים אלא שאיכויותיהם בלבד משתנים, אם שיקורו מדור או יחומרו מחום השימוש, או שפועלותיהם עוברות השיעור הניאות והראוי, או שהמנוחה או [19] העצלת עברים השיעור הניאות והראוי זולת זה ממה שדומה לאלו. בוגדים באמת נעשה רוע מזג מתחלף מסיבות יבואו מחוץ ואותם העניינים מחממים או מקרים או מחלחים. ומני רוע המזג אלו הם פשוטות ופרטיות כמו שהראיתך בספר המזג. (3.) וממנו באמות יש ארבעה מינים אחרים מרכיבים שיתהוו כشيخום ויתחלח הגוף יחד אוشيخום ויתיבש הגוף יחד או שיקורר ויתחלח יחד או שיקורר ויתיבש יחד. ומספרם הוא באמת שallow המינים מרוע מזג מתחלף אינם מתחלפים מרוע מזג נקבע לפי שהם אינם מנחות אבל חלקי הגוף אותו ששנתנה מזגו.

פרק שני². אם כן שכונתי בזה הספר היא הידועה באז דרכ נעשה הוית כל מני רוע מזג מתחלף. בעבור שהוא דברי בכך מבואר لكن ראוי שאזכיר בכוון כל האיברים ואתחיל לדבר

¹ היוונים: הנוצרים א' בנוסח הנוצרי כתוב שקורין היוונים איפואו א'² שני: שיני א': emendation editors

מהגדולים מהם הנודעים³ לאותו אין לו⁴ ידיעה ברפואה, שחד והרגל והבטן והחזה והראש הם אוטם שלא יסכל שום אדם בישותם. (1.2) لكن נعيין בדבר⁵ כל אחד מהם, וכל אחד ואחד נחלק לחלקים הקרובים אליו שהוא מורכב מהם. המשל בזיה הרגל נחלק אל הרגל והשוק, והיד אל הזרוע והקנה והכף, והכף נחלק אל האיברים [ז20] הקרובים לו שהם הסובכיות⁶ והגב והאכבעות יחלקו עוד לחלקים שהורכבו מהם והם העצמות והסתויסים וקשרים ועצבים וגידים דופקים וקרומים ובשר ומיתרים וציפורניים ועור ושוון.

(2.2) כי אלה האיברים אשר זכרתי באחרונה אי אפשר לחלקם בשום חלוקה אחריה זאת, אבל הם באמות איברים ראשונים דומי החלקים, זולתי הגידים הדופקים והנחים, כי אלה שני האיברים מורכבים מליפים וקרומים כמו שזכרתי באו->דות⁷ הנთוח. והודעתתי בו עוד כי בתוך האיברים הראשונים דומי החלקים יש נקבים רבים מהם גדולים ורבים שיש בתוך האיברים הכליליים. ולפעמי נמצוא באז זה אבר דומה החלקים נקבים דומים להם כמו שאנו רואים בעצמות והעור. אבל מאותם האיברים יש שהוא רפה החלקים, כי ממנו מותהווים חלקים שנקביהם יعلמו לחושים. אך יש אבר מן האברים שהוא קשה ויבש תוכל להציג כל הנקבים והסתדים אשר הם בו, כמו שנשיג בחוש ריקות העצמות; ובאותו ריקות יש לחות שמנית לבנה בטבע מוכנה לעצמות שייזנו בה ממנה. אולם באז זה צד יתילדו אלו הנקבים שהם בעור כבר הודיעתי בספר המזג. ואלו הדברים ההכרח חייב זכרונם לפי שבUberom יתאמת מה שנמשך לזכור.

(2.3) **פרק שלישי** שילמוד בו [ז20] כל מהות רוע מג מותחלף וישים חילוק בין מיניו. ועתה יאות שנבוא אל ידיעת רוע מג מותחלף ושנזכיר טבעו וכמה מיינו. הנה כבר אמרנו בהרבה מקומות זולת זה שחלקי⁸ הגוף שבהם יקרה רוע מג מותחלף אינו מג אחד. וזה נאות שוה לכל מיני מג מותחלף, אבל מיניו⁹ הולכים אחרי טבע הגופות אשר יתילדו, כי כשיקרה רוע מג מותחלף בבשר הוא זולת הקרותו בקשרים לבדים, ומרקחה כל אחד מלאה עניינו בזולת עניינו.¹⁰

³ הנודעים : emendation editors passim

⁴ לו : emendation editors

⁵ בדבר : emendation editors

⁶rasceta L

⁷ באו->דות : De . . . anotomie L

⁸ שחלקי : emendation editors

⁹ מיניו : emendation editors

¹⁰ בזולת ענייט : מזה נמשך add

(3.1) **פרק רביעי** שיבואר בו איך יתילד רוע מוג מותחן חם כשהחומר יהיה בעצל. מזה נמשך¹¹

שאם ישך מותחן חם בעצל או בגידים הגדולים ממנו הדופקים והבלתי דופקים מתמלאים בתחילת ומתפסטים, ואחריהם בקטנים. וזה לא יעוצר עד שיבוא אל הגידים היותר קטנים. ואחר שאותו המותר מפעע מהגידים ולא יכולו, ישך ממנו כמוות מה מיפויו אותם הגידים ומתדיית¹² מה, וירוקו ממנו מגופות הגידים. ואחר-ה-> שיהיה זה הנה יתמלאו מאותו המותר הנקבים אשר בתוך האברים הראשונים עד שיקרה להם שיתחמו ויתחלחו מכל צדיהם מאותו המותר אשר יכול. ורצוני באברים הראשונים שיובן העצבים והקברים והקרומים והבשר, ואחר אלה גידים דופקים ובלתי דופקים, ובhem ביחס יקרה הכאב בראשונה לפי עניינים מותחפים. וזה זה¹³ [21] לפי שהמותר אשר בפנימיותם יחמס וימתחם >זיבקם, ומותר אשר בחוץ יחמס< ויקבץ ויבצר ויכביד. ואmens בשאר האברים בקצתם לא יחולו ממש אל בחום בלבד, וקצתם לא יחולו ממש רק במתיחה בלבד, וקצתם יחולו בשני עניינים יחד. (3.2) והחולי הזה הוא הנקרא בלשון היוונים "פלייגמוני", שהוא מושג חמה, והוא רוע מוג מותחן יקרה בעצל, ובבעור הדם אשר בו הנה נתחמס ויקרחו כדמות רתיחה. ואחר יתחמו ראשונה מוחמו גופות הגידים הדופקים והבלתי דופקים, ואחר זולתם משאר האברים אשר יכולו אותו הדם עד שיושקע בו.

ובאמת הוא בלתי אפשר שזאת העלה לא תבוא לאחד משני אלו הפנים: או שהמותר ינצח ויהיה שפך->עלצל< ויפסיד הגוף אשר ינוצחו ממנו, או שהמותר מנוצח וישוב העצל לתכונתו הטבעית. נציג שהמותר יהיה מנוצח, שהוא ראוי יותר ונאות יותר להקדים מה שהוא טוב. אני אומ' שהבריאות תהיה לפי אחד משני אלו הפנים: או שיפסידו כל הלחויות שנשתפכו בעצל או שייתבשלו. אולם הבריאות היותר מושבחת משני אלו היא אותה שהיא בכלין. אמנס אחר בישול אותו המותר ימשכו שני אלו עניינים: האחד הוא התילודות מוגלא ואחר קיבוץ. וזה הקבוץ לפעם היה בנקבים. הגדל היותר קרוב ליציאה, ובמעט פחד; וזה קבוץ יותר מושבך לפי שהוא נקבה יותר רחב יותר קרוב.

ולפעם' [21] יהיה בנקב קטן יותר רחוק ממקום היציאה והוא יותר מסוכן¹⁴; ואותו הנקב אינו

¹¹ מזה נמשך : נ. om.

¹² ומתדיית : resudat L.

¹³ "זה וזה לפי עניינים מותחפים" חזר בכה"י.

¹⁴ מסוכן : emendation editors מסוכן נ.

במעט פחד. ולפעמי' יהיה בנקב מעט הפחד ואינו מהנקבים הגדולים ולא מהקרים לצתת¹⁵, (3.3) והוא בהיותו בחלקי האסטומי יהיה יותר מושבח שהוא בחללו מאותו שהוא בפנימיות עצמותו¹⁶. אמנים הקיבוץ המתהווה בקרים הנקרא "ציפאך" הוא רע. וכשיהיה הקבוץ בחלקי המוח, בהיותו בשני החדרים המוקדמים יהיה יותר מושבח, והקבוץ המתהווה תחת השני קורמים כשהיה בחרד האחרוני מהמוח הוא מגונה ורע. אמנים הקבוצים אשר בחלקי הצלעות תהיה בקיутם לחלי חזה, והקבוצים המתהווים בעצלים בקיутם אל העור, והקבוצים המתהווים באברים הפנימיים בקיутם בגידים הדופקים והבלתי דופקים אשר בהם, או אצל הקרים¹⁷ אשר יקיפו אשר הוא להם במקום העור.

(3.4) ושחמותר ינצח האברים הוא באמות, אז מתבואר שזה לתגבורת רוע מזג אשר בהם הוא בטול פועלתם, ושחיה תיפסד לאורך הזמן. אמנים התחלת מנוחת החולי בהם יהיה כדיימו האיברים אל העניין המתחלף ומשנה אותם, וזה יהיה כשלא ירגשו האברים הכאב לפי שטבעם נשתנה תכלית החשתנות, אלא בעת השתנות הטבע, כמו שכבר זכר זה העניין המעליה אפוקראט באומרו שהכאבים אינם מורגשים לאיברים [22] אלא בתוכנת השתנות הגוף ומהפסדו ויציאתו מטבעו. וכל אחד ואחד שתרצה מהאברים לישתנה ולא יצא מטבעו ולא יפסד אם לא יחומם או לא יקור או לא יתחלף או לא יונגב או שיפורק חיבורו. ואמנים ברוע המזג המתחלף, לפי שהaber נתחמס או נתקרר יקרה הכאב ביחיד, ויהיה זה לפי שפיעולת שני האיכות חזק משאר האיכות. אמנים יתחדש הכאב גם כן <כ>שיתחלח האבר או כשייתיבש כמו בעת הרעב והצמא, ויקרה זה החולי ברעב לחסרו עצם ייש ובעת הצמא לחסרו עצם לח. אמנים כשפיעולת האבר תחול בסבב מה שיעקצחו או מה שיפסידחו או מה שימותיכחו או שיפרנקו, אז יקרה החולי הזה בסבב פרוק החיבור.

18 (4.1) **פרק החמישי.** וכשהם הדם אשר באבר אפושטומושא ר"ל בעל מרסא יתחדש חום נח, ויהיה הדם אשר בכל הגוף שווה המזג, [ו]אולי לא יתחדש חום בכל הגוף מוחם האבר העול.

¹⁵ לאנת : L. om.

¹⁶ et ad quam secundum plurimum fit saniei eruptio חסר בכח"י ותרגומו: "וועל הרוב נשפכת לתוךו מונלא"

¹⁷ הקרים : emendation editors

¹⁸ וכשהם הדם אשר באבר אפושטומושא ר"ל בעל מרסא, יתחדש חום נח : emendation editors כשיתמגל הדם אשר באבר יתחדש חום נח כשיתמגניל נ"א וכשיתמגנום נ"א וכשהם הדם אשר באבר אפושטומושא ר"ל בעל מרסא יהיה חום נח א

וכשיתחמס הדם אשר באבר המת¹⁹ חם חזק, יתחמס [בכל הגוף מחזק רותחת הדם אשר בו. וכשתגבר האדומה בדם העובר בכל הגוף או לא יכול (?) שלא יתחמס הגוף חום חזק. וכאשר ישתנו התגברות בשני האכיות האלו ר"ל שהדם אשר באבר המתמגלו יהיה חזק החום והדם הכלול כל הגוף תגבר עליו האדומה, יהיה זה יותר חזק.]

(4.2) אמנס מה שיתחמס ראשונה, כשיגבר החום, יתחמס הדם אשר בגידים הדופקים, מפני שהוא בטבעו יותר חם ויתר קרוב לטבע הרוח, ואחריו הדם אשר בגידים הבלתי דופקים. וכשהابر המתמגלו יהיה²⁰ [22] קרוב לאוות האיברים הפנימיים המתגברים בדם אשר יכילים,ילך החום מהר אל הדם העובר בכל הגוף. ובכלל יותר ראוי שיתחמס ראשונה כל מה שהוא נקל להשתנות²¹ או שבבעו יותר חם; וכן, הראשון שיתגבר הוא מה שהוא נקל להשתנות או שבבעו יותר קר. ומה שהוא יותר כל ההשתנות בגופתו הינו הרוח מפני שהוא יותר דק והיותר רקי. והיותר חם בגופתו המרה האדומה, והיותר קר הליהת הלבנה. ואמנס בשאר הליהות חום הדם הוא אחר חום האדומי, וקור המרה השחורה הוא אחר קור הליהת הלבנה. האדומי משתנה מהר ובקל מה שיפעל בה, והשחורה משתנה בקושי. ובכלל: כל מה שהוא דק ורקי קל להשתנות, ומה שהוא גס ועבה מותפע בקושי ובאייחור.

(4.3) ولكن ראוי שיהיה הקרוב מהמורסה הראשונה השתנותו מתחלף ממד להתחלפות תכונות הגוףות ממנו, לפי שהליהת אשר תחדר ממנה המורסה היא מותספת חום או מחסרונו. ועוד שבה אחרית-شعיפושה אינו אלא לפי [ש]טבעה, ולפי יתרון גודל כמות התאספה או מיועטה **<ב>** פנימיות האברים. כי עיפוש מה שאין לו התנשומות נקל ממד וממהר, וזה נמצא בדברים הפנימיים והחיצוניים. ואם יראה עס זה שמזגה חמה ולחה, הנה העופש המתחדש ממנה יהיה יותר מרהה. והابر גם כן אשר בו המורסה או [23] הוא הקרוב לאברים אשר הם רבוי הדם או רחוק מהם. ועוד, כי הדם שתגבר בו האדום או השחורה או הרוח [ו]יתחלפו אלו התכונות בריבוי או במעט. ויתחייב אם כן בהכרח שיהיה גובל²¹ המורסה רב התחלפות לפי התיחס²² כל אחד ואחד מלאה זה עם זה וכפי התיחסו לעצמו.

¹⁹ המת^{<מ>} גל: מorsi ב' לאפשרו מושא א'

²⁰ להשתנות emendation editors : להשתנות A

²¹ גובל המורסה resolutio L : חתים N

²² התיחס emendation editors : חתים A

(5.1) הנה התאמת שכל אילו העניינים הם סבת רוע מזג מתחלף. ולזה הוא שהaicות²³ אשר בدم

היוור מנחת היא באבר המתמגל, ואחריו באברים אשר הם רבי הדם, ואחריו בדם אשר בלב, וביחוד אותו שהוא בחל השמאלי ממנו. שאמ תכenis האצבעות בזה החל בעוד שהאיש חי, ושהוא בלתי מוקדח, >...<²⁴ תרגיש חום מופלג ביוטר בתכליות. لكن איינו רוחק שהגוף בשיתחמים מוחם חום מתגבר על הטבע, שהחל ההוא יתחמס תכליות החום. וממה שיעזר לפועל זה הוא לפי שבו יהיה הדם היוטר דק והיוטר קרוב לטבע הרוח, ואחר לפיו שהוא מתנווע תנועה תמידית.

(5.2) אמנס בקדחות ימצא שהחום מתלקח בכל הדם, ושהוא מקבל קובל שלם החום העובר המנוג הטבעי המתילד מעיפוש הליחה. אמנס בגופות הגידים הדופקים ושאר הגוף השכנים אליהם והמקיפים אותם איינו נמצא עדין שלימיות השתנות המזג, אבל הם מותחים השתנות החולץ אל החום השלם. ואם יותמד זה לאורך זמן, [א23] יגעה אל התכליות אשר בו יונצחו וישתנו מכל וכל, ואז הם כבר הגיעו לכך אותו חום היוצא מהטבע >...<²⁵ אמנס אי זו תכונה כשהיא אצל תכליות העניין הגעת זה התכליות איינו אלא דרך לצאת התכונה ההיא מהunnyין הטבעי המורכבת בשיווי ובמצוע בין שני אלו ר'יל בין התכונה הטבעית באמות ממנה ובין התכונה כשהיא יוצאת מהטבע למגרי.

פרק שני. ואם כן בכל זמן ארוך יקרה שהגוף יתחמס מזוה החום כמות מהשתנות הולך אחריו.

(5.3) אבל לפי שאברי הגוף הראשונים בשלמות נתחמו מזוה אותה הקדחת הנקראת²⁶ שדפונית ובעלז "אייטיקה" שהיא נקבעת, והיה כן לפי שהעצם ממנה איינו עומד בליך וברוחות²⁷ בלבד, אבל היא בזולת אלו והיא בגופים הקיימים. ובזאת הקדחת <לא> יהיה ציר, וידמה אז החולה שאין בו קדחת לפי שלא ירגיש חום, וזה לפי שאברי נתחמו בשיווי בתכונה אחת²⁸. והנה נסכו על זה הפילוסופים הטבעיים בעיונים בחושים ואמרו, שאין הרגש אם לא בהפכו, ושלא יהיה ציר וכאב באוטם אשר נשתנו בתכליות השליות. ולזה הוא שאין בעל אחת הקדחות מזוה הסוג שקדם זכרה בסמוך, ר'יל קדחת השדפון, מרגיש בכאב וחולי ואין החולה מרגיש בה כלל, [א24] והסביר בזה לפי

²³ שהaicות L : (= qualitas)

²⁴ caliditas L : (= qualitas) Sicut narravi in libro de medicatione anathomie L : <...>

²⁵ ותרנונו: "כפי שאמרתי בספר אודות רפואי"

- Resolutionis autem terminus in unoquoque membrorum est documentum operationis eius L : <...>

ותרנונו: "סימונו של שני באבר מן מהברים גורם נזק לפועלנו"

²⁶ הקראת : אייטיקה A : add. and del.

²⁷ וברוחות : emendation editors A : add. and del.

²⁸ בתכונה אחת : emendation editors A : add. and del.

שתכוונת אבראי הגוף בעלי זאת הקדחת אינה תכוונה שתפעל בקצתם ויתפעלו ממנה קצתם, כי ככל כבר נעשה מתוכנה אחת ומזוגם נעשה אחד זאת²⁹ (6.1) ואע"פ שהיה קצתם, <ר"ל> האבראים³⁰, הם חמים ביותר וקצתם קרים קור מופלג ולא יקרה לאותם החמים השכנים לאותם הקרים שיתבלבלו מ庫ר אותם האבראים הקרים השכנים להם. שאלו היה כן, הנה לאבראים בעצם יקרה כמו זה הבלבול בישות מהותם ותוכנותם. שהאבראים שהם בתוכנות הטבעית יש בהם הפקות, והוא שהבהיר ממנו הוא אבר חם והעצם ממנו קר, והנה אין בהתחלפות³¹ אלה והדומים להם ציר וחולי למייעוט יחס <חום> והקור בינויהם. ולזה הוא שהאויר³² המקורה גופותינו אינו משנה גופותינו עד שישתנה שינוי מתגבר בחום או בקור. ואמנם המתחלפים³³ ממנו ברוב חום או ברוב קור יהיו לפי התרבותם³⁴ ולפי הערך אשר בינו ובין הגוף, כן גופותינו ירגישו ולא יתבלבלו ממנו.

(6.2) ואם כן אולי איזה בעל נפש יודה לפי זה העיוון למה שאמרו, כמו שזכר אפוקרט בספריו, שככל החולמים אינם אלא חברות. והיה זה בעבור שהחברות אינם³⁵ אלא פירוק חבר, וחום מופלג או קור לעיתים מחדים פירוק חבר; החום המופלג מפני שיתיך וישבר חבר הגשם שניצח, [ב] 24v והקור המופלג ייחבר ויקבץ בפנים העצימות ממה שניצח עד שתתגבר איזה עניין ממנו, וויציא ויקובץ מה שנשאר ממנו ויפורק. ואם אחד שישים זה הגבול בתגברות חום או בתגברות קור, יצדק העניין שלא יהיה רחוק מלהיות ממנו שימצא הסבה. אמנם אם זה הגבול אינו בתגברות, זה יהיה גבול אחר בו, והנה לפי תכוונה נגלית ששותם תגברות אינה מובנת אלא דרך היחס לאיזה דבר. ולזה יהיה שמו שיקירה לוגוף מהדברים שהם מתוכנה אחת בחום ובקור אינו בצד אחד.

(6.3) ומפני זה היה שהליך שתום בקצת בעלי חיים יש בינויהם נאותות, ומקצת בעלי חיים הליחות אשר בינויהם אינם ניאות, אבל מפסידים וחרוגים זה את זה, כמו האדם והנחש שככל אחד מהם ממית חברו ברוקו. ולזה הוא שהעקרוב ימות ברוק האדם הצם, והאדם אינו ממית הדומה לו ממנה ולא האפעה אפעה אחר. והסביר שמתודעה הוא נאות ואוהב וההפק שונה ומבלבל. וממה שירוגה על זה הוא שככל הצמחים גדלים לא יצמחו ולא יקבלו גידול אלא במה שידמה להם הנאות להם, והנפס

²⁹ נאות : emendation editors : שנות א

³⁰ האבראים : om. L :

³¹ המתחלפים : emendation editors : מתחלפות א

³² שהאויר : emendation editors : שהابر

³³ המתחלפים : emendation editors : המתחלפים א

³⁴ התרבותם : הרכבתם(?) א

³⁵ אינם : emendation editors : אינם א

או חנוך לא יפסד ולא יתך אלא מהפכו. ולזה היה ששמירת הבリアות אינה אלא בדברים נאותים ודומים לגופים הבRIAים וטוביים³⁶ לבריאות, ורפואה החלים אינה אלא בעניינים ההפכיים. ואולם

[25] הדבר מזה הוא בזולת כוונתיו במה שאחננו בו.

(6.4) ואולם אותה הקדחת הקיימת אשר היא מבואשה קיימת קיומ חזק³⁷ לא ורגשנה מי שיסבול אותה. ומשאר הקדחות אין אחת מהם שלא תהיה מוחשת לשובלה; אבל בקצתם כשירגשוה הגופות יהיה מאד מבולבל וקצתם במעט בלבול. ומהם עדיין יש בקצתם שיחדשו סמור, וזה המקרה³⁸ הוא בשאר המקרים הרבים שלא יהיו אלא מרוע מזג מותחלף. ואיל אפ"ר³⁹ שאזכור באיזה מן המינים יתאחד זה המקרה במאמרי זה, אם לא אודיעך כמה הם הkadות הטבעיות ומהותם, ומה הוא מה שהוא מיוחד בפועל כל אחד ואחד מהם. אבל אזכור סבות המקרים כולם והוויותם בספר החלים והמרקם.

(7.1) **פרק שבעי.** ונשוב למיini רוע מזג מותחלף. הנה כבר זכרתי במה שקדם באז' דריך תמיילד הקדחת ממורסא החמה הנקרה-ת^ת "פלגמוני", ושבל מורסאה מהסוג הזה וכל קדחת, זולת קדחת שדפון, הם מהחולמים אשר בהם רוע מזג מותחלף. והנה יתylimדו קדחות מעופש ליהות, ואמנם שלא מורסא, והיה זה מפני כי מה שיתעפש אינו מתקבץ שייהי מוסף נעצר, והוא נעדר ההתנסמות בלבד, אבל יותר מהרה יתילד עופש בזיה ובחזק. ואמת הנה יתעפשו דברים אחרים רבים שהם מוכנים להתעפש. אבל אני אזכיר הווית הכהנה ממה שהוא מוכן להתעפש בספר אחר זולת זה.

(7.2) ואולם רוע מזג מותחלף יתאחד בדרך אחרת בכל הגוף; ולפעמים יהיה בהיות האיד החם⁴⁰ בו מוקבץ ועוצר, [25] ולפעמים יהיה מרוב חום בסבב תנועה גדולה מהשיעור הרואוי, ולפעמי' מפני שהדם יתחמס וירותח רתיחה רבה בסבב הкус, או שיתחמי' מאד בסבב העמידה בשימוש החם, ומכואר הוא אכן שכל אלו הקדחות הבאות מחמת מורסא הם לפי הווית כח הסבות הפעולות בגוף, ולפי תוכנות כל אחד הגופות תהיה הקדחת בקצת הגופות יותר חזקה ובקצת הגופות יותר חלואה, וקצתם הם بلا שום קדחת כלל.

³⁶ וטוביים <emendation editors : ושוב נ

³⁷ מבואשה (מברואה) קיימת קיומ חזק נ que substantie animalis fixe inheret L :

³⁸ המקרה : emendation editors נ

³⁹ אפשר : emendation editors נ

⁴⁰ החם : emendation editors נ

(7.3) ואmens הנה הוא מבואר שרוּעַ מזג מותחָלָף הווֹה לְפָעֵמִי בְּרוֹחוֹת לְבָד וּלְפָעֵמִים יַעֲבֹר עַם זֶה אֶל הַלִּיהָ. וּבְאַמְתָּה מִהְדָּבָרִים שָׁאַיָּנִים לְמִתְהָרָה מִזֶּה בַּבָּאוֹר שֶׁל הַקְּדָחָות הַמּוֹתָאָרוֹת יִמְשַׁךְ אַחֲרֵיכֶם קַדָּחָת שְׁדָפָנוֹת. וּמִזֶּה הָעֲנֵין הָנֶה נִתְבָּאֵר שְׁרוּעַ מזג מותחָלָף לְפָעֵמִי הוּא מְלִיחָה חָמָה אוֹ קָרָה נְאָגָרָת⁴¹ לְאַיְזָה אֶבֶר, כְּמוֹ שִׁבְיאָרָתִי מְהוֹיוֹת הַאַיְבָּרִים אֲשֶׁר בְּהַמִּסְרָה. וּלְפָעֵמִים לֹא יְהִי כֵן, אֲבָל הוּא בְּהַשְׁתָּנוֹת מזג הַגּוֹף מְשׂוּוֹת⁴², וּשְׁקָצָת עִילּוֹת אֲשֶׁר יְשַׁנוּ אֹתוֹ אֶוּ בְּאֹתָה מִזְוֹן הַגּוֹף, וּקְצָת בְּאֹותָה מִזְוֹן. וַיְקָרֵה שְׁקָדָחָת מִתְיָלָדָת מִזְוֹן הַשְּׁמָשׁ וּלְפָעֵמִים מִקְצָת מְוֹרָסָה הַגּוֹף. וַיְתִילֵּד קַדָּחָת מִזְוֹן הַשְּׁמָשׁ אֲוֹתָה בְּתְנוּעָה מִוּפְלָגָת חִיצָּוֹנָה אֲזָכָּר בַּבָּאוֹר יוֹתֵר רַחֲבָה מִזֶּה הַחֲבָרָה בְּסֶבֶת וְהַמְּקָרִים. וּכְמוֹ שִׁתְהַחֲדָשׁ קַדָּחָת מִזְוֹן הַשְּׁמָשׁ בְּהַשְׁתָּנוֹת מזג הַגּוֹף, כֵּן יְקָרֵה גַּם כֵן לְקַצְתַּת הָאָנָשִׁים פָּעֵמִים רַבּוֹת לְקַרְיוֹרָת הַאֲוֹרָה שִׁינָּצָה בְּהַמִּסְרָה⁴³ מַוְלָּגָע דַּעֲשֵׂמָתוֹ [26r] קַצְתָּמָה. וְהָעֲנֵין בְּאַמְתָּה בְּאַלְוּ הָאָנָשִׁים הוּא מִבָּאוֹר שִׁיקָּרָה לְהַמִּסְרָה כְּחָולִי וּכְאָבָב (8.1) כַּשִּׁיגָּר בְּהַמִּסְרָה קָרָה רַב מִקּוֹר חָזָק, וְאַחֲרֵי יְתָחֹזֵק וְיַתְּחַמֵּס גּוֹפָם מִהְרָה בְּהַתְּקָרְבָּה⁴⁴ הַגּוֹף. אֲלֵהֶשׁ וּרְבָּם אֲשֶׁר יִקְרָם זֶה וַיִּקְרַבְוּ גּוֹפָם מִהְרָה אֶל הָאֲשָׁר, יַרְגִּישׁוּ כָּבָב חָזָק בְּשֶׁרֶשֶׁי הַצְּפָרְנִים.

פרק שְׁמַיִּנִי אַם כֵן מֵי שְׁרוֹאָה בְּמוֹחָשׁ בְּזֶה הַדָּרֶךְ שְׁסַבֵּת צִיר וּכְאָבָב אַיְנוּ אֶלָּא רַוְעַ מזג מותחָלָף אַיְזָה יְתִיחָה דָּבָרִים לְבָזָות אַזְעֵינָן בְּכָאָבִים אֲשֶׁר יִקְרְוּ בְּפְנִימִיּוֹת הַגּוֹף. וְשִׁיטָמָה בְּאַיְזָה צְדָה⁴⁵ יְקָרֵה כָּבָב פָּעֵמִי רַבּוֹת בְּלֹא מְוֹרָסָה לְאָנָשִׁים, אַם בְּמַעַי הַנְּקָרָא "קָוְלוֹן" אַם בְּקָצְיוֹן תְּבִצָּם אַו בְּשָׁאָר הַאֲבָרִים, וְאָוֹמָר אַנְיִי בְּזֶה שָׁחַד מָאַלְוָה הָעֲנֵינִים אַיְן רָאוּי לְהַפְּלָא עַלְיָהָם בְּזֶה. וְאַחֲרֵי שָׁהָוָה כֵן אַיְן מִן הַפְּלָא מָה שִׁיקָּרָה לְקַצְתַּת הָאָנָשִׁים קַדָּחָת וּפְלָצָות בְּתְכָנוֹנָה אַחֲת, כִּי זֶה הָעֲנֵין הוּא כֵן כַּאֲשֶׁר תָּגַבֵּר לִיהְיָה קָרָה לִיהְיָת דּוֹמָה לְזֹכֶכֶת, וּלְיִיחָה חָמָה שָׁהָיָה מִסְגָּבָה הַאֲדֻומָּה, בְּכָדֵי שְׁתָהִיָּה גּוֹבָרוֹת יְחִידָה בְּגּוֹף וּמִתְנָעָוָת בְּגּוֹף, וּבִיחוּד בְּאָבָרִים הַמְּרֻגְשִׁים, וְאַיְן מִתְהָמָה אַם מִי שָׁהָוָה בְּזֶה תְּכָנוֹנָה יַרְגִּישׁ שְׁנֵי הָעֲנֵינִים הָאַלְהָ יְחִיד. שָׁאַם תְּעִמֵּיד הָאָדָם בְּשֶׁמֶשׁ חָמָה וְאַחֲרֵי תְּשִׁפּוֹךְ עַלְיוֹ מִים קָרִים, אַיְנוּ בְּלֹתִי נָאֹת אַם יַרְגִּישׁ חָום הַשְּׁמָשׁ וּקָרָה הַמִּים. אַמְנָס אַלְוָה הַשְׁנִים יְשַׁלֵּחַ לְהַמִּסְרָה זֶה תְּכָנוֹנָה וְשָׁלָא קָרָה מִזְוֹן, וַיְקָרֵה כָּל אַחֲד וְאַחֲד בְּחָלְקִים הַגְּדוּלִים מִהְגּוֹף.

(8.2) אַמְנָס בְּקַדָּחָת שְׁקוּרִין הָיּוֹנִים "אִיפִיאָלָא" יְקָרָה הַפְּעָלוֹת חָום [26v] <וּקָרָה>, וַיְקָרֵה זֶה מִמֶּה שְׁבָפְנִים, וַיְקָרֵה לֹזָה גַּם כֵן כָּל אַחֲד רַיְלָחָם וּקָרָה בְּחָלְקִי הַגּוֹף הַקָּטָנִים מִמֶּנוּ. וְהַסְּבָה בְּהַיּוֹת זֶה שְׁאַיָּן

⁴¹ נְאָגָרָת א : emendation editors נְאָרָת א

⁴² מְשׂוּוֹת נ : qualitate L (= equalitate)

⁴³ קָרָה א : emendation editors חָום א

⁴⁴ בְּהַתְּקָרְבָּה emendation editors בְּהַתְּקָרְבָּה A

⁴⁵ צְדָה נ : zd N

חלקי הגוף הראשונים הגדולים אשר להם יקרה הקור, שלא יהיה הצד כל אחד חלק גדול שלא יקרה אליו חום. והגוף השני אין בו חלק אחד קטן שיקרה לו הקור אשר לא יהיה הצד חלק אחר קטן שלא יקרה לו חום. ומפני זה חוש הגוף השני ידמה שירגש שנייהם יחד. והיה זה לפי שכל אחד ואחד מהם שיחומם ויקורו הוא עבר בחלקים קטנים קרובים האחד אצל השני, ולא ימצא אחר קטן החקלים האלה חלקים קטנים מהם, ואי אפשר⁴⁶ שימצא איזה חלק שבו יהיה חוש חמימות וקרירות יחד בלתי האחד. (8.3) וקצת מהגופות אשר תקרה להם קדחת, אחר שאחزو הקדחת בכל אחת ואחת מהעונות יקרה שירגש עמה קור או חום חזק, אבל לא ירגש אחד מלאה האכוויות במקום שבו ירגש השני. ומפני שהוא יכול לבורר להכיר בין האברים שלו איזה מהם החום ואיזה מהם נתקרר, יהיה זה מוגן שהוא ירגש חום באברים הפנימיים וירגש <קור> בכל האברים החיצוניים מוגנו. ומהקדחות עוד יש קדחת שקורין היוונים "שינוקא" שאינה נפלת וחסירה מזוה העניין, וגם יש קדחת השורפות. ומה שיקרה לאלו הקדחות בחלקים גדולים הוא מה שיקרה בקדחת שקורין היוונים "אייפילא" בחלקים הקטנים, כי רוע מזג באלו הקדחות הוא מתחלף <והוא מתחלף גם> באותה שתקרה אליו פלצות מבלתי שיקרה לו קדחת. אולם זה המקרה מעט הוא [ז27] שיקרה, אבל אמנים לפי התכוונה יקרה לקטת האנשים ולקטת הנשים. ובאמת יתרחיב לפני זה, ר"ל הפלצות⁴⁷, קדם החנוגה במנוחה, או שהחולה הרגיל זמן ארוך בהתמודת רב אוכל מולד ליהה פגעה ליהית כמו הליחה הדומה לאזוכית. הנה נראה שזה המקרה לא יתחדש כלל באוטם אנשים שלא הרגilio הנגנת המנוחה ורוב אוכל. ולזה נמצא שקדמוני הרופאים גוררים שהוא מוכרח שהפלצות ימושך אחריו קדחת. ובאמת אנו כבר ראיינו, וראו אחרים מהרופאים החדשניים, פלצות יבוא אבל לא תמשך אחריו קדחת. (8.4) אמנים הקדחת שקורין היוונים "אייפילא" מורכבת מזרע מזג שמננו יתחדש פלצות זה מוסף בספר אחר⁴⁸ זה הוא שלא ימשך עמו קדחת, ומרוע מזג שמננו תקרה קדחת. ואמנים אמרינו "אייפילא" איני רוצה להבין מזוה השם אלא הקדחת שביה יקרה לאחר לעולם, אבל הקדחת שילך לפניה הפלצות ואחריו ימשך <חום> כמו שיקרה בשלישית וברבעית איני קורא אותה "אייפילא". הנה כבר התברר שהקדחת הנקרה->ת <אייפילא> מורכבת משני מיני רוע מזג מתחלף, וגם כן היא זאת התכוונה בשאר הקדחות מלבד קדחת איטיקא.

⁴⁶ אפשר emendation editors : איפשר א-⁴⁷ om. L : ר"ל הפלצות :⁴⁸ זה מוסף בספר אחר : L : om.

(9.1) וכן יש חוליות שהם מיוחדים בקצת איברים, עם מורסא, וכולם מתחווים מרוע מוג מותחף, כמו המורסא הנקראת "פלגמוני" ונקראת "סרטן" ונמלת, והאנצורים הנולדים בעבר אירישיפילא, והמורסא הנקראת "מוליסיאווני" והנקראת "אישטיאומיניש", ואotta שיקראו היוונים "קקריני"⁴⁹, והוא מקרה יביא האבר לדרך המות. שכל אלו חוליות שווים לכל אחד מהאברים בהשפך אחת מהליחות בהם, אבל הם מותחפות, כי בקצת יתאחדו בסבב ליהה [27r] *לlichiyot* ובקצת בסבב ליהה *אדומיית צהובה*. וקצת מהם >...<⁵⁰ מדם חם דק רותח, וקצת מהם מדם עבה קר. וקצת ממה נעשות משאר מיני הדם.

אומנם אני אחקור ואבואר בעיון דק מיני הקדחות אלו בספר אחר. (9.2) אבל בזה הספר יספיק לי שאזכור באיזה דרך הוא תכונה בlijche הנשפכת באבר במרקחה אשר לו, שבבערו יתאחד כל אחד מן החוליות שזכרתי, שהדבר ההוא לפי העיון⁵¹ שקדם מדברינו ממרקחה המורסא הנקראת "פלגמוני" שהיא מליחה חמה ודמיית. ושכל אחד ואחד מהאברים דומי החלקים, *ה>פשויטים <ו>הראשונים*, כשינצח אותם לחות ההזה, מזוגו יבוא לרוע מוג מותחף. והסביר בזה בעבר שהוא ידוע אם שהוא יתחמס⁵² או שיתפרק או שיתנגב או שיתחלח לפי התגבורות⁵³ אותו הלחות הקרובה אליו בו, אומנם מה שבפנים מאותו האבר עדיין אין משתנה למה שידמה לאותה התכונה. וاع"פ שהוא ישתנה כולם תכליות ההשתנות באחרונה מה שבפנימיות ובטחו החיצון ויהיה כולם מותכונה אחת, וישקוט ויקל ממנה הכאב למורי. אבל החולי או הוא יותר קיים ויוטר כבד ויוטר קשה.ומי שהיטיב בעיון מה שעבר ומה שקדם יבין מה שנזכר מזה ויספיק לו עד שיבין ספרי ברפואות ואחריו בספר תחבורות [28r] הבראות.

ותהילה לאל חי שליל ייחיאל מקיינצאנו בכמי מרדכי הרופא זלה"ה מגروسיטו כתבתי פה בקיינצאנו

[מ]חדש סינון רלייה ליציר<ה>

⁴⁹ קקריני : קקריני א

⁵⁰ A colera nigra et quedam a sanguine et eorum que proveniunt a sanguine quedam fiunt L : <...> ותרגםנו : "מונע המורה השחורה ומהם מן הדם ומאללה אשר טובעים מהדם יש היוצרים "

⁵¹ העיון : emendation editors א

⁵² יתחמס : או יתחמס א add

⁵³ התגבורות : emendation editors א

III. GLOSSARIES

The primary glossary gives Latin, Hebrew, and English equivalents for the principal Arabic terms and phrases occurring in Hunayn's translation of *Fī sū' al-mizāğ al-muḥṭalif*. Latin and Hebrew *indices verborum* follow separately.

A. Arabic–Latin–Hebrew

The following paragraphs describe the arrangement of entries in the primary glossary and explain its use of symbols:

Arabic entries:

- 1) Order of entries: The glossary is arranged according to the Arabic roots. Within each root, the following order has been applied: verbs are listed first, followed in second place by the derivative nominal forms in order of their length and complexity, followed thirdly by the verbal nouns of the derived stems, and fourthly by the participles, both in the order of their verbal stems.
- 2) Verbs: Verbs are listed according to the common order of the verbal stems (I, II, III. . .). If the first stem does not appear in the text, the first derived stem to do so is introduced by the first stem set in parentheses. When more complex expressions headed by a verb are listed, they directly follow the corresponding verb.
- 3) Nouns: The different numbers of a noun (sg., du., pl., coll., n. un.) are listed as separate entries and are usually given in their indeterminate state. However, the article is supplied if the noun is commonly used with the article in general, or if it always appears in the text with the article in a nominalized usage.
- 4) Complex expressions: Each entry may have subordinate entries featuring complex expressions that contain the term from the superordinate entry in some place. Complex expressions may be listed in the indeterminate as well as the determinate state.
- 5) Foreign words: Foreign words are listed in a strictly alphabetical order unless they are arabicized.
- 6) Vocalization: Only such words that might be confused with each other are vocalized. For the main part, this applies to the verbal nouns of the first stem that might be confused with the verb. In these cases, only the verbal noun is vocalized. Nouns that are distinguishable from each other by their vowel structure only are likewise vocalized, unless only one of them appears in the glossary.
- 7) Numbers: The numbers indicate the chapter and paragraph of the Arabic text in which the respective entry may be found.

Symbols employed in the Arabic entries:

- 1) - The dash is used in subentries to represent the superordinate entry. If this superordinate entry is a complex one, the dash represents only its first element.
- 2) : A word followed by a colon may have two functions. A singular with a colon introduces a plural or dual, when the corresponding singular does not figure in the

text. Any word followed by a colon may be used to introduce complex verbal or nominal expressions containing the word preceding the colon when this word itself does not figure in the text as an isolated item. The two functions of the colon may be combined.

3) < The angled bracket refers to other entries either containing the word in question or representing a different orthography thereof.

Hebrew equivalents:

- 1) Every word is given in the spelling (either defective or plene or both) in which it appears in the text.
- 2) Nouns are given in the indeterminate state, unless the corresponding Arabic term is given in the determined state for some reason; in the latter case, the Hebrew equivalents are given in the state in which they figure in the text.
- 3) Sometimes Pi'el verbs are written with an additional yud that does not necessarily appear in the texts, with the purpose of distinguishing the Pi'el from the corresponding Qal.

English equivalents:

The English translation corresponds to the Arabic entry as it is translated in the English text. Therefore, it does not necessarily correspond to the Hebrew equivalents, nor does it necessarily represent the common usage of the Arabic word independently from the text. This practice may result in a lack of symmetry between the different translations of the singular, dual, and plural of one single word.

when the part of the body is affected	ואמנם כשפיעולה האבר תחדר	cum autem in membro fit operatio	تأثير: عند تأثير ما يؤثر في العضو 3.4	1
			مؤخر > تجويف	
to harm	התבלבל, קרה הבלבול, משנה	impediri; impedire	أذى: آذى 6.1	2
to suffer harm	היה מבלבול	impediri	تأذى 6.4	3
harmful	מבלבול	impediens	مؤذن 6.3	4
the roots of the nails	שרשי הציפורנים	radices unguium	أصل: أصول الأظفار 8.1	5
			أصلي > أعضاء	
'QTYQWS [= hektikos]	שידפון, שופונגית ובלען "איטיקא"	ethica	اقطيقوس 1.1; 5.3	6
to corrode	הפסיד	corrodere	أكل 3.4	7
canker	אישטיאומינוש	herpestiomenus; estiomenus	أكلة 1.2; 9.1	8
composed	הרכיב	compositus	مؤلف 2.1	9
to hurt	חללה	egrotare facit; facit pati	الم: ألم 3.1	10
pain	חוליה, כאב, ציר	egritudo, dolor, passio	الم 3.4; 5.3; 6.1; 7.3; 8.1	11
			الم > أعضاء	
meninges	השני קרומים	duae matres	أم: أما الدماغ 3.3	12
testicles	בצים	testiculi	الأنثى: الأنثيان 8.1	13
'NPY'LYS [= epialos]	איפילא, איפיאלא, איפילא	epiala	انفيلي 1.1; 8.2,3,4	14
scattered	עובר	sparsus	مبثوث 8.2	15
pustules	נוצזורים	pustule	بثر 9.1	16
vapor	איד	vapor	بخار 7.2	17

body	גוף	corpus	1.2; 4.1,2; 5.1; 6.2; <i>أعضاً < 7.2,3; 8.1,2,3</i>	18
in the entire body of the animal	בכל הגוף החי	in toto animalis corpore	- في البدن كله من الحيوان 1.1	19
bodies; body	גופים, גופות	corpora; corpus	أبدان; <i>أبدان 6.1,3; 7.2</i>	20
healing	בריאות	sanitas	برء 6.3	21
			برئان < أحمد	
to cool; to be cooled	מקרר, קורר, התקרר, נתקרר	infrigidare, infrigidari	برد 9.2 1.2,3; 3.4; 4.2; 8.3;	22
to cool	קורר	infrigidare	أبرد 8.2	23
cold	קור, קיריות	frigus; frigiditas; frigor	بارد 9.2 1.1,2; 6.1,2; 7.3; <i>غلب 8.1,2,3</i>	24
a severe chill	קור חזק	fortis frigor	- شديد 8.1	25
cold	יותר קר, קור	frigidus, frigidior	بارد 9.1 4.2; 6.1; 7.3; 8.1,3;	26
coldest; colder	יותר קר, קר	frigidius, frigidior	أبرد 4.2; 6.1	27
to spit	רוק	exspuere	بزق 6.3	28
simple	פשוט	simplex	بسيط 1.2 < الأعضاء	29
slow to be changed	מתפעל בקושי ובאוחר	tarde resolutionis	بطيء: بطيء الاستحالة 4.2	30
to be abolished	בטל	destrui	بطل 3.4	31
belly	בטן	venter	بطن 1.3	32
to become moist	המלחלה	humectari	بل: ابتل 3.1	33
phlegm	ליחה לבנה, ליחה	flegma	بلغم 4.2,3	34
phlegmatic	לחמי	flegmaticus	بلغمي 8.1,3; 9.1 < ورم	35
white	לבן	albus	أبيض: بيضاء 2.2	36

Glossaries

fixed	נקבע	fixus	ثابت < جوهر, حمى, حميات	37
			ثبات < أجسام	
thick	זקן	spissus	ثخن 4.2	38
serpent	-	draco	ثعبان 6.3	39
to bear down	הכביד	[gravare]	(نقل) أثقل 3.1	40
elephantiasis	-	lepra	جذام 1.2	41
body	גוף	corpus	جسم 2.3	42
<parts>	גוףות	corpora	أجرام 2.3	43
			مجرى < الحرارة	
part	חלק	pars	جزء 8.2	44
parts	חלוק, חלקים	partes	< 2.3; 8.1,2,3 أجزاء أعضاء	45
body	גוף	corpus	جسم 5.2	46
bodies	גוףות	corpora	أجسام 3.2; 4.3; 5.2,3	47
bodies that have firmness	הגוףים הקיימים	corpora quae adest fixio	الأجسام: الأجسام التي لها ثبات 5.3	48
to dry	התיבש, נוגב, התנגב	desiccare, desiccari	جف 1.2,3; 3.4; 9.2	49
skin	עור	cutis	جلد 2.1,2; 3.3	50
to contract and compress	חיבור וקיבוץ	adunare et constringere	جمع: جمع وعصر 6.2	51
concentration	קיבוץ	collectio	جَمْع 3.2,3	52
kind, kinds	סוג	genus	جَنْس 1.2; 5.3; 7.1; جَلْطَه < خلط 8.1,3	53
to be near, to be adjacent, to be close	שכן, קרוב	vicinus; vicinior; appropinquare	(جوار) جاور; 6.1; 9.2	54
close	קרוב	propinquum	مجاور 4.2	55

to pass	עבר	עבר pertransire	7.3 جاز (جاز)	56
immoderate	עבר השיעור הניאותי והראוי mensuram que est decens	transcendere mensuram que est decens	تجاوز المقدار الذي ينبغي 1.2	57
hunger	רעב	fames	جوع 3.4	58
ventricle	חלל	ventriculus	تجويف 5.1	59
the posterior ventricle of the brain	החדר האחורי מהמוח	ventriculum qui est in posterioribus cerebri	التجويف: التجويف الذي في مؤخر الدماغ 3.3	60
the anterior ventricles	שני החדרים המוקדמים	ventriculi anteriores	التجويفان المقدمان 3.3	61
substance	עצםية	-	جوهر 6.2	62
the moist substance	עצם לח	humiditas	الجوهر الرطب 3.4	63
the dry substance	עצם יבש	substancia sicca	الجوهر: الجوهر اليابس فرق < 3.4	64
the fixed substance of an animal	?	substantia animalis fixa	- الثابت من جوهر الحيوان 6.4	65
beloved	אהוב	amicus	محبوب 6.3	66
degree; definition; limit	קץ, תכליות, גבול	terminus	حد 1.2; 5.2; 6.2	67
present-day physicians	הרופאים החדשניים	novi medici	حدث: الحدث من الأطباء 8.3	68
afflictions	מקרה	eventus	أحداث 9.2	69
heat	חום	calor; caliditas	حرّ 1.1.2; 6.1.2; 8.2.3	70
hot	חם, יותר חם	calidus, calidior	حارّ 3.1; 4.2.3; 6.1. < ورم 7.2.3; 8.1; 9.1.2	71
heat; hot	חום	calor	حرارة 4.1.2.3; 5.1.3. < أقوى 6.2; 7.2; 8.1	72
strong heat	חם חזק	caliditas fortis	قوية 4.1	73
quiet heat	חום נח	calor quietus	- هادئة 4.1	74

unnatural heat	الheat المنוגה העובר הבלתי natural	caliditas egrediens cursum naturalem	الحرارة: الحرارة الخارجية عن المجرى الطبيعي 5.2	75
			حرق > حمى	
to move	move מתרנע	moveri	حرك: تحرك 8.1	76
it moves with a constant motion	move תנועה קבועה תמידית	movetur...motu assiduo	تحرك...حركة دائمة 5.1	77
			حركة > حرك	
to feel, to be felt; to sense	感覺, הרגיש, היה מהושך ל-	sentire	حسن 5.3; 6.1,4; 8.1,2,3	78
to feel	הרגיש	sentire	حسن 5.1; 8.1	79
sense; sensation	חוש, הרגש	sensus	حسن 2.2; 5.3; 8.2	80
sensation	חושים	sensus	حسن 5.3	81
sensitive	מרגיש	sensibilis	حسن 8.1	82
viscera; intestines	האיברים הפנימיים, באיברים אשר הם רבי הדם	viscera	احشاء: أحشاء الغزيرة 3.3; 5.1; 8.3	83
the intestines abounding in blood	האיברים הפנימיים המתוגברים בדם, האיברים אשר הם רבי הדם	viscera sanguine habundantia	الاحشاء: الأحشاء الغزيرة 4.2,3 الدم	84
the preservation of health	שמירת הבריאות	conservatio sanitatis	حفظ: حفظ الصحة 6.3	85
to be congested	מכובץ ועצוץ	in ... constrictione retineri	احتفان 7.2	86
perfectly	שלמות	perfectus	مستحكم 5.3 > سخن	87
to be dissolved	הפסיד	resolvere	حل: تحلل 3.2	88
dissolution	בליעון	resolutio	تحلل 3.2	89
to be feverish; fever patient	קדחת	febrire	حمى 7.2; 8.3	90
fever	קדחת, מוקדחת	febris	حمى 1.1; 5.1; 5.3; 7.1,2,3; 8.1,2,3,4	91

hectic fever	קדחת הקיימת, קדחת שדופן	קדחת הקיימת, קדחת שדופן	febris fixa	الحمى: الحمى الثابتة; 6.4 7.3	92
the fever known as hectic	קדוח שדופן?	קדוח שדופן?	febris fixa nominata	- التي تعرف بالثابتة 7.1	93
the fever known as "hectic fever"	קדחת הנקבעת	קדחת הנקבעת	febris fixa	- المعروفة بالثابتة 1.1	94
fevers	קדוחות	קדוחות	febres	حميات; 1.1; 5.2; 6.4; 7.2; 8.4	95
hectic fevers	קדחת איטיקא	קדחת איטיקא	febres fixe	الحميات: الحمييات الثابتة 8.4	96
ardent fever	קדחות השורפות	קדחות השורפות	febres adurentes	- المحرقة 8.3	97
laudable	יותר משבוה	יותר משבוה	laudabilis	محمود 3.3	98
better; best; laudable	יותר משבוה	יותר משבוה	laudabilis, laudabilior	أحمد 3.2, 3.3	99
the best healing	הבריאות היותר משובחת	הבריאות היותר משובחת	laudabilior duabus	أحمد البرئين 3.2	100
erysipelas	אִירִיסִיפָּלָא, נמלה	אִירִיסִיפָּלָא, נמלה	formica	حمرة 1.2; 9.1	101
to overwhelm	מתלך	متلך	comprehendere	(حود) استحوذ 5.2	102
to surround	הקייף, מקיף	הקייף, מקיף	continere	حاط: أحاط 3.3; 5.2	103
surrounding	הכיף	הכיף	continere	محيط <3.1> هواء	104
to transform	מתחלף	מתחלף	resolvere	(حول) أحال 3.4	105
to be changed; to be altered	משתנה, השתנה	משתנה, השתנה	resolvi; resolutus esse; alterare; alterari	استحال 4.2; 5.2; 6.1; 7.3; 9.2	106
to change and alterate	מתakhir ההשתנות	מתakhir ההשתנות	habens resolutionem et alterationem	- وتغير 5.2	107
the change ... has been completed; the alteration ... has been completed	נשתנה תכילת ההשתנות, נשתנה בתכילת השלים	נשתנה תכילת ההשתנות, נשתנה בתכילת השלים	transmutatus est; integre alteratus esse	- وفرغ 3.4; 5.3	108
transmutation; change; alteration	השתנות, התחלופיות, הכויות	השתנות, התחלופיות, הכויות	permutatio; resolvendum; resolutio; alteratio	استحال 3.4; 4.2, 3; 5.2, 3 < بطيء	109

time; disposition; condition	חכונה, עניין	dispositio	حال; 7.2; 8.1,3,4, 9.1,2	110
the unnatural disposition	החכונה הלאה מההענין הטבעי	dispositio egrediens a re naturali	الحال: الحال الخارجة عن الأمر الطبيعي 5.2	111
the disposition that is truly natural	החכונה הטבעית באמת	dispositio que est vere natura	- التي هي بالحقيقة طبيعية 5.2	112
the disposition that is fundamentally unnatural	החכונה כשהיא ויצאת מהטבע לגרמנית	dispositio que est a natura penitus egressa	- التي هي خارجة عن الطبيعة أصلاً 5.2	113
a natural disposition	חכונם הטבעית	naturalis dispositio	- الطبيعية 6.1	114
dispositions	חכונות	dispositiones	أحوال 4.3	115
			حيلة: حيلة البرء < كتاب	
alive	חי	vivere	حي 5.1	116
animal, animals	איש, בעלי חיים	animal; animalia	حيوان 5.1; 6.3 < بدن, جوهر	117
to stream forth; to emerge	הורק, הוציא	egredi	خرج 3.1; 6.2	118
departure	יציאה	exiture	خروج 3.4 < طريق	119
abscesses	קבוציות	exiturae	خرج: خراجات 3.3	120
in all external things	בדברים הפנימיים והחיצוניים	in omnibus rebus extrinsecis	خارج: في جميع الأشياء الخارجية 4.3 < حرارة, حال	121
idleness; ease of life	מנוחה	quies	خوض 1.2; 8.3	122
gaps	סדקים	scissure	خلل 2.2	123
humor	ליחה	humor	خلط 4.3; 8.1,3; 9.1,2	124
a humor that is of the variety of yellow bile	ליחה אדומית צהובה	humor qui est de genere colere rubee	- من جنس المرار الأصفر 9.1	125
humors	ליחות, لיחות	humores	خلط 4.2; 5.2; 6.3; 7.1,3	126

to vary; to differ	ההחלף, מתחלף	diversificari	خلف: اختلف 4.3; 9.1	127
diversity	ההחלפות, מתחלפות	diversitas	اختلاف 4.3; 6.1	128
to vary; to differ; different; anomalous	הpecיות, מתחלף	diversus; diversificari	مخالف 4.3; 6.1; 7.1; سوء < 8.3	129
to follow	הרגיל	usus esse	دبر: تدبر 8.3	130
regimen	הנהגה	regimen	تدبير 8.3	131
inside	פנימיות	interiora	داخل 3.3	132
to reject	הטיה דברים לבזות אותו העניין	respondere	دفع 8.1	133
to indicate	הורה	significare	دل 6.3	134
blood	ם	sanguis	دم 3.2; 4.1,2,3; 5.1,2; أحشاء < 7.2; 9.1	135
bloody	דמוי	sanguineus	دموي 9.2 < ورم	136
			دماغ > أم؛ تجويف؛ نواحي	
to apply oneself	הרגיל	assidue esse	أدمى 8.3	137
to bring close	הקריב	appropinquare	دنا: أدنى 8.1	138
			أدوية > كتاب	
reprehensible	מגננה	illaudabilis	مذموم 3.3	139
head	ראש	caput	رأس 1.3	140
ligaments	קשרים	ligamenta	رباط: رباطات 2.1; 3.1	141
quartan fever	رباعية	quartana	ربع 8.4	142
foot	רגل	pes	رجل 2.1	143
legs	רגל	pedes	رجل: رجلان 1.3	144
wrist	سبוכיות	rasceta	رسخ 2.1	145

to sprinkle	שפֵּךְ	effundere	رُشَّنْ 8.1	146
to exude	מתדיית	resudare	رُشَّحْ 3.1	147
to moisten, to be moist, to be moistened	מלחלה, התחללה	humectare, humectari	رُطْبَ 1.2,3; 3.4; 9.2	148
fluid; moisture; residue	לחות, מותר ליהה, אתת מהליהות	humiditas	رُطْبَةَ 2.2; 3.1,2; 7.3; 9.1,2	149
moistures	לחויות	humiditates	رُطْبَاتْ 5.3	150
moist	לח	humidus	رُطْبَ 4.3 < جوهر	151
thin	דק, רַקֵּק	tenuis; subtilis	رَقِيقَ 4.2; 9.1	152
thinnest	יותר רַקֵּק, היוטר דק	tenuior; subtilior	أَرْفَقَ 4.2; 5.1	153
compound; composed	מורכב	compositus	مَرْكَبَ < 1.3; 2.1,2; 8.4 أَعْصَاء	154
swelling; "tarahhul"	רכות, מוליפיאזני	mollicies	تَرَهَّلْ 1.2; 9.1	155
spirit	רוח, רוחות	spiritus	رُوحْ 4.2; 5.1,3; 7.3	156
ventosity	רוח	ventositas	رِيحَ 4.3	157
exercise	פעולות, תנועה	exercitium	رِياضَةَ 1.2; 7.2 < إفراط	158
to have an empty stomach	צם	ieiunus	رِيقَ: على الرِيقِ 6.3	159
glass	כוכית	vitrum	زجاج 8.1,3	160
to push against	קִיבֵּץ	constringere	زَحْمَ 3.1	161
to increase	רוֹב	augmentum	(زَيْدَ) زَرْيَدَ 7.2	162
cause	סִבְּהָ	causa	سَبَبَ 8.1 < قُوَّةَ	163
cause, causes	סִבְּהָ, עִילוֹת	causa; occasiones	أَسْبَابَ 5.1; 7.3 < كتاب	164
to heat; to be hot; to be heated	תחמם, חומם, תחמם, נתחם	calefacere; calefieri; calefactus esse	سَخْنَ 1.2,3; 3.1,2,4; 4.1,2; 5.1,2; 7.2; 8.3; 9.2	165

to become hot equally	נתחם [בשוו]	calefactus esse equaliter	5.3	- سخونة متساوية	166
to be heated excessively	התחם מאך	calefieri superflue	7.2	- سخن سخونة مفرطة	167
to be fully and perfectly heated	בשלמות נתחם	integre et perfecte calefactus esse	5.3	- السخونة الناتجة المستحكمة	168
to be fully heated	-	integre calefactus esse calefactionem	5.2	- وفرغ	169
to heat	חימם, התחם	calefacere; calefieri	3.1; 4.1; 8.2	أسخن	170
to warm quickly	התחם מהר	calefacere velociter	8.1	- إسخانا سريعا	171
heat; to become hot	חום	calefactio	3.1,2; 4.1,2; 5.2; 6.1; 7.3	سخونة	172
unnatural heat	החום היוצא מהטבע	calefactio a natura egrediens	5.2	- خارجة عن الأمر ال الطبيعي	173
unnatural heat	הום חזק מתגבר על הטבע	calefactio naturam supergrediens	5.1	- خارجة عن الطبيع	174
to be exceedingly hot	חום חזק	calefactio superflua	4.1	- مفرطة	175
hottest; hotter	יותר חם, חם	calidior	4.2; 6.1	أسخن: سخن	176
cancer	سرطان, גראנקו	cancer	1.2; 9.1	سرطان	177
fast; quick	נקל, קל	velox	4.2	< أسرع	178
quickly; quicker; fastest; very fast	מהר, יותר קל, נקל מאך ומהר, יותר מהר	velociter; velocius; velox; velocissime	4.2,3; 7.1	أسرع	179
rapidity	מהר	velox	4.3	< سهلة	180
forearm	קנה	ulna	2.1	ساعد	181
dropsy	שיקוי	ydropis	1.1	استسقاء	182
to rely upon; to be relieved from	הודה, שקט	acquiescere; sedari	6.2; 9.2	سكن	183
to ease	מנחה	quies	3.4	سكون	184

pores	נקבים	pori	مسام 2.2	185
easily and quickly	מהירה ובקללה	velociter	سهولة: بسهولة وسرعة 4.2	186
dyscrasia	רועל מזג מתחלף, רועל מזג	malitia complexionis diverse; malitia complexionis	سوء: سوء المزاج; 7.3; 8.3,4	187
anomalous dyscrasia	רועל מזג מתחלף	malitia complexionis diverse	- مزاج مختلف 3.2; 9.1,2	188
anomalous dyscrasia	רועל מזג מתחלף, חילוק רועל מזג מתחלף, רועל מזג	malitia (malitie) complexionis diverse; malitia complexionis	- المزاج المختلف: 0; 1.1,2; 2.3; 3.4; 5.1; 6.4; 7.1,2,3; 8.1,4; 9.2	189
the uniform [kinds] of anomalous dyscrasias	רועל מזג נקבע	malitia complexionis diverse	- المزاج المستوي 1.3	190
black bile	שחורה	melancolia	سوداء 4.2,3	191
lower leg	שוק	crus	ساقي 2.1	192
			مستوي > سخن, سوء	
to flow	נהair	currens	سيل (سال) 7.3	193
to be inherent to	קיים קיומ?	inherere	ثبت: ثبت 6.4	194
to resemble	דומה	similis	مشابه 6.3	195
to become similar	دمحة	similari	شبه: شبّه 3.4	196
			مشابه > أعضاء	
fat	שומן	adeps	شحم 2.1	197
			شدة > كدّ	
severe	مولיג	fortis	شديد 6.2	198
			شرح > كتاب	
cure	רפואה	curatio	شفاء 6.3	199

similar	נאות	conveniens	6.3	مشاكل 200
common; combined	שוה, בשווי	participativus; communis	2.3; 5.2	مشترك 201
finger	-	digitus	5.1	إصبع 202
fingers, finger	אצבעות	digiti	2.1	أصابع 203
to stream	נקבע, שפיכה, נשפך, הה נשפך, נשפך, השפך	infusus; infusio; effundi	1.2; 3.1,2; 9.1,2	صبّ: انصبّ 204
				صحة > حفظ
healthy	בריא	sanus	6.3	صحيح 205
chest	חזה	pectus		صدر 1.3 < فضاء 206
to split	-	disrumpere		صدع 3.1 207
yellow bile	אדומה	colera	4.3; 8.1	صفراء 208
				أصفر > خلط
peritoneum	הקרום הנקרא ציפאק	siphac	3.3	صفاق 209
hard	קשה	durus	2.2	صلب 210
heat	< חום >	calor	8.4	صالب 211
to bring close to the fire	בהתקרב הגוף אל האש	approximando ipsum igni	8.1	اصطلاح: بالاصطلاح 212
kind	ענין	modus	1.2	صنف 213
kinds	מינים	species	1.2,3; 2.3; 6.1; 7.1	أصناف 214
to be right; to happen; to occur	מצע הסבה, קרה	advenire; evenire; advenire	6.2; 8.1,3	(صوب) أصاب 215
to contain	הכיל	continere	3.1	ضبط 216
opposite	הפק	contrarium		ضدّ 6.3 < متوسط
contrary	הפקתי	contrarius		مضاداً 6.3 218
harm	-	nocumentum		ضرر 5.2 219

weaker	יִוְתֵּר חֲלֵשׁ	debilior	أَضْعَفُ 7.2	220
to put pressure on; squeeze; to be squeezed	מתה, קובץ	coartare; coartari	ضغط 3.1, 4; 6.2	221
pressure	מתיחה	coartatio	ضغط 3.1	222
			صلع < نواحي	
relation	יחס	relatio	إضافة 6.2	223
medical	רפואה	medicina	طب 1.3	224
			طبيب: أطباء < حدث، قديم	
nature	טבע	natura	طبع 2.2 < سخونة	225
nature	טבע	natura	طبيعة 2.3; 3.4; 4.2, 3, 5.1	226
natures, nature	טבע, طبيعي	natura; nature	طبياع 2.3; 3.4; 5.3	227
natural	טבעي	naturalis	طبيعي 3.2 < حرارة, حال, سخونة, قوى	228
the way [process] that leads to	דרך ליצאת	via egrediens	طريق: طريق الخروج 5.2	229
			طعام < إكثار	
to be prolonged	מתארך	prolongari	(طول) تطاول 7.3	230
nails	ציפורנים	ungues	ظفر: أظفار 2.1 < أصول	231
GN̄GRYN [= gangraina]	קָרְרִיבִי	cancrene	عفريبا 1.2	232
balanced	شווה	equalis	مُعَدَّل 4.1	233
hostile	שׁוֹנָא	inimicus	عدو 6.3	234
range (latitude)	תכוונה	intentio	عرض 5.2	235
symptoms	מקרים	accidentia	أعراض 6.4 < كتاب	236
symptom	مקרה	accidens	عارض 6.4; 8.3; 9.1	237

knowledge	ידעעה	notitia	1.3	معرفة 1.3	238
vessels	ಗናድዎች	vene	3.1	عروق: عروق	239
the pulsating vessels	הגִּידִים הַדּוֹפְקִים	vene pulsatiles	العروق: العروق	240	الضوارب 4.2; 5.2
the nonpulsating vessels	הגִּידִים הַבְּלִתִי דּוֹפְקִים	vene non pulsatiles	4.2	- غير الضوارب	241
pulsating and non-pulsating vessels	גִּידִים דּוֹפְקִים, הגִּידִים הַדּוֹפְקִים וְהַנְּחִים, גִּידִים דּוֹפְקִים וּבְלִתִי דּוֹפְקִים	vene pulsatiles et non pulsatiles	2.1,2; 3.1,2	- الضوارب وغير الضوارب 2.1,2; 3.1,2	242
the largest pulsating and nonpulsating vessels	בגִּידִים הַגּוֹלִים מִמְּנָנוּ הַדּוֹפְקִים וּבְלִתִי דּוֹפְקִים	maiores vene que in ipso sunt, pulsatiles et non pulsatiles	3.1	- التي هي أعظم عروقها الضوارب وغير منها الضوارب 3.1	243
the vessels there, <that is> the pulsating and non-pulsating <vessels>	הגִּידִים הַדּוֹפְקִים וּבְלִתִי דּוֹפְקִים אֲשֶׁר בָּהֶם	vene que sunt in eis pulsatiles et non pulsatiles	3.3	- التي فيها الضوارب وغير الضوارب 3.3	244
more difficult	יזהו קשה	difficilior	9.2	عسر: أصعب 9.2	245
nerves	עצבים	nervi	2.1; 3.1	عصب 2.1; 3.1	246
				عصر > جمع	
to bite	-	mordere	6.3	عضن 6.3	247
upper arm	זרוע	adiutorium	2.1	عضد 2.1	248
muscle	קְשָׁרִים, עַצֵּל	lacertus; musculus	2.3; 3.1,2	عضلة 2.3; 3.1,2	249
part	אָבָר	membrum	1.2; 3.4; 4.3; 6.1; 9.1	عضو 1.2; 3.4; 4.3; 6.1; تأثير 9.1	250
some part	אי זה אָבָר	aliquid membrum	7.3	من الأعضاء 7.3	251
in any part of the body, whatever part it is	בְּכָל אֶחָד וְאֶחָד מֵן הַאֲבָרִים אֵי זה שִׁירָה	in uno membrorum erit, quodcumque fuerit	1.2	- في عضو واحد من الأعضاء أي عضو كان 1.2	252
the affected part	האָבָר הַעֲלָל	membrum infirmum	4.1	العضو: العضو العليل 4.1	253

the swollen part	הבר המתמגל,ابر אפושטומושא	membrum apostemosum	العضو الوارم 5.1; 4.1,2	254
part, parts; organs	איברים	membra	أعضاء 1.2,3; 2.1,2; 3.1,4; 5.3; 6.1; 7.3; 8.1,3; 9.1	255
homoiomeric, primary parts	איברים ראשונים דומי החלקים	membra similiūm partium prima	- متشابهة الأجزاء أولية 2.2	256
the main parts of the body	הברים הראשונים	prima corporis membra	الأعضاء: الأعضاء الأصلية من البدن 5.3	257
first parts	הברים הראשונים	prima membra	- الأول 3.1	258
the primary, homoiomeric parts	הברים הראשונים דומי החלקים	membra prima similiūm partium	- الأول المتشابهة الأجزاء 2.2	259
the composite, instrumental parts	הברים הכליים	membra composita officialia	- المركبة الآلية 2.2	260
homoiomeric part, simple and primary	ברים דומי החלקים <small>הראשונים</small> <small>পশտোনি</small>	membra similiūm partium simplicia prima	- المتشابهة الأجزاء البسيطة الأول 9.2	261
one [particular] homoiomeric part	אי זה הבר דומה החלקים	aliquid membrorum similiūm partium	- الواحد من الأعضاء المتشابهة الأجزاء 2.2	262
to be destroyed	נפסד	mori	عطب 6.3	263
thirst	צמא	sitis	عطش 3.4	264
bone	עצמות, עצם	os	عظم 2.2; 6.1	265
bones	עצמות	ossa	عظم: عظام 2.1,2	266
to putrefy	התעפש	putrefieri	عفن 7.1	267
putrefaction	עיפוש, עופש	putrefactio	عفونه 4.3; 5.2; 7.1,3	268
scorpion	עקרב	scorpio	عقرب 6.3	269
illness	חוליה	egritudo	علة 3.2; 9.2	270
afflictions	חליהם	egritudines	علال 1.2; 9.2 <كتاب	271

			عليل > عضو	
			علاج > كتاب	
to act	فعل	agere	عمل 4.2	272
GN̄GRYN [= gangraina]	קָרְרֵין	cancrene	عنقرانا 9.1	273
tertian fever	שלישית	tertiana	غَبَّ 8.4	274
to feed; to be nourished	זון, קבל גידול	nutririri	اغتنى 2.2; 6.3	275
to immerse	הושקע	submergere	(غرق): استغرق 3.2	276
membrane	קרום	panniculus	غشاء 3.3	277
membranes; tunics	קרומים	panniculi	أغشية 2.1, 2; 3.1	278
anger	כעס	ira	غضب 7.2	279
cartilages	סחוסים	cartillagines	غضروف: غضاريف 2.1	280
to overpower; to dominate; to be dominated; to be dominant; to be overcome	ניצח, נויצה, מנורצת, גבר	vincere; vinciri; dominare; superhabundare; victus esse	غلب 3.2, 4; 4.1, 3; 5.2; 6.2; 7.3; 8.1; 9.2	281
domination	תגבורת	dominium	غلبة 3.4	282
thick; gross	شمني, عبة	grossus; spissus	غليظ 2.2; 4.2; 9.1	283
more hard	יותר קים	spissior	أغاظ 9.2	284
most dominating	היוותר מנצח	vincens	غلب 5.1	285
to boil	הוותה, روتה	fervere; ebulliens	على 7.2; 9.1	286
cooking; boiling; to boil	رطحة	ebullitio	غليان 3.2; 4.1; 7.2	287
to enter	مفعفع	redundere	غاص 3.1	288
to transmute; to alter	משנה, شינה	transmutare; alterare	(غير) غير 3.4; 7.3	289
to change	משתנה, الشتنة	alterari	تغير 1.2; 3.4 < استحال	290

to be altered completely	שלימות השתנות	perfecte et integre alteratus	5.2	- وفرغ	291
transmutation; to change	השתנות	alteratio; alterari	3.4; 7.3	تغییر	292
to be discharged	-	fit saniei eruptio	3.3	فجر: انفجر	293
eruption; to erupt	בקיעה	eruptio	3.3	انفجار	294
thigh	-	coxa	2.1	فخذ	295
hollow space	נקב	foramen	3.2	فرجة	296
spaces; space	נקבים	foramina	2.2; 3.1,2	فرج	297
noncompound	פרטי	singularis	1.2	مفرد	298
to be exceedingly...; extreme...	גבר, מתגבר	superfluere	4.2; 6.1	فقط	299
excessive	مولג, رب, חזק	superfluus	< 6.2; 7.2; 8.3	مفرط سخن, سخونة	300
excess; excessive	רוב, תגבורת	superfluitas	6.1,2	إفراط	301
excessive exercise	תגבורת מופלת	superfluitas exercitii	7.3	- الرياضة	302
				فرغ < استحال, سخن, تغییر	
to dissolve the continuity	הידש פירוק חבור	continuitatem solvere	6.2	فرق: فرق الانصال	303
to dissolve and cut the continuity	התיר ושביר חבור הגוף	solvare et secare continuitatem substantie	6.2	فرق وقطع انصال الجوهر	304
its continuity is dissolved	SHIPORK חיבורו	eius continuitas solvatur	3.4	تفرق: بأن يتفرق انصاله	305
to distinguish clearly	ברר להכיר	discernere manifeste	8.3	فرق: فرق تفرقة بيته	306
the continuity is dissolved; dissolution of continuity	פירוק חיבור	solutio continuitatis	3.4; 6.2	تفرق: تفرق الانصال; 6.2	307
to tear; to be torn	פרק, פירק	disrumpere	3.4; 6.2	فسخ	308

to be corrupted	נִפְסַד, נִשְׁתַּנָּה	corrumpi	فسد 3.4	309
to corrupt	הַפְסִיד	corrumpere	فسد: أفسد 3.2	310
decay; corruption	הַפְסִיד	corruptio	فساد 3.4	311
corrupting	מִפְסִיד	corrumpere	مفسد 6.3	312
residue; excess	מִוָּתָר, יִתְרֹן גָּדוֹל כָּמוֹת	superfluitas	فضل 1.2; 3.1,2; 4.3; 6.1	313
disparity	יחַם, עַרְךָ	comparatio	تفاصل 6.1	314
empty space	חָלֵל	amplitudo	فضاء 3.3	315
the hollow space of the chest	חָלֵלי הַחֹזֶה	amplitudo pectoris	- الصدر 3.3	316
to act; to effect	פָּעַל, פּוּעַל	agere; efficere	فعل 5.3; 6.4	317
to be acted upon	הַתְּפַעֵל	pati	انفعل 5.3	318
activity; effect; functioning	פָּעָולָה	operatio	فعل 3.4; 5.2	319
			فاعل < قوة	
viper	נַחַשׁ, אֲפָעָה	vipera	أفعى 6.3	320
lack	חַסְרוֹן	penuria	فَقْد 3.4	321
PLGMWNY [= <i>phlegmonē</i>]	פְּלֶגְמוֹנִי, פְּלֶגְמוֹן	flegmon	فلغموني 3.2; 7.1; 9.1,2	322
openings	פִּוִּית	orificia	فم: أفواه 3.1	323
to kill	מַתָּה	interficere	قتل 6.3	324
destroying; fatal	הַרְגֵּג	interficere; perimere	قاتل 6.3	325
mortifying	-	mortificans	قاتل 8.3	326
immoderate; measure	שִׁיעּוּר, כָּמוֹת	mensura, quantitas	مقدار 1.2; 5.2; 7.2	327
foot	-	pedes	قدم 2.1	328
ancient physicians	קְדוּמָׁוִי הַרוֹפָאִים	antiqui medicorum	قديم: القدماء من الأطباء 8.3	329

wound	חִבּוּרָה	ulcus	فَرَحَةٌ	6.2	330
wounds	חִבּוּרֹת	ulcera	فَرَوْحَةٌ	6.2	331
			قطع < فرق		
paucity; a smaller extent; a small measure	מִיעּוֹת	parvitas; paucitas	فَلَّةٌ	4.3; 6.1	332
heart	לֵב	cor	قَلْبٌ	5.1	333
colon	קוֹלוֹן	colon	قَولُونٌ	8.1	334
spirit	עַצְם	essentia	قَوْمٌ	5.3	335
strength	חוֹזֶק	fortitudo	قُوَّةٌ	4.1	336
to the strength of the efficient cause	כח הסבות הפעולות	virtutem cause operantis in corpore	- السبب الفاعل	7.2	337
faculties	-	-	قُوى	6.4	338
the natural faculties	הכחות הטבעיות	virtutes naturales	القوى: القوى الطبيعية	6.4	339
strong	חזק	fortis	قوى 4.1 < حرارة	4.1	340
very strong; stronger	בְּחֹזֶק, יוֹתֵר חֹזֶק	fortior; fortissime	قوى 7.1,2	7.1,2	341
the strongest heat there is	חֹם מָוֶלֶג בְּיוֹתָר בְּתַכְלִית	fortior caliditas que est	ما يكون من الحرارة	5.1	342
to be compared	התיחס	comparari	(قياس) قاس: قيس 4.3	4.3	343
argument	עִזּוֹן, עַנֵּין	ratiocinatio	قياس 6.2; 9.2	6.2; 9.2	344
my book <i>On the Causes and Symptoms <of Diseases></i>	בְּסֶפֶר הַחֲלִיִּים וְהַמְּקָרִים	in libro de morbis et accidentibus	كتاب: كتابي في العلل والأعراض 6.4	6.4	345
my book <i>On Temperaments</i>	סֶפֶר המזג	liber de complexionibus	كتابي في المزاج 1.2; 2.2	1.2; 2.2	346
my book <i>On Anatomical Procedures</i>	בְּאָוֹ[דוֹת] הנְּתָה	in libro de medicatione anathomie	كتابي في علاج التشريح 2.2; 5.1	2.2; 5.1	347
my book <i>On Drugs</i>	סֶפֶר ברפואות	librum meum de medicinis	كتابي في الأدوية 9.2	9.2	348

my book <i>On the Therapeutic Method</i>	ספר תחביבות הבריאות	librum ingenio sanitatis	de	كتابي في حيلة البرء	9.2	349
my book <i>On the Causes of Symptoms</i>	ספרי בסיבות והמקרים	liber de causis accidentium		كتابنا أسباب الأعراض	7.3	350
the consumption of a large quantity of food	החטאה רב אוכל, רוב אוכל	multitudo cibi		إكثار: الإكثار من الطعام	8.3	351
a larger extent; excessive	ריבוי	multitudo			كثرة 4.3; 6.1	352
by exertion and strain	בקושי	laboriose et violenter		كذ: بذ وشدة	4.2	353
hand	קף	palma		كفت 2.1		354
quality	איכות, משווה	qualitates		كيفية 1.2; 7.3		355
two qualities	שני האיכות	due qualitates		كيفيتان 3.4		356
(qualities)	איכות	qualitates		كيفيات 3.4		357
to be for a long time	עמידה	mora		لبيث 7.2		358
to flee	הלך מהירה	recurrere		لجا 4.2		359
to be obstructed	מתקוץ שיהיה מוסך	adherere et retentus esse		لحج 7.1		360
tightness [constrictedness]	התאסת, פנימיות האברים	retentio		لحوج 4.3		361
to be joined by; to follow	נמשך, קרה	consecutus esse; consequi		لحق 7.3; 8.3,4		362
flesh	בשר	caro		لحم 2.1,3; 3.1; 6.1		363
of the flesh	בשרי	carnosa		لحمي 1.1		364
fine	דק	subtilis		لطيف 4.2		365
finest	ויתר דק	subtilior		الطف 4.2		366
saliva	רוק	saliva		لعاب 6.3		367
to affect	בنا	occurrere		لقي 1.2		368
LYPWRY'S	שינוק	synochus		ليثورياس 8.3		369

fibers	לייפים	villus	ليف 2.2	370
soft	רפה החלקים	mollis	لين 2.2	371
to stretch	מתה	extendere	مذ: مدد 3.1,4	372
to stretch	מתפשט	extendi	تمدد 3.1	373
pus	מוגלא	sanies	مذة 3.2,3	374
black bile	המרה השחורה	melancolia	مرأة: المرأة السوداء 4.2	375
yellow bile	המרה האדומה, האדום'	colera rubea, colera	- الصفراء 4.2	376
bile	אדומה	colera	مرار 4.1 < خلط	377
illnesses, illness	חוליות, חוליות	egritudines	مرض: أمراض 6.2,3; 7.1; 9.1	378
temperament; composition	מזג, טבע	complexio	مزيج 1.3; 2.3; 3.4; < 4.1,3; 5.3; 6.1; 7.1,3 سوء	379
mixed	מורכב	commixtus	مزوج 5.2	380
marrow	ריקות	vacuitates	مشاش 2.2	381
metacarpus	גב	pecten	مشط 2.1	382
			معدة < ناحية	
intestine	معوي	intestinum	معى 8.1	383
to be filled	מתמלא, הtmpלא	impleri	ملأ: امتلا 3.1	384
to die	מת	mori	(موت) مات 7.3	385
to die off; death	מות	mors	موت 1.2; 9.1	386
water	מים	aqua	ماء 8.1	387
the region of the stomach	חלקי האסטום'	partes stomachi	ناحية: نواحي المعدة 3.3	388
the region of the brain	חלקי המוח	partes cerebri	نواحي الدماغ 3.3	389
the region of the ribs	חלקי הצלעות	partes costarum	نواحي الأضلاع 3.3	390

to sting	עקץ	pungere	نَخْسٌ 3.4	391
to emerge; to protrude	נשפן; התגבר	effluere; exuberare	نَدْرٌ 6.2 3.1	392
to be concocted	התבשל	decoqui	نَضْجٌ 3.2	393
coction	בישול	decoctio	نَضْجٌ 3.2	394
study	עיזון	considerationes	نَظَرٌ 5.3	395
natural philosophers	הפילוסופים הטבעיים	speculatores naturarum	أصحاب النظر 5.3 :-	396
mind	ברל נפש	anima	نَفْسٌ 6.2	397
perspiration; to breathe [exhale]	התנשימות	expiratio	نَفْسٌ 7.1 4.3	398
rigor	סטור, פלצות	tremor	نَفْضٌ 8.1, 4.6	399
to be annihilated	נתך	minui	نَفْصٌ 6.3	400
shingles	אירישיפילא	erisipila	نَمْلَةٌ 9.1	401
to grow	צמיח	augmentari	نَمْيٌ 6.3	402
every paroxysm	כל אחת ואחת מהעונות	unaquaque accessionum suarum	نَوبَةٌ كل نوبة من نوائبها 8.3	403
fire	אש	ignis	نَارٌ 8.1	404
crude	פג	crudus	نَبْيَنٌ 8.3	405
			هادئ < حرارة	
air	אוויר	aer	هواء 7.3	406
the air which surrounds	האוויר המקורה	aer circundans	الهواء: الهواء المحيط 6.1	407
disposition	הכנה	preparatio	تهيئة 7.1	408
to be disposed	מוכן	preparatus	متاهيئٌ 7.1	409
to arise	בָּא	consurgere	(هيج) هاج 7.3	410
tendons	מיתרים	corde	وتر: وترات 2.1	411

Glossaries

pain	כאב	dolor	3.1; 5.2,3; 6.1; 7.3; 8.1; 9.2	وجع	412
pains	כאבם	dolores		أوجاع	413
restfulness	عزלה	tranquillitas		دعة	414
swelling	مورסה, مورסה, مورسوت	apostema; apostemata; apostematio	1.2; 4.3; 7.1,3; 8.1; 9.1,2	ورم	415
inflamed swelling; hot swelling	مورסה (ה) חמה	apostema calidum	3.2; 7.1; 9.1	الورم: الورم الحار	416
the hot sanguine swelling	مورסה דמיית חמה	apostema sanguineum calidum	1.2	- الدموي الحار	417
swellings, swelling	مورסה, مورسوت	apostemata	7.2,3	أورام	418
				وارم > عضو	
in the middle between two opposites	בשווים ובמצאו בין שני אלו	media inter duo contraria	5.2	متوسط: متوسط في ما بين الضدين	419
				اتصال > فرق؛ تفرق	
place	מקום	locus	8.3	موقع	420
to be fitting	נאות	conveniens esse	6.3	وافق: وافق	421
compatible	נאות, ניאות	convenire		موافقة	422
fitting	נאות	conveniens	6.3	موافق	423
to originate; arise	התהדרש, התהילד	generari	6.4; 7.1	توأد	424
to originate; generation	הוויה, התילדות	generatio	1.3: 3.2	توأد	425
producing	مولיד	generans	8.3	مولد	426
to originate	מתהילד	generatus	5.2	متولد	427
dry	יבש	siccus		يابس 2.2 > جوهر	428
arms	יד	manus	1.3	يد: يدان	429

B. Latin

With the exception of a few very common words (mostly pronouns, numerals, and prepositions), every occurrence of every word in *De malitia* has been entered below and referred to the chapters in which they are found. Verbs are usually given under the infinitive form, and nouns under the nominative. Most of these words have also been listed in the preceding Arabic–Latin–Hebrew glossary; in the index that follows, the number in parentheses at the end of an entry refers readers to the word's location (or locations) in the glossary, and will allow them to identify the word's Arabic or Hebrew equivalent in a specific passage. Particles and other simple words in the Latin text that do not appear in the glossary are usually given here followed by their normal Arabic equivalent in Hunayn's translation.

- absque, 1.2, 7.1, 8.1 (دون) (من غير), 8.2 (403)
- accesio, 8.3 (403)
- accidens, 3.2, 6.4, 6.4, 6.4, 6.4, 6.4, 7.3, 8.3, 8.3, 9.1 (236, 237, 350)
- accidere, 1.1, 1.2, 2.3, 3.1, 3.1, 3.4, 3.4, 4.1, 5.1, 7.3, 7.3, 7.3, 8.1, 8.1, 8.1, 8.1, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.4, 8.4
- acquiescere, 6.2 (183)
- adeo, 3.1
- adeps, 2.1 (197)
- adesse, 5.3
- adherere, 7.1 (360)
- adhuc, 5.1, 5.2, 5.2 (بعد)
- adinvenire, 6.2 (215)
- adiutorium, 2.1 (248)
- (magis) adiuvans, 4.3 (اعون)
- adunare, 6.2 (51)
- adurens, 8.3 (97)
- advenire, 6.2, 8.1, 8.1, 8.2, 8.2, 8.2, 8.2, 8.2, 8.2, 8.2, 8.3, 8.3 (215)
- aer, 6.1, 7.3 (406, 407)
- agere, 4.2 (272), 5.3 (317)
- aggregantur, 4.1 (اجتماع)
- albus, 2.2 (36)
- aliquis, 1.3, 6.2, 8.3, 9.1 (أحد)
- alius, 1.1, 2.2, 7.1, 8.2 (آخر), 2.3, 4.3, 6.2, 7.1 (غير), 3.1 (سابق); 1.2, 1.2, 1.2, 1.2, 1.3, 2.2, 3.4, 5.2, 6.4, 7.2, 8.2, 8.2, 8.3, 9.1, 9.1
- alter, 2.3, 3.2 (آخر)
- alterare, 1.2, 3.4, 5.2, 5.3, 6.1, 7.3, 7.3, 7.3 (106, 289, 290, 292)
- alteratio, 3.4, 5.2, 5.3 (107, 109, 292)
- amicus, 6.3 (66)
- amplitudo, 3.3, 3.3 (315)
- anima, 6.2 (397)
- animal, 1.1, 5.1, 6.3, 6.4 (19, 117)
- anthomia, 2.2, 5.1 (347)
- ante, 3.1, 5.3 (قبل من), 4.2, 4.2 (قبل) (في المتقَدِّم), 8.3 (قبل من) (في المتقَدِّم)
- antecedere, 9.2 (تقدِّم)
- antequam, 6.1 (دون)
- anterior, 3.3 (61)

antiquus, 8.3 (329)
 apostema, 1.2, 1.2, 1.2, 1.2, 1.2, 3.2, 4.3, 4.3, 4.3, 7.1, 7.1, 7.1, 7.2, 7.3, 7.3, 8.1, 9.1,
 9.1, 9.1, 9.2 (415–418)
 apostemosus, 4.1, 4.1, 4.2, 4.1, 5.1 (254)
 apparens, 9.2
 appropinquare, 8.1, 9.2 (54, 138)
 approximando, 8.1
 apud, 1.3, 3.2, 5.3, 7.2 (عند), 5.2 (منذ)
 aqua, 8.1, 8.1 (387)
 assidue esse, 8.3 (137)
 assiduo, 5.1 (77)
 audere, 8.1 (قد)
 augmentari, 4.3, 6.1, 6.1, 6.3, 6.3 (402)
 augmentum, 7.2 (162)
 autem, 1.2 (الـ), 2.2, 2.3, 4.3, 5.2, 6.1, 7.1, 8.2 (أمـا), 6.4 (لـكـنـ); 2.3, 3.1, 3.3, 3.4, 3.4, 4.2,
 4.2, 5.2, 5.3, 6.3, 6.4, 8.3, 8.4, 8.4, 9.2
 bonus, 3.2
 calefacere, calefieri, 1.2, 1.3, 1.3, 3.1, 3.1, 3.1, 3.2, 3.2, 3.4, 3.4, 4.1, 4.1, 4.1, 4.1, 4.2, 4.2,
 5.1, 5.2, 5.2, 5.2, 5.3, 5.3, 7.2, 7.2, 8.1, 8.2, 8.3, 9.2 (165, 170)
 calefactio, 3.1, 3.2, 4.1, 4.1, 4.2, 5.1, 5.2, 5.2, 5.2, 6.1, 6.1, 6.1, 7.3 (172)
 caliditas, 4.1, 4.1, 4.1, 4.2, 4.3, 5.1, 5.1, 5.1, 5.2, 5.3, 6.1, 6.2, 6.2, 6.2, 6.2, 7.2, 7.3, 8.1
 (70, 73)
 calidus, calidior, 1.2, 3.1, 3.2, 4.2, 4.2, 4.2, 4.2, 4.3, 6.1, 6.1, 7.1, 7.2, 7.2, 7.3, 8.1, 8.1,
 8.2, 9.1, 9.2 (71, 176)
 calor, 1.1, 1.2, 4.1, 4.1, 6.1, 6.1, 8.2, 8.2, 8.2, 8.3, 8.3, 8.4 (70, 72, 74, 211)
 cancer, 1.2, 9.1 (177)
 cancrene, 1.2 (232), 9.1 (273)
 caput, 1.3 (140)
 carnosus, 1.1 (364)
 caro, 2.1, 2.3, 3.1, 6.1 (363)
 cartillagines, 2.1 (280)
 causa, 2.1, 5.1, 7.2, 7.2, 7.3, 8.1 (163, 164, 337, 350)
 cerebrum, 3.3, 3.3, 3.3 (60, 389)
 cibus, 8.3, 8.3 (351)
 circundans, 6.1 (407)
 coartare, 3.1, 3.4, 6.2 (221)
 coartatio, 3.1 (222)
 colera, 4.1, 4.1, 4.2, 4.2, 4.2, 4.3, 8.1, 9.1, 9.1 (125, 208, 375, 376, 377)
 collectio, 3.2, 3.2, 3.2, 3.3, 3.3, 3.3, 3.3 (52)
 colon, 8.1 (334)
 commixtus, 5.2 (380)
 communis, 2.3, 5.2 (201), 9.1
 comparari, 4.3, 4.3 (343)
 comparatio, 6.1, 6.1 (314)
 complexio, 1.2, 1.2, 2.2, 2.1, 2.1, 2.3, 3.4, 3.4, 4.1, 4.3, 5.2, 5.3, 6.1, 7.1, 7.3, 7.3, 7.3,
 8.3, 8.4, 8.4 (187, 189, 379)

complexio diversa, 1.1, 1.2, 1.2, 1.2, 2.1, 2.1, 2.3, 2.3, 2.3, 2.3, 3.2, 3.4, 5.1, 6.4, 7.1, 7.2, 7.3, 8.1, 8.4, 9.1, 9.2 (187–190)
 componi, 2.1 (مرکب)

compositus, 1.3, 2.1, 2.2, 2.2, 8.4, 8.4 (9, 154)
 comprehendere, 5.2 (102)
 consequi, 2.2, 3.2, 7.3, 8.3, 8.3 (362)
 conservatio, 6.3 (85)
 consideratio, 5.3 (395)
 consistere, 1.3
 constrictio, 7.2 (86)
 constringere, 3.1, 6.2 (161)
 consurgere, 7.3 (410)
 continere, 3.1, 3.1, 3.1, 3.2, 3.3, 4.1, 4.1, 4.2, 4.2, 5.2, 9.2 (103, 104, 216)
 continuitas, 3.4, 3.4, 6.2, 6.2, 6.2 (303, 304, 305, 307)
 contrarius, 5.2, 6.3, 6.3, 6.3 (217, 218, 419)
 conveniens, 5.3, 6.3, 6.3, 6.3, 6.3, 7.2 (200, 421, 423)
 convenire, 4.3, 5.3, 6.3 (422)
 conversus esse, 9.2 (صار)
 cooperire, 2.2 (انطبق)
 cor, 5.1, 5.1 (333)
 corda, 2.1 (411)
 corpus, 1.1, 1.2, 1.3, 1.3, 2.3, 3.1, 3.2, 3.2, 4.1, 4.1, 4.1, 4.1, 4.2, 4.2, 4.2, 4.2, 4.3, 5.1, 5.2, 5.2, 5.2, 5.3, 5.3, 6.1, 6.1, 6.2, 6.3, 7.2, 7.2, 7.2, 7.2, 7.3, 7.3, 7.3, 7.3, 8.1, 8.1, 8.1, 8.1, 8.2, 8.2, 8.2, 8.2, 8.3 (18, 20, 43, 46, 47)
 corrodere, 3.4 (7)
 corrumpere, 1.3, 3.2, 3.4, 3.4, 6.3 (309, 310, 312)
 corruptio, 1.2, 3.4 (311)
 costa, 3.3 (390)
 coxa, 2.1 (295)
 crudus, 8.3 (405)
 crus, 2.1 (192)
 cum (adv. or conj.), 1.3, 3.1, 3.1, 3.3, 3.4, 4.3, 4.3, 5.3, 6.3, 6.3, 7.3, 7.3, 7.3, 8.1, 9.2 (اذ), 5.3 (ذ), 4.1, 4.1, 5.1, 8.4 (متنی); 1.2, 1.2, 1.2, 1.2, 3.2, 3.4, 3.4, 4.1, 4.2, 5.3, 7.2, 7.3, 7.3, 7.3, 8.1, 8.2, 8.3
 cum (prep.), 1.2, 4.3, 5.3, 6.1, 6.4, 9.1 (مع); 8.3
 cumque, 4.1 (متنی)
 curatio, 6.3 (199)
 currens, 7.3 (193)
 cursus, 5.2 (75)
 cutis, 2.1, 2.2, 2.2, 3.3, 3.3 (50)
 debilior, 7.2 (220)
 decens, 1.2 (57)
 declaratio, 7.3
 declaratum est, 7.3 (قول)
 decoctio, 3.2 (394)
 decoqui, 3.2 (393)
 deinde, 3.1, 3.2, 4.2, 4.3, 5.1, 8.1, 8.1, 9.2 (ثم)

desiccare, 1.2, 1.3, 1.3, 3.4, 3.4, 9.2 (49)
 destrui, 3.4 (31)
 dicere, 1.1, 2.2, 2.3, 3.2, 3.2, 3.4, 5.3, 6.2, 7.1, 8.4, 9.2 (فَلَ)
 difficilior, 9.2 (245)
 digitus, 2.1, 2.1, 5.1 (202, 203)
 dignius, 4.2
 dignum, 6.2 (خليق)
 diminutus, 4.3 (أَنْصَصْ)
 discernere, 8.3 (306)
 dispositio, 1.1, 1.3, 3.2, 3.4, 3.4, 4.3, 4.3, 4.3, 5.2, 5.2, 5.2, 5.3, 5.3, 5.3, 5.3, 6.1, 6.1, 6.2,
 6.2, 7.2, 8.1, 8.1, 8.1, 8.3, 8.3, 8.4, 9.1, 9.2, 9.2, 9.2 (110, 111, 115)
 disrumpere, 3.1 (207), 3.4, 6.2 (308)
 diversificare, 1.3, 4.3, 6.1, 9.1 (127, 129)
 diversitas, 4.3, 4.3, 6.1, 6.1 (128)
 diversus, 3.1, 7.1, 8.3, 8.3, and see complexio (129)
 dividere, 2.1, 2.1, 2.1, 2.1, 2.2 (قسم)
 dolor, 3.1, 3.4, 3.4, 5.2, 5.3, 5.3, 5.3, 6.1, 7.3, 8.1, 8.1, 8.1, 8.1, 9.2 (11, 412, 413)
 dominare, 4.1, 4.1, 8.1, 8.1, 9.2 (281)
 dominium, 3.4 (282)
 donec, 3.1, 3.1, 3.2, 6.2, 7.3, 8.1, 9.2 (حَتَّى)
 draco, 6.3, 6.3 (39)
 dum, 5.1, 6.3
 durus, 2.2 (210)

 ebulliens, 9.1 (286)
 ebullitio, 3.2, 4.1, 7.2 (287)
 efficere, 6.4 (317)
 effluere, 3.1 (392)
 effundere, 3.1, 3.2, 3.2, 8.1, 9.1, 9.2 (146, 204)
 eger, 1.1 (صاحب)
 egredi, 3.1, 3.4, 5.2, 5.2, 5.2, 5.2, 6.2 (75, 118, 173, 229)
 egritudo, 1.2, 3.2, 3.4, 6.2, 6.3, 7.1, 9.1, 9.1, 9.1, 9.2, 9.2 (11, 270, 271, 378)
 egrotare, 3.1, 3.1 (10)
 enim, 1.3, 9.1, 9.1
 enunciare, 1.3 (أَخْبَرْ)
 epiala, 1.1, 8.2, 8.3, 8.4, 8.4, 8.4, 8.4 (14)
 equalis, 1.3, 4.1 (233)
 equaliter, 5.3 (مستوية)
 ergo, 1.3, 2.2, 2.2, 3.1, 3.1, 4.2, 4.3, 5.1, 5.2, 6.2, 8.1
 erisipila, 1.2, 9.1 (401)
 eruptio, 3.3, 3.3, 3.3, 3.3 (293, 294)
 essentia, 5.3 (335)
 estimare, 5.3, 6.2, 8.2 (ظن)
 estiomenus, 1.2, 9.1 (8)
 ethica, 1.1, 5.3, 5.3 (6)
 etiam, 2.1, 4.3, 5.1, 7.3, 8.1 (أَيْضًا); 2.2, 4.2, 4.3, 6.1, 6.4, 7.3, 7.3, 8.1, 8.1, 8.2, 8.3, 8.3
 etsi, 6.1 (وَإِنْ)
 evacuare, 1.2 (خل)

evanescere, 1.3 (ذهب)
 evenire, 3.2, 7.3, 8.1 (215)
 eventus, 2.3, 2.3, 3.4, 7.3, 9.2 (69)
 exemplum, 2.1 (مثل)
 exercitium, 1.2, 7.2, 7.3, 7.3 (158, 302)
 exeundi, 5.2 (خروج)
 existere, 5.3 (كان); 1.1, 1.3, 2.2, 2.2, 2.3, 2.3, 3.1, 3.3, 6.4
 exitura, 3.3, 3.3, 3.3 (120)
 exitus, 3.4 (119)
 expiratio, 4.3, 7.1 (398)
 exponere, 9.1 (تخيص)
 expuere, 6.3 (28)
 extendere, 3.1, 3.1, 3.4 (372, 373)
 exterius, 1.2, 7.3, 7.3, 8.1 (ظاهر) (من خارج), 9.2 (من خارج)
 extra, 3.1 (إلى خارج) (من خارج), 3.2 (إلى خارج)
 extremum, 8.1
 extrinsecus, 4.3 (121)
 exuberare, 6.2 (392)

facere, 1.3, 3.1, 3.1, 3.1, 3.3, 5.3, 5.3, 8.1, 9.2
 facile, 4.2 (يسهلة)
 fames, 3.4, 3.4 (58)
 febrire, 7.2, 8.3 (90)
 febris, 1.1, 1.1, 5.1, 5.2, 5.3, 5.3, 5.3, 5.3, 6.4, 7.1, 7.1, 7.1, 7.2, 7.2, 7.3, 7.3, 7.3, 7.3, 8.1, 8.2, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.3, 8.4, 8.4, 8.4, 8.4, 8.4, 8.4, 8.4 (91, 95)
 febris fixa, 1.1, 6.4, 7.1, 7.3, 8.4 (92, 93, 94, 96)
 fervere, 7.2 (286)
 fieri, 1.1, 2.3, 4.3, 7.3 (حدث) (كان) (صار), 1.3 (صار) (حدث); 1.2, 1.2, 1.2, 1.2, 1.3, 3.3, 3.3, 3.3, 3.3, 3.4, 3.4, 3.4, 5.3, 5.3, 6.3, 6.3, 6.3, 6.3, 6.4, 7.1, 7.1, 7.2, 7.3, 8.2, 9.1, 9.1, 9.1
 finis, 5.1 (غالية)
 fixio, 5.3 (48)
 fixus, 1.1, 5.3, 6.4, 6.4, 7.1, 7.3, 8.4 (37, 65)
 flegma, 4.2, 4.2, 4.3 (34)
 flegmaticus, 1.2, 8.1, 8.3, 9.1 (35)
 flegmon, 3.2, 7.1, 9.1, 9.2 (322)
 foramen, 2.2, 2.2, 2.2, 2.2, 3.1, 3.2, 3.2, 3.2, 3.2, 3.2 (296, 297)
 formica, 1.2, 9.1 (101)
 forsitan, 4.1, 6.2
 fortasse, 6.2
 fortis, fortior, 3.4, 4.1, 4.1, 5.1, 6.2, 7.2, 8.1 (198, 340, 341, 342)
 fortissime, 7.1 (341)
 fortitudo, 4.1 (336)
 frigidior, frigidius, 4.2, 6.1 (26, 27)
 frigiditas, 6.1, 6.2, 6.2, 6.2, 8.1 (24)
 frigidus, 4.2, 4.2, 6.1, 7.3, 8.1, 8.1, 8.2, 8.3, 9.1 (26)

frigor, 6.1, 7.3, 8.1, 8.2 (24)
 frigus, 1.1, 1.2, 6.1, 6.2, 7.3, 8.1, 8.2, 8.2, 8.3, 8.3 (24, 25)
 generare, 5.2, 8.3 (424, 426, 427)
 generatio, 1.3, 3.2 (425)
 genus, 1.2, 5.3, 7.1, 8.1, 8.3, 9.1 (53, 125)
 gravare, 3.1 (40)
 grece, 1.1 (باليونانية)
 greci, 1.1, 1.2, 3.2, 8.2, 8.3, 8.3, 8.4, 9.1 (يونانيون)
 grossus, 2.2, 4.2 (283)
 habere, 4.3, 5.2, 8.1
 habundans, 4.2, 4.3 (84)
 homo, 6.3, 6.3, 6.3, 6.3, 7.3, 8.1, 8.1, 8.1, 8.3 (إنسان)
 huiusmodi, 5.2 (أمثال هذه)
 humectare, 1.2, 1.3, 1.3, 3.1, 3.4, 3.4, 9.2 (33, 148)
 humiditas, 2.2, 3.1, 3.2, 3.4, 5.3, 7.3, 9.1, 9.2, 9.2, 9.2 (63, 149, 150)
 humidus, 4.3 (151)
 humor, 4.2, 4.3, 5.2, 6.3, 6.3, 7.1, 7.3, 8.1, 8.1, 8.3, 8.3, 9.1, 9.1, 9.2 (124, 125, 126)
 ieinus, 6.3 (159)
 igitur, 1.3, 2.1, 8.4, 9.1
 ignis, 8.1, 8.1 (404)
 illaudabilis, 3.3 (139)
 ille, 1.2, 2.2, 3.1, 5.2, 6.1 (ذلك); and passim
 impediens, 6.3 (4)
 impedire, 6.1, 6.1, 6.1, 6.1, 6.4 (2, 3)
 impleri, 3.1, 3.1 (384)
 impossibile ... quin, 3.2 (لا بد)
 incessanter, 3.1 (لا يزال)
 incipere, 3.2 (ابتداء); 1.3
 inconveniens, 8.1 (من المحال)
 inde, 1.1, 3.1, 6.1 (من ذلك)
 inesse, 5.2
 inferior, 7.3 (دون)
 infirmus, 4.1 (253)
 infrigidare, 1.2, 1.3, 1.3, 3.4, 3.4, 4.2, 8.2, 8.3, 9.2 (22, 23)
 infrigidatio, 6.1 (برد)
 infusio, 1.2 (204)
 infusus, 1.2 (204)
 ingenium, 9.2 (349)
 inherere, 6.4 (194)
 inimicus, 6.3 (234)
 integre, 3.4, 5.2, 5.2, 5.3 (الناتمة), 5.3 (وفرغ)
 intelligere, 3.1, 6.2, 8.4, 9.2 (فهم)
 intentio, 1.2, 1.3, 2.3, 5.2 (235)
 inter, 2.2, 2.2, 2.2, 3.1, 5.2, 5.2, 5.2, 6.1, 6.1, 6.1, 6.1, 8.3, 8.3 (بين)
 interficere, 6.3, 6.3, 6.3 (324, 325)

interiora, 3.1, 3.3, 4.3, 6.2, 9.2 (132)
 interius, 8.3 (باطن)
 intestinum, 8.1 (383)
 intrinsecus, 8.1, 8.2 (من داخل)
 intromittere, 5.1 (ادخل)
 invadere, 8.3 (أخذ)
 invenire, 1.1, 2.2, 2.2, 4.3, 5.2, 5.2, 8.2, 8.3 (وجد)
 (ad) invicem, 6.1, 6.3, 6.3 (بعضها بعضا)
 ira, 7.2 (279)
 iste, 1.2, 1.3, 4.3, 7.1, 7.2, 8.2, 8.2, 9.1 (هذا)
 ita, 6.1, 7.3 (كذلك); 4.1, 5.2, 8.2 (حثى)
 itaque, 2.1, 3.2
 iudicare, 8.3 (حكم)
 iuvare, 5.1 (اعان)

 laborare, 6.4
 laboriose, 4.2 (353)
 lacertus, 2.3, 3.2, 3.2, 3.2, 3.3 (249)
 latius, 7.3 (باكثر)
 latus, 8.2, 8.2 (جانب)
 laudabilis, 3.2, 3.2, 3.2, 3.3, 3.3 (98, 99, 100)
 lepra, 1.2 (41)
 liber, 1.2, 1.3, 2.2, 2.2, 2.2, 5.1, 6.2, 6.4, 7.1, 7.3, 9.1, 9.2, 9.2, 9.2 (345–350)
 ligamenta, 2.1, 3.1 (141)
 locus, 3.1, 3.2, 8.3 (420)
 longe (adv.), 5.1 (بعيد)
 longitudo, 3.4 (طول)
 longus, 5.2, 8.3 (طويل)
 loqui, 6.3 (الكلم)

 magis, 4.3
 magnus, 8.1, 8.2, 8.2 (عظيم)
 maior, maius, 1.3 (أكبر)
 malitia, 1.1, 1.2, 1.2, 1.2, 1.3, 1.3, 1.3, 2.3, 2.3, 2.3, 2.3, 3.2, 3.4, 3.4, 5.1, 6.4, 7.1, 7.2, 7.3, 8.1, 8.3, 8.4, 8.4, 8.4, 9.1, 9.2 (سوء)
 malus, -a, -um, 3.3 (ردي)
 manifestatio, 6.1 (بيان)
 manifeste (adv.), 8.3 (306)
 manifestus [est], 1.3, 7.2, 7.3 (واضح)
 manus, 1.3, 2.1 (429)
 mater, 3.3 (12)
 medicatione, 2.2, 5.1 (347)
 medicina, 1.3, 9.2 (224, 348)
 medicus, 8.3, 8.3 (68, 329)
 mediuss, 5.2 (419)
 melancolia, 4.2, 4.2, 4.3 (191, 375)
 melius, 3.2 (أحمد)

membrum, 1.2, 1.2, 1.2, 1.3, 2.1, 2.2, 2.2, 2.2, 2.2, 2.2, 2.2, 3.1, 3.1, 3.1, 3.4, 3.4, 3.4, 3.4, 3.4, 3.4, 3.4, 4.1, 4.1, 4.1, 4.1, 4.2, 4.3, 5.1, 5.2, 5.3, 5.3, 5.3, 6.1, 6.1, 6.1, 7.3, 7.3, 8.1, 8.1, 8.3, 8.3, 9.1, 9.1, 9.1, 9.2, 9.2 (250–255)

mensura, 1.2, 7.2 (57, 327)

minor, 3.1, 3.1 (أقل), 3.2 (صغير), 8.3 (أقل)

minus (adv.), 6.4 (أقل)

minui, 6.3, 6.3 (400)

mirabilis, 3.4 (عجيب), 8.1 (عجب)

mirari, 8.1, 8.1 (تعجب)

modus, 1.2, 2.3, 2.3, 2.3, 3.1, 3.2, 3.2, 5.3, 8.4, 7.2 (213)

mollicies, 1.2, 9.1 (155)

mollis, 2.2 (371)

mora, 7.2 (358)

morbus, 6.4 (345)

mordere, 6.3 (247)

mori, 6.3, 6.3 (263), 7.3 (385)

mortificans, 8.3 (326)

mortis, 1.2, 9.1 (386)

motus, 5.1 (77)

moveri, 5.1, 8.1 (76)

mulieres, 8.3 (نساء)

multiplicare, 8.1 (كثير)

multitudo, 4.3, 6.1, 8.3, 8.3 (351, 352)

multotiens, 7.3, 8.1, 8.3 (كثيراً)

multus, 7.1, 8.1 (كثير)

musculus, 3.1 (249)

nam, 2.2, 4.3, 4.3, 5.1, 5.3, 6.1, 6.1, 8.1

namque, 2.3, 6.1, 8.3

narrare, 2.2, 2.2, 2.3, 3.4, 5.1, 6.4, 6.4, 7.1, 7.3, 7.3, 9.2, 9.2 (وصف)

natura, 2.2, 2.3, 2.3, 3.4, 3.4, 4.2, 4.2, 4.2, 4.2, 4.3, 5.1, 5.1, 5.2, 5.2, 5.2, 5.3 (225, 226, 227, 396)

naturalis, 3.2, 5.2, 5.2, 6.1, 6.4 (228, 339)

necessario, 2.2, 3.2, 4.3 (ضروري)

necesse, 8.3 (يجب)

neque, 3.2, 5.3, 5.3, 5.3, 5.3, 6.1, 6.3, 6.3, 6.4, 8.1

nervi, 2.1, 3.1 (246)

nichil, 8.1 (ليس شيء)

niger, 9.1 (أسود)

nisi, 5.3 (غير), 6.4 (دون), 8.2 (لـ); 1.3, 3.1, 3.1, 3.4, 3.4, 4.3, 5.2, 6.2, 6.2, 6.2, 6.3, 6.3, 6.3, 6.4, 8.1, 8.2, 8.2, 8.4

niti, 8.1 (رام)

nocumentum, 5.2 (219)

nolle, 8.4

nomen, 8.4 (اسم)

nominare, 2.2, 5.3, 9.2 (ذكر), 8.1, 9.1 (سمى); 1.2, 1.2, 7.1, 8.2, 8.4, 8.4, 9.1, 9.1, 9.1, 9.1, 9.2

nominari, 7.1, 9.1 (عرف)

non, 2.2, 3.4, 5.1 (ليس), 3.1 (لم), 3.1, 6.3 (ما), 6.4 (لا); and *passim*
 nondum, 5.1, 9.2
 noscere, 1.3, 9.1 (عرف)
 notio, 1.1, 1.2 (المعروف)
 notitia, 1.3 (238)
 novus, 8.3 (68)
 nudus, 2.3 (مجرد)
 nullus, 5.3, 5.3, 6.4, 8.3
 numquam, 8.3
 nunc, 2.3 (الآن)
 nutrire, 2.2, 6.3, 6.3 (275)

occasio, 7.3 (164)
 occultare, 2.2 (خفى)
 occurrere 1.2 (368)
 officialia, 2.2 (الأل)
 omnes, 1.2, 1.3, 1.3, 2.3, 3.2, 4.3, 5.3, 5.3, 6.2, 6.3, 6.4, 7.1, 7.3, 9.1 (جميع), 1.3, 3.2, 4.2, 4.2, 4.2, 4.2, 4.3, 5.1, 5.3, 6.2, 6.2, 6.3, 7.1, 7.2, 7.3, 8.3, 9.1 (كل)
 operans, 7.2 (337)
 operatio, 3.4, 3.4, 3.4, 5.2 (1, 319)
 oportet, 1.3, 2.3, 3.4, 4.3, 4.3, 8.3 (يجب)
 orificia, 3.1 (323)
 os, ossis, 2.1, 2.2, 2.2, 2.2, 2.2, 6.1 (265, 266)
 ostendere, 1.2, 2.2, 6.4 (بين)

palma, 2.1, 2.1 (354)
 panniculus, 2.1, 2.2, 3.1, 3.3 (277, 278)
 pars, 1.3, 2.1, 2.1, 2.2, 2.2, 2.2, 2.3, 3.3, 3.3, 3.3, 8.1, 8.2, 8.2, 8.2, 8.2, 8.2, 8.2, 8.3, 9.2 (44, 45, 388–390)
 participatus, 2.3 (201)
 parvitas, 4.3, 6.1, 8.2 (332)
 parvus, 3.2, 3.2, 8.2, 8.2, 8.2, 8.2, 8.2 (صغير)
 passio, 3.4, 3.4, 5.3, 5.3, 5.3, 6.1, 7.3, 8.1, 8.1 (11)
 pati, 3.1, 5.3 (10, 318)
 patiens, 5.3, 5.3, 6.4, 8.3 (صاحب)
 paucitas, 4.3 (332)
 paulo, 5.3
 pecten, 2.1 (382)
 pectus, 1.3, 3.3 (206, 316)
 pedes, 1.3, 2.1, 2.1 (143, 144, 328)
 penitus, 5.2, 5.2, 5.3, 7.2, 8.3, 9.2 (أصل)
 penuria, 3.4, 3.4 (321)
 per, 2.2, 8.4, 9.1 (ب); 3.1
 perducens, 9.1 (مع سلوك)
 perfecte (adv.), 5.2, 5.3 (87, 291)
 perfectus, 5.2 (87)
 perimire, 6.3 (325)
 permutatio, 3.4 (109)

perscrutari, 9.1 (تُلْخِصُ)
 perseverare, 5.2 (دَامَ)
 pertransire, 1.2, 7.3 (56)
 pervenire, 2.1, 2.3 (صَارَ) (عَدَمٌ), 3.1, 5.1, 6.1 (بَلَغَ), 5.2 (صَارَ) (عَدَمٌ); 3.2, 5.2
 plerisque, 1.1
 plurime, 4.3 (كَثِيرَةٌ)
 plurimum, 3.3 (كَثِيرَةٌ) (فِي أَكْثَرِ الْأَمْرِ)
 plus, 2.2, 2.2, 4.1, 6.4, 6.4, 7.2 (أَكْثَرُ)
 ponere, 3.2 (جَعَلَ) (أَنْزَلَ)
 pori, 2.2 (185)
 posse, 8.3 (قُدرَ)
 possibile, 2.2, 6.4, 8.2
 post, 2.2, 3.1, 4.2, 4.2, 4.2, 4.3, 5.1, 8.2, 8.2, 9.2 (مِنْ بَعْدِ)
 postea, 3.2, 8.3, 8.4 (ثُمَّ)
 posterior, 3.3 (60)
 postquam, 3.1
 postremo, 2.2 (بِأَخْرَى)
 precedere, 8.3 (تَقْدِيمَ) (قَدْمَ)
 premissus, 2.3, 7.1, 9.2 (تَقْدِيمَ)
 preparatio, 7.1 (408)
 preparatus, 2.2, 7.1, 7.1 (409)
 preter, 1.1, 2.2, 8.4 (مِنْ خَلَى) (عَيْنَ) (خَلَى), 2.3, 6.3 (غَيْرُ), 5.3, 6.3 (مِنْ ذَلِكَ) (عَيْنَ)
 preterea, 6.4, 8.3
 principium, 3.4, 5.2 (أَوْلَى)
 privare, 7.1 (عَدَمٌ)
 procedere, 3.1 (سَرِى)
 proculdubio, 8.3 (لَا مَحَالَةٌ)
 prolongari, 7.3 (230)
 propinquus, 2.1, 3.2, 3.2, 4.2, 4.2, 4.3 (55)
 proprie (adv.), 3.1, 3.2, 3.4, 5.1, 5.1, 5.1, 8.1 (خَاصَّةٌ)
 proprius, 2.1, 6.4, 9.1
 propter, 6.1, 3.4, 3.4, 3.4, 4.3, 6.3, 7.2, 7.2, 7.2, 8.2, 8.3 (مِنْ قَبْلِ)
 propterea, 3.4, 4.2, 4.2, 6.2, 6.2, 7.2, 8.1 (مِنْ قَبْلِ); 3.4
 provenire, 2.2, 2.3, 4.3, 7.2, 7.3, 7.3, 8.3, 8.4, 8.4, 9.1, 9.1, 9.1, 9.1, 9.1, 9.2, 9.2 (حَدَثَ)
 proventus, 9.2 (حَدَثَ)
 pungere, 3.4 (391)
 pustula, 9.1 (بَيْنَ)
 putrefactio, 4.3, 4.3, 4.3, 5.2, 7.1, 7.1, 7.1, 7.3 (268)
 putrefieri, 7.1, 7.1, 7.1 (267)
 qualitas, 1.2, 3.4, 3.4, 7.3 (355, 356, 357)
 qualiter, 6.4, 7.1, 8.1, 8.1, 9.2 (كَيْفَ)
 quandoque, 1.1, 2.2, 3.2, 3.2, 7.2, 7.2, 7.2, 7.3, 7.3, 7.3, 7.3, 7.3 (رَبِّما)
 quantitas, 1.2, 5.2 (مَقْدَارٌ) (327)
 quanto, 4.1
 quapropter, 4.3 (لَذِكَ), 5.3, 6.3 (مِنْ ذَلِكَ) (لَذِكَ)
 quartana, 8.4 (رَبِّعٌ) (142)
 quasi, 7.3 (كَائِنٌ)

quemadmodum, 1.2, 2.2, 6.2, 7.3, 7.3 (كما)
 quidem, 1.2, 1.3, 2.2, 2.2, 2.3, 3.2, 3.2, 3.2, 4.2, 4.2, 4.3, 4.3, 5.1, 5.1, 5.3, 6.2, 6.2, 6.3, 6.3, 6.4, 7.2, 7.2, 7.3, 7.3, 7.3, 7.3, 7.3, 8.3, 8.3, 9.2
 quies, 1.2, 3.4, 8.3, 8.3 (122, 184)
 quietus, 4.1 (هادئ)
 quin, 1.2, 3.2 (من أن), 4.1, 5.1 (أن)
 quodcumque, 1.2, 2.2, 2.2 (أي)
 quomodo, 1.3, 2.2 (كيف)
 quoniam, 1.3, 2.3, 3.4, 4.3, 4.3, 5.3, 8.3, 9.1 (لأن)
 et illud ideo quoniam, 3.1, 3.2, 3.4, 5.1, 5.3, 5.3, 6.1, 6.2, 6.2, 6.3, 7.1, 8.1, 8.2, 8.3, 9.2 (وذلك لأن)
 quoque, 1.2, 1.2, 1.2, 1.3, 2.1, 6.3 (أيضا)
 quot, 2.3, 6.4 (كم)

 radix, 8.1 (5)
 raro, 8.3 (قليل)
 rasceta, 2.1 (145)
 ratiocinatio, 6.2, 9.2 (344)
 receptio, 5.2 (قبول)
 recipere, 5.2 (قبل)
 recordari, 1.3, 1.3 (ذكر)
 recurrere, 4.2 (359)
 redire, 3.2 (عاد)
 redundere, 3.1 (288)
 regimen, 8.3, 8.3 (131)
 relatio, 6.2 (223)
 reliquus, 4.2, 6.4, 8.1, 8.4 (سائر)
 remanere, 6.2 (باقي)
 rememorari, 2.2
 remotus, 4.3, 8.3 (بالبعد)
 reperire, 2.2 (وجد)
 res, 1.2, 1.2, 3.4, 4.2, 4.2, 4.3, 6.2, 6.2, 6.3, 6.3, 7.1 (شيء), 3.1, 3.2, 3.2, 4.1, 5.2, 5.2, 6.1, 7.3 (أمر)
 resolutio, 3.2, 4.2, 4.2, 4.3, 4.3, 5.2, 5.2, 5.2 (30, 89, 109)
 resolutus, 5.2 (استحالت)
 resolvere, 3.2, 3.4, 4.2, 4.2, 4.2, 4.2, 4.2, 9.2 (88, 105, 106, 107, 109)
 respondere, 8.1 (133)
 resudare, 3.1 (147)
 retentio, 4.3, 4.3 (361)
 retinere, 7.1, 7.2 (360)
 rubeus, 4.2 (صفراء) (376), 9.1 (أصفر) (125)

 saliva, 6.3 (367)
 sanatio, 3.2 (براء)
 sanguineus, 1.2, 9.2 (136, 417)
 sanguis, 3.2, 4.1, 4.1, 4.1, 4.1, 4.1, 4.1, 4.2, 4.2, 4.2, 4.2, 4.2, 4.2, 4.2, 4.2, 4.3, 4.3, 5.1, 5.1, 5.1, 5.1, 5.2, 7.2, 9.1, 9.1, 9.1, 9.1, 9.1 (135)
 sanies, 3.2, 3.3 (293, 374)

Glossaries

sanitas, 3.2, 6.3, 6.3, 9.2 (21)
sanus, 6.3 (205)
scilicet, 4.1, 4.3, 5.2, 6.4 (أعني)
scire, 9.2 (علم)
scissura, 2.2 (123)
scorpio, 6.3 (269)
secare, 6.2 (304)
secundum, 1.3, 2.3, 2.3, 2.3, 3.1, 3.2, 3.4, 5.3, 6.1, 6.2, 6.2, 6.2, 7.2, 8.3, 9.2 (على), 4.3, 4.3, 7.2, 7.2, 9.2 (بحسب); 1.2, 3.3
sed, 1.2, 2.2, 2.2, 3.2, 3.2, 3.3, 3.3, 3.4, 3.4, 3.4, 5.2, 5.2, 5.3, 6.2, 6.3, 7.1, 7.1, 7.3, 8.3, 8.3 (لكن)
sedari, 9.2 (183)
semita, 1.2, 6.2, 9.1 (طريق)
semper, 8.4 (دائما)
sensibilis, 8.1 (82)
sensibiliter, 8.1 (عيانا)
sensus, 2.2, 2.2, 5.3, 5.3, 8.2 (80, 81)
sentire, 5.3, 5.3, 6.1, 6.4, 6.4, 6.4, 8.1, 8.1, 8.1, 8.2, 8.3, 8.3, 8.3, 8.3, 8.3 (78, 79)
sequestrare, 2.1 (قسم)
sequi, 2.2, 2.3, 5.2, 8.3, 8.4, 8.4 (لحق)
sermo, 1.3, 6.2, 6.4, 7.3, 7.3 (قول)
si, 1.2, 3.3, 3.4, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 6.2, 6.2, 8.1, 8.1, 8.1, 9.2
sic, 3.1 (كذلك)
siccus, 2.2, 3.4, 9.2 (428)
sicut, 1.1 (ك), 2.2, 2.2, 2.3, 3.4, 5.1 (كما), 3.3, 8.3, 9.1 (بمنزلة), 6.3, 6.4 (مثل); 8.4
significare, 6.3 (134)
similari, 3.4 (196)
similis, 1.2, 2.2, 2.2, 2.2, 2.2, 6.1, 6.3, 6.3, 6.3, 6.3, 6.3, 8.1, 8.3, 9.2, 9.2 (195)
similiter, 1.2, 4.2, 7.3, 8.3, 8.4, 9.1 (كذلك)
similitudo, 3.2 (شبيه)
simplices, 1.2, 9.2 (29)
simul, 1.3, 1.3, 1.3, 1.3, 8.1 (معا), 3.1, 8.1, 8.1, 8.2 (جميعا)
singularis, 1.2 (298)
sinister, 5.1 (أيسر)
siphac, 3.3 (209)
situs, 3.4, 3.4 (264)
sive, 9.2
sol, 1.2, 7.2, 7.3, 7.3, 8.1, 8.1 (شمس)
solus, 7.3
solutio, 3.4, 6.2 (307)
solvere, 3.4, 6.2, 6.2 (فرق) (303, 304, 305)
sparsus, 8.2 (15)
spatium, 5.2, 5.2, 8.3 (مدة)
species, 1.1, 1.2, 1.3, 1.3, 1.3, 1.3, 2.2, 2.3, 6.1, 7.1, 9.1 (214)
speculator, 5.3 (396)
spiritus, 4.2, 4.2, 5.1, 5.3, 7.3 (156)
spissior, 9.2 (284)
spissus, 4.2 (غليظ) (ثخين) (42), 9.1 (283)

stare, 4.1, 8.1 (لَبَثَ)
 stomachi, 3.3 (388)
 sub, 3.3 (دون) 3.3 (تحت)
 subito, 8.1, 9.2
 submergere, 3.2 (276)
 substantia, 3.4, 6.2, 6.2, 6.4 (62, 304)
 subtilior, 4.2 (أَرْقَ) (366), 5.1 (أَرْقَ) (الطف) (153)
 subtilis, 4.2 (لَطِيفَ) (365), 9.1 (رَفِيقَ) (لطيف) (152)
 subtilissime, 9.1 (استقصى)
 sufficere, 9.2 (كَفَى)
 super, 5.3, 6.3, 8.1 (على)
 superare, 1.2 (غلب)
 superfluere, 4.2 (299)
 superfluitas, 1.2, 1.2, 3.1, 3.1, 3.1, 3.1, 3.1, 3.2, 3.2, 3.2, 3.2, 3.4, 4.3, 6.1, 6.1, 6.1, 6.1, 6.2, 6.2, 6.2, 7.3 (301, 302, 313)
 superfluus, 4.1, 6.1, 6.2, 6.2, 6.2, 7.2, 7.2, 8.3, 8.3 (175, 300)
 supergrediens, 5.1 (174)
 superhabundare, 4.3 (281)
 synochus, 8.3 (369)

 tamen, 8.3 (لَكَنْ), 8.3 (أَلَّا); 1.2, 2.2, 8.3, 9.2
 tantum, 1.2, 3.1, 3.1, 5.3, 7.1, 7.1, 7.3 (فقط)
 tarde, 4.2 (30)
 tempus, 3.4 (مَدَةَ) (زمان) 5.2 (مَدَةَ)
 tendere, 1.2, 5.2 (صار)
 tenuior, 4.2 (153)
 tenuis, 4.2 (152)
 terminus, 1.2, 5.2, 5.2, 5.2, 5.2, 5.2, 6.2, 6.2, 6.2 (67)
 tertiana, 8.4 (274)
 testiculi, 8.1 (13)
 timor, 3.2, 3.2, 3.2 (خطر)
 totus, 1.1, 4.1, 4.1, 4.1, 4.2, 4.3, 5.1, 5.2, 5.2, 5.2, 5.2, 7.2, 7.3, 9.2, 9.2 (كل)
 tranquillitas, 1.2 (414)
 transcendere, 1.2 (57)
 transmutare, 3.4, 3.4 (289)
 tremor, 6.4, 6.4, 8.1, 8.3, 8.3, 8.3, 8.4, 8.4 (399)
 tunc, 3.2, 5.2, 5.3, 9.2 (عند ذلك); 3.1, 3.3, 3.4, 3.4, 4.1, 6.2

 ubi, 3.4 (حين)
 ulcus, 6.2 (قرح) (331), 6.2 (قرحة) (330)
 ulna, 2.1 (181)
 ultimus, 8.2 (غاية) 9.2 (آخر)
 undique, 3.1 (من جميع جهاتها)
 unguis, 2.1, 8.1 (5,231)
 universaliter, 4.2, 4.2 (بِالجملة)
 unusquisque, 2.3, 3.4, 5.2, 6.4, 8.1, 8.2, 8.2, 8.3, 9.2, 9.2 (كل واحد)
 usque, 6.1, 7.3 (حتى)

usus, 8.3, 8.3 (130)
 uterque, 3.1, 4.1, 8.1, 8.2, 8.4 (أميرين)

vacuitas, 2.2, 2.2 (381)
 vapor, 7.2 (بخار)
 vehemens, 8.1
 vehementer, 7.3
 vehementissimus, 8.1 (شديد جداً)
 vel, 7.1
 velle, 3.1
 velocissime, 7.1 (179)
 velociter, 4.2 (سرع) (سرعه), 4.2 (سرع) (سرع) (179, 186)
 velocius, 4.2 (179)
 velox, 4.2, 4.2, 4.2, 4.3 (سرع) (سرع) (178, 179)
 vena, 3.1, 3.1, 3.1, 3.1, 3.3, 4.2, 4.2 (239)
 vena pulsatilis, 2.1, 2.2, 3.1, 3.1, 3.2, 3.3, 4.2, 5.2 (240, 242, 243, 244)
 vena non pulsatilis, 2.1, 2.2, 3.1, 3.1, 3.2, 3.3, 4.2 (241, 242, 243, 244)
 venire, 4.3, 5.1, 8.1 (عمد)
 venter, 1.3 (32)
 ventositas, 4.3 (157)
 ventriculum, 3.3, 3.3, 5.1, 5.1, 5.1 (59, 60, 61)
 vere, 5.2 (بالحقيقة)
 verificare, 2.2 (وضوح)
 vero, 3.1, 3.2, 3.3, 4.2, 4.2, 5.2, 6.4, 8.4, 9.2 (اما)
 versus, 3.3, 3.3 (نحو)
 verumtamen, 2.2, 5.2, 6.1, 6.2, 6.3, 6.4, 8.1, 8.3 (إلا أن)
 via, 5.2 (طريق)
 vicinior, 3.2 (قرب), 5.1 (قرب)
 vicinus, 5.2, 6.1 (54)
 videre, 8.1, 8.3, 8.3 (رأى)
 videri, 8.3 (أشبه)
 villus, 2.2 (370)
 vincere, 3.2, 3.2, 3.2, 3.2, 3.4, 5.1, 5.2, 6.2, 6.2, 7.3, 9.2 (281, 285)
 violenter, 4.2 (353)
 vipera, 6.3, 6.3 (320)
 vir, 8.3 (رجل)
 virtus, 6.4, 7.2 (339)
 viscera, 3.3, 4.2, 4.3, 5.1, 8.3 (83, 84)
 vitrum, 8.1, 8.3 (160)
 vivere, 5.1 (حي)
 vocare, 1.2 (عرف), 1.1, 8.3, 8.3, 8.4 (سمى)

ydropisis, 1.1 (182)
 Ypocras, 3.4, 6.2 (أيقراط)

C. Hebrew

The following glossary lists the principal words and phrases appearing in David Caslari's Hebrew translation of the Latin text. The number following each entry refers readers to the word's location in the numbered glossary, and will allow them to identify the word's Latin (and Arabic) equivalent in a given passage.

aber	— ← פנימיות, פעלָה	250
aber	אבר אפושטומושא	254
	ה아버 המותגאל	254
	ה아버 העלול	253
	אי זה אבר	251
	אי זה אבר דומה החלקים	262
	איברים	255
	ה아버ים אשר הם רבי הדם	84
	איברים דומי החלקים >ה< פשוטים >ו< הראושים	261
	ה아버ים הכלליים	260
	ה아버ים הפנימיים	83
	ה아버ים הפנימיים המתגברים בדם	84
	ה아버ים הראשוניים	258
	איברים ראשוניים דומי החלקים	256
	ה아버ים הראשוניים דומי החלקים	259
	babarim אשר הם רבי הדם	83
	בכל אחד ואחד מן האיברים אי זה שהיא	252
	אבי הגוף הראשוניים	257
אך:	איך	17
	אדם:	אדם ← ← מורה
		376
	אדום:	אדומית ← ליה
		347
	אותות:	אותות [באו] הנתוו
		66
	אות:	נאות 422
		406
	אויר:	האויר המקורה 407
		אחר ← ← פעל
		107
	(אחר)	מתואר ההשתנות
		107
	איסיקא:	קדרת, שְׁקָפָן ←
		355
	aicivit:	aicivit 357
		356
	שנii האיכיות	aicivit 14
		איפילא/איפילא 14
		101
	איריסיפילא	401
		117
	איש	איש 8
		אישטיאומינוש
		אכל ← התמדה, רב
		אסטומם[כה] ← חלק

(אָסָף) התאסָף 361
 אָפָוְשָׁטוּמוֹשָׁא ← אָבָר
 אָפָעָה 320
 אָצְבָּעָי: אָצְבָּעָתָה 203
 (אָרָךְ) מִתְחָאָרָךְ 230
 אָשׁ ← קָרָב 404

(בָּאוּ) בָּא 368, 410
 בָּוָה ← טָוָה
 בָּטָוָל 31
 בָּטָן 32
 בִּיצָה: בִּיצָים 13
 בְּלָבָל ← קָרָה
 (בְּלָבָל) מִבְּלָבָל 4
 הִיאָ מִבּוֹלָבָל 3
 הַחְבָּלָבָל 2
 בָּעֵל: בָּעֵל נְפָשָׁת 397
 בָּעֵלָיִם 117
 בִּקְיָה 294
 בְּרִיאָה 205
 בְּרִיאָות 21 ← סָפָה, שְׁמִירָה
 הַבְּרִיאָות הַיּוֹתָר מִשׁוּבָחָת 100
 (בָּרָר) בָּרָר לְהַכִּיר 306
 בְּשָׂוֵל: בְּשָׂוֵל 394
 (בָּשָׁל) הַתְּבָשָׁל 393
 בָּשָׁר 363
 בָּשָׁרִי 364

גָּבָ 382
 גָּבוֹל 67
 גָּבָר 281, 299
 הַתְּגָבָר 392
 מַתְּגָבָר 299
 גָּדוֹל ← קָבָל
 גָּדוֹל: גָּדוֹל ← יִתְרֹן
 גָּוָר 18, 42, 46 ← אָבָה, קָרָב
 בְּכָל הַגָּוָר הַחַי 19
 גָּוָפָה 20, 43
 גָּוָפָט 20, 47
 הַגָּוָפִים הַקִּיּוּםִים 48
 גִּידָּוִים 239

הַגִּידִים הַבְּלָתִי דּוֹפְקִים 241
 (הַגִּידִים) (ה)דּוֹפְקִים 240, 242
 גִּידִים דּוֹפְקִים וּבְלָתִי דּוֹפְקִים 242
 הַגִּידִים הַדּוֹפְקִים וּהַבְּלָתִי דּוֹפְקִים 244
 הַגִּידִים הַדּוֹפְקִים וְהַנְּחִים 242
 בְּגִידִים הַגָּדוֹלִים מִמֶּנוּ הַדּוֹפְקִים וּהַבְּלָתִי דּוֹפְקִים 243
 (גִּנְגָה) מְגִנְגָה 139

גס 38

גשם ← נתך

דבר ← טוח

בדברים הפנימיים והחיצוניים 121

(דית) מחדית 147

דס ← אבר 135

דמה 196

דומה 195

דמי 136

דמוי 152, 365

דך 366

הויתר דך 153

דרך: דרך לצאת 229

הניתה: הווה 425

הכונה 408

(הלו) הלו מהרה 359

הנתגה 131

הפרק 217

הpecific 109, 129

הpecific 218

הפסד 311

(הרג) הרג 325

הרגש 80

השנתנות 109, 291 ← אחה, שלומות, שנה

התחלפות 128

התחלפות 109

התילדות 425

התמודה: התמודה וב אוכל 351

התנשומות 398

(זע) זע 275

וכובית 160

זרוע 248

חברו ← חדש, נתן, פרוק

חברות: חברות 330, 331

(חבר) חבר וקיבוץ 51

חדר ← פאלה

חדר: החדר האחורי ממהותו 60

שני החדרים המוקדמים 61

(חדר) חידש פירוק חברו 303

התחדש 424

(חוש) היה מוחש ל-78

חוש 80

חוושם 81

חווה ← 206 חלל

חוק 300, 340
 יותר חוק 341
 חוק; חוק 336
 בחוק 341
 כי 116
 חלה 10
 חלי; חולץ 11, 270
 (ח) ליטר ← 271, 378 ספ"ר
 חלק 45
 החלק; חילוק רוע מוג מתחלף 189
 חלק 59, 315
 החליל החוצה 316
 (חליל) התחולף 127
 105, 127, 128, 129 מתחלף ← אבר, רפה
 חלק 45
 חלקים 388
 חלקים המוח 389
 חלקים הצלעות 390
 (חלש) יותר חלק 220
 חם 71, 176
 71, 176 יותר חם
 חם: חום 70, 72, 172, 211
 (ח) חוק 73, 175
 חום חוק מתגבור על הטבע 174
 החום היוצא מהטבע 173
 חום מופלג ביוור בתכליות 342
 חום נח 74
 החום העובר המנהג הטבעי 75
 (חם) חימם 170
 מהחם 165
 חום 165
 התחם 165, 170
 התחם, מזד 167
 התחם מהירה 171
 נתחם ← שלמות 165
 נתחם [בשיוי] 166
 חסרון 321
 טבע ← חם 225, 226, 227, 379
 טבע ← חם 227, 228
 (טוח) הטיח דברים לבאות אותו העניין 133
 (יבש) החיבש 49
 יבש 428
 ד 429
 (דיה) הודה 183
 דיעות 238

ייחס (התיחס)	343
ייחס	223, 314
(ילד) התайлר	424
מתילד	427
مولיך	426
ישך ← קבץ	
יצא ← דריך, הום, תכונה	
הציא	118
יציאה	119
יריה (הורה)	134
יתרונו: יתרון גודל כמות	313
cab	11, 412
cabins	413
(כבד) הכבד	40
(כלל) הכליל	104, 216
כח: כח הסבות הפעולות	337
הכוחות הטבעיות	339
כלין	89
כמות ← יתרון	327
כעס	279
כף	354
לב ← לנה	333
לבן	36
לה	151
להקה: להקה אדרומית צחובה	125
ליהה לבנה	34
ליהות	126
אות מהליהות	149
לחות	149
לחיהת	150
לחיה: לחיה	35
(מלחלה) מלחלה	148
התחללה	33, 148
לפי: לפנים	370
לקח (מתלקח)	102
(מהר) ממחר ← נקל	
מחר	180
יותר מהר	179
מהירה	179
מהירה ובונקלה	186
מוגלא	374
מוח ← חלק, חדר	
מוחן	409
מולוקיאוני	155

מורסא/מורסה 415, 418
 מורסא דמיית חמה 417
 מורסא (ה) חמה 416
 מורסות 415, 418
 מות (מח) 324, 385
 קווות 386
 מוחר 149, 313
 מג ← 379 חילוק, ספר, רע
 מים 387
 מין: מינים 214
 מיתר: מיתרים 411
 מלא (החולמלא) 384
 מותמלא 384
 מותג ← חם 122, 183
 מנוחה 332
 מעוט: מיעוט 383
 משי 214
 מצא ← הסבה 215
 מצוע ← שאו 420
 מקום 103
 מקור 69, 237
 מקרים ← ספר 236
 מרה: המרה האדומה 376
 המרה השחורה 375
 משך (משך) 362
 מתח 221, 372
 מתייה 222
 נאות 200, 421, 422, 423
 נאצרים: נאצרים 16
 נגב (נגב) 49
 החנגב 49
 נגר (נגר) 193
 נגע (מתגעגע) 77
 נחש 320
 נכר (הכר) ← ברר 101
 נמלה 101
 נפש ← בעל 281
 נצח (נצח) 281
 הוויתר מנצח 285
 נצח 281
 מנצח 281
 נקב 296
 נקבים 185, 297
 נקל ← מהירה 178
 נקל מادر וממוהר 179
 נקי (הקייף) 103

נתהה ← אודות	304
נתך ושבר חבור הגשם	304
סבה ← בָּחָ, מִצָּא, ספר	163, 164
סבוכיות	145
סדק: סדקים	123
סוג	53
סחוות: סחוותים	280
סמור	399
ספר: ספר המזג	346
ספר תחכולת הבריאות	349
ספר המלחים והמרקרים	345
ספרי בסבות והמרקרים	350
ספרי ברפואות	348
سرطان	177
עבה	283
עבר	56
עבר השיעור הניאות והראי	57
עובר	15
עונה: כל אחת ואחת מהעונות	403
עור	50
עיזן	344, 395
עליה: עלילות	164
עמידה	358
ענין: עניין/ענין	110, 213, 344 ← טוח, תוכנה
עפוף/עיפוש	286
(עפש) התעפש	267
עצב: עצבים	246
עצב	249
עצבל	414
עצבלה	265, 335
עם	335
עכם יבש	64
עכם לך	63
עכמתות	265, 266
עכימות	62
עוצר ← קבץ	
עקן	391
עקרב	269
ערך	314
פב	405
פה: פיות	323
פילוסוף: הפילוסופים הטבעיים	396
(פלג) מופלג	198, 300
פלטמן	322
פלגמוני	322

פלצ'ות 399
 פנימיות 132
 פנימיות האברים 361
 (פסד) נפסד 263, 309
 הפסד 7, 88, 310
 מפסד 312
 פעולה 272, 317
 פעול 317
 הטעול 318
 מטעול בקשוי ובאיחרו 30
 פעללה: פעולה 319
 ואמונה כשלפעולת האבר תחדר 1
 פעולות 158
 (פעוף) מפעוף 288
 פרטי 298
 פרוק: פ(ר)וק חברו 307 ← ← חדש 308
 פרק 308
 שיפורק חברו 305
 פשוט 29
 (פשוט) מותפשת 373
 צהוב: צהובה ← ↗
 (צום) צם 159
 ציפאך ← קרום
 ציר 11
 צלע ← חלב
 צמא 264
 צמח 402
 צפָרָן: ציפרנים ← ↗ שרט
 קברון: קיברן 52
 קברצים 120
 (קבל) קבל נידול 275
 (קבע) נקבע ← ↗ קדחת 37, 204
 (קבע) קיבוץ ← חבר 161
 קובץ 221
 מקובץ ועוצר 86
 מותקbez שיהיה מושי 360
 (קדח) מוקדח 91
 קדחת 90, 91
 קדחת איטיקא 96
 הקדחת הנקבעת 94
 הקדחת והקימנה 92
 קדחי שדפון 93
 קדחת שדפונית 92
 קדחות 95
 הקדחות השורפות 97

קדמוני: קדמוני הרופאים 329
 קולון 334
 קיים ← קים 67
 קיים? ← קים? 194 ← קחתה
 יותר קיים 284
 קל 178
 יותר קל 179
 כמה 181
 כץ 67
 קיריבטי 232
 גור 27
 יותר גור 26, 27
 קור 24, 25
 (קור) בהתקרב הנגע אל האש 212
 הקיריב 138
 קרה 215, 362
 קרה הבלבול 2
 קרוב 54, 55
 קרום 277
 הקרום הנקרה ציפאק 209
 קרומים 278
 השן קרומים 12
 קריעי 273
 קרירות 24
 קרטוק 177
 (קור) קורר 22, 23
 מקרר 22
 התקדר 22
 נתקרר 22
 קשה 210
 יותר קשה 245
 קשי: בקושי 353 ← פעל
 קשר: קשרים 141, 249
 ראש 140
 ר: ר(ו)ב 162, 300, 301
 רוב אוכל ← התמדת 351
 רבבי: ריבבי 352
 רבעית 142
 (רגל) הרגל 130, 137
 רגלי 143, 144
 רגש (רגש) 78, 79
 מרגש 78, 82
 רוח 156, 157
 רוחות 156
 (ויק) הורק 118
 ריקות 381

(רכב) הורכב 9
 מורכב 380
 רכחות 155
 רופא ← קדמון 68
 ר' רוע מגן 189, 187, 188, 189 ← חילוק
 רוע מגן מחלף ← 187, 188, 189 ← חילוק
 רוע מגן נקבע 190
 רעב 58
 רפה: רפה החלקים 371
 רפואה ← 199, 224 ← ספר
 ר' רוק 28, 367
 רקי 152
 יותר ורקי 153
 רותח (רותח) רותח 286
 רותחה 286
 רתיחה 287
 (שבח) יותר משובח 98, 99
 שבר ← נתך
 שךפון: שידפון 6 ← קדחת
 שדפוני: שדפוני ובלען "איטיקא" 6
 (שוה) משווה 355
 שעה 201, 233
 שווי: בשווי 201
 בשווי ובמצוע בין שני אל 419
 שונא 234
 שוק 192
 שחורה: שחורה ← מרה
 שטקה 369
 שכן 54
 שליש: שלישית 274
 שלמות ← שנה
 שלימות השנה 291
 בלימת נחתמת 168
 שמירה: שמירת הבריאות 85
 שיכון: שיכון 197
 שמני 283
 (שנה) שנה 289
 משנה 2, 289
 השתנה 106, 290, 309
 השתנה חכילת ההשתנה 108
 השתנה בתכילת השלים 108
 משנה 106, 290
 שיעור: שיעור ← עבר 327
 שפיכה 204
 שפָּן 146
 נשפָּךְ 204, 392

היה נשפט	204
נשחפט	204
השפט	204
שקיי: שיקוי	182
שקט	183
(ש��ע) הושקע	276
שך ← קדחת	
שך: שרכי האפיגורנים	5
תגבורת: תגבורת	282, 301
חחבולה ← ספר	
תכונה	110, 235
התכונה התחא מהענין הטבעי	111
התכונה הטבעית באמת	112
התכונה כשהיא יוצאת מהטבע למורי	113
תוכנות הטבעית	114
תוכנות	115
תכלית ← חם, שנה	
תנועה ← נוע	
תנועה מופלגת	302

INDEX

Abraham Bedersi, 26, 33
Abraham Caslari: see Caslari, Abraham
Abraham ibn Dāūd, 10
Abū Djafar Ahmād ibn Muḥammad ibn abī I-AS'at, 4
Abū I-Ḥasan ibn Mūsā, 3
Albucasis, 10, 13
 Chirurgia, 10
Anatomy and anatomical terminology, 70–71
 bones, 70–71
 colon, 78
 fingers, 14
 heart ventricle, 74
 intestines, 74
 ligaments, 71
 marrow, 70–71
 meninges, 72
 metacarpals, 14
 nerves, 71
 siphac, 35
 teeth, 8
 testicles, 8, 17, 78
 tunics, 71
 vessels (blood), 71
 wrist, 14
al-Andalus, 9–10
Anomalous dyscrasia, viii, 4, 71
 causes of, 73–74
 kinds of, 69–70, 76–77, 79–80
Arabic: See Ḥunayn ibn Iṣhāq al-‘Ibādī; *Fī sū’ al-mizāq al-muhtalif*
Aristotle, 30–31
Arnaud de Vilanova, 11, 21
Artemidorus, 2
Avendauth (Abraham ibn Dāūd), 10
Avicenna, 9–10, 13
 Canon, 10, 13
 Shīfa', 9–10
Banū Mūsā, 2
al-Batrīq, 30–31
Bernard de Sedirac, 9
Blood, 73–74, 77
Bruno Longoburgo
 Chirurgia, 34–35
Burgundio of Pisa, v
Burnett, Charles, 10, 16, 19
Caslari, Abraham, 26, 36
 Green Leaf, 36
Caslari, David, 21–22, 25–36, 101
 life, 25–27
 translation technique, 27–36
 vocabulary, 34–36
 writing style, 30–33
 See also *Sefer ro'a mezeg mithallef*
Caslari, Yaḥṣe’el b. Abraham, 26, 33
Castelló d’Empúries, 26
Chapterization, 3, 23, 29, 101–102
Constantine the African
 Pantegni, 15
Coxe, John Redman, viii
Daniel of Morley, 10
David Caslari: see Caslari, David
De malitia complexionis diverse, 11–12, 14, 17, 20–24
 glossary, 140–153
 Hebrew translation of, 21–22
 Latin text, 20–24, 81–100
Dino del Garbo, 11, 24
Diseases and disease terminology
 abscesses, viii, 72
 cancer, viii, 69, 79
 canker, 79–80
 dropsy, 69
 elephantiasis, 69
 eroding sore, 15
 erysipelas, viii, 69, 79
 gangraina (GNGRYN’), 36, 69, 80
 hemorrhoids, 25
 [herpes] estiomenus, 15
 melancholia, 36
 paroxysm, 20, 78
 phlegmonē (PLGMWNY), viii, 69, 71, 76, 79, 80
 shingles, 79
 See also Anomalous dyscrasia; Fever
 Dissolution of continuity, 72, 75

Dominicus Gundissalinus, 10, 13

Dunash ben Labrat, 33

Euclid
Elements, 12

al-Fārābī, 10, 13
 Gerard of Cremona and, 19
On the Classification of the Sciences, 10

Ferre, Lola, 34

Fever, viii, 69, 74–75, 76, 77, 79–80
epialos ('NPY'LYS), viii, 14, 36, 69, 78–79
 fixed, see *hekitikos*
hekitikos (QTYQWS), viii, 36, 69, 74–75,
 76, 77, 79
leipurias (LYPWRY'S), 78

Fit sū' al-mizāg al-muhtalif
 Arabic text, 37–67
 Arabic-Latin-Hebrew glossary, 115–139
 English translation of, 69–80
 and Greek original, 1–8
 Latin translation from, 9–24

Francesco da Piemonte, 24

Galen, 2, 10–11, 13, 20–24, 135–136, 140
Ad Glaucōnem, 15
 al-Batrīq and, 30–31
On Anatomical Procedures, 17–18, 70, 135
On the Causes and Symptoms, 76–77,
 135–136
On Drugs, 80, 135
On Temperaments, 70, 135
On the Therapeutic Method, 80, 136
 See also *Peri anomalou dyskrasias*

Galippus, 11

García Ballester, Luis, 10

García Novo, Elsa, vi–vii, 4, 8, 11, 17, 27

Gariopontus
Passionarius, 15

Gerard of Cremona, v–vii, 9–24
 David Caslari and, 27–28
 Toledan translations, 9–11
 translation technique, 12–20
 See also *De malitia complexionis diverse*

Glaze, Eliza, 15

al-Harīzī, Judah, 35

Heat, 71, 73, 74, 75

Hebrew: See Caslari, David; *Sefer ro'a*
mezeg mithallef

Hippocrates, 75
Airs, Water, Places, 25

Hubayš ibn al-Hasan al-A'sam, 2

Humors, 36, 73, 76, 79–80
 putrefaction, 73, 74, 76, 77

Hunayn ibn Ishāq al-'Ibādī (Johannitius),
 1–8, 17–18
 life and work, 1–2
 Maimonides on, 31
Risāla ilā 'Alī ibn Yahyā..., 2
 translation technique, 5–8
 See also *Fit sū' al-mizāg al-muhtalif*

'Isā ibn Yahyā, 2

Jacquart, Danielle, 13–14, 16

al-Jauharī, 5

Jean de Saint-Amand, vii, 11

Judah al-Harīzī: see al-Harīzī, Judah

Kalonymos of Arles, 26

Kunitzsch, Paul, 12, 15, 19

Latin: See *De malitia complexionis diverse*;
 Gerard of Cremona

Lo Bello, Anthony, 12

Maimonides, 30–31
Aphorisms, 33
Guide to the Perplexed, vi, 33, 35

Menahem ben Saruq, 33

Menander
Epitrepones, 8

Naftali, 33

Nathan ha-Me'ati, 25, 35

al-Nayrīzī, 12

Niccolò da Reggio, 24, 27

Pain, viii, 72, 74–75, 77–78, 80

Peri anomalou dyskrasias (Galen), vi–viii, 2,
 11, 15, 25–27, 35
 summaries of, vii–viii

See also *De malitia complexionis diverse*; *Fit sū' al-mizāg al-muhtalif*; *Sefer ro'a* *mezeg mithallef*

Pietro d'Abano, 27

Praxagoras, 78

Ptolemy
Almagest, 10, 12

Qustā ibn Lūqā
De differentia spiritus et anime, 9

Raymond de la Sauvetat, 9

Residues, viii, 69–70, 71–72

Index

Rhazes

De egritudinibus iuncturarum, 25
Liber ad Almansorem, 10, 13, 18
Liber divisionum, 10

Rigor, 76, 78–79

as-Safadī, 5

Samuel ibn Tibbon, 33, 35

Sefer ro'a mezeg mithallef, 25–27
glossary, 154–164

Hebrew text, 101–114

Sensation, 74–75

Serapion

Breviarium (Practica), 13

Sergius of Rēs'ainā, 5

Solomon ha-Me'ati, 25

Solomon ibn Ayyub, 25

Spaces (within body), 70–72

Steinschneider, Moritz, 25

Swellings, 69, 71, 73, 76, 77–78,
79–80

Taddeo Alderotti, 23–24

Terminology: see Anatomy and anatomical
terminology; Disease and disease
terminology; Translation technique

Thābit ibn Qurra, 4

Translation technique

collaboration, 9–10, 20, 25, 28
of David Caslari, 27–36
explanatory glosses, 5, 6, 14
of Gerard of Cremona, 12–20
of Hunayn ibn Ishāq, 5–8
inconsistency in translation, 32–33
misunderstandings, 17–18, 29–30
oral intermediary, 9–10, 28
paraphrase, 5, 6–7
repetition, 13, 18, 31–33
style and word choice, 19, 32, 33
synonyms, 5, 7–8, 18
syntactical shift, 16
Syriac, 5
technical terminology, 14–15, 34–38
transliteration, 13, 14–15, 38
[Hebrew] vocabulary, limitations of, 34–36
word-for-word (*verbum e verbo*), 5, 16–17,
18, 30–31

Weber, Michael, 13, 19–20

Wounds: see Dissolution of continuity

Yehi'el of Genzano, 101

Zerahyah ben Isaac ben She'altiel Hen, 33, 35

INDEX CODICUM

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Cesena, Biblioteca Malatestiana S.V.4, 23: 28
El Escorial, Real Biblioteca del Monasterio
848/2: 3–4, 8, 17, 20, 37–67
El Escorial, Real Biblioteca del Monasterio
879/2: 3–4, 8, 37–67
Erfurt, Amplon. F. 249: 21–23, 82–106
Istanbul, Ayasofya 3593: 3–4, 8, 17, 37–67
Istanbul, Süleymaniye 3631: 4
London, British Library, Harl. 5425: 12, 21–23,
82–106
London, Wellcome Library 286: 28
Lisbon, Academia das Ciencias, Vermelho
292–293: 4, 8, 37–67
Madrid, Biblioteca Nacional 5011: 3–4, 8, 17,
20, 37–67
Oxford, Bodleian Library, Opp. Add. Fol. 18:
101–113
Paris, Bibliothèque Nationale ar. 2847: 4, 8, 12,
37–67
Paris, Bibliothèque Nationale lat. 6865: 21–23,
82–106
Paris, Bibliothèque Nationale n. a. l. 343: 12,
14, 21–23, 82–106
Vatican City, Biblioteca Apostolica Vaticana,
Ottob. 1158: 12, 21–23, 82–106
Vatican City, Biblioteca Apostolica Vaticana,
Palat. Lat: 1095, 21–23, 82–106
Vatican City, Biblioteca Apostolica Vaticana,
Urb. 209: 23–24

Index

Rhazes

De egritudinibus iuncturarum, 25

Liber ad Almansorem, 10, 13, 18

Liber divisionum, 10

Rigor, 76, 78–79

as-Safadī, 5

Samuel ibn Tibbon, 33, 35

Sefer ro'a mezeg mithallef, 25–27

glossary, 154–164

Hebrew text, 101–114

Sensation, 74–75

Serapion

Breviarium (Practica), 13

Sergius of Rēs'ainā, 5

Solomon ha-Me'ati, 25

Solomon ibn Ayyub, 25

Spaces (within body), 70–72

Steinschneider, Moritz, 25

Swellings, 69, 71, 73, 76, 77–78,
79–80

Taddeo Alderotti, 23–24

Terminology: see Anatomy and anatomical

terminology; Disease and disease

terminology; Translation technique

Thābit ibn Qurra, 4

Translation technique

collaboration, 9–10, 20, 25, 28

of David Caslari, 27–36

explanatory glosses, 5, 6, 14

of Gerard of Cremona, 12–20

of Hunayn ibn Ishāq, 5–8

inconsistency in translation, 32–33

misunderstandings, 17–18, 29–30

oral intermediary, 9–10, 28

paraphrase, 5, 6–7

repetition, 13, 18, 31–33

style and word choice, 19, 32, 33

synonyms, 5, 7–8, 18

syntactical shift, 16

Syriac, 5

technical terminology, 14–15, 34–38

transliteration, 13, 14–15, 38

[Hebrew] vocabulary, limitations of, 34–36

word-for-word (*verbum e verbo*), 5, 16–17,
18, 30–31

Weber, Michael, 13, 19–20

Wounds: see Dissolution of continuity

Yehi'el of Genzano, 101

Zeraḥyah ben Isaac ben She'altiel Hen, 33, 35

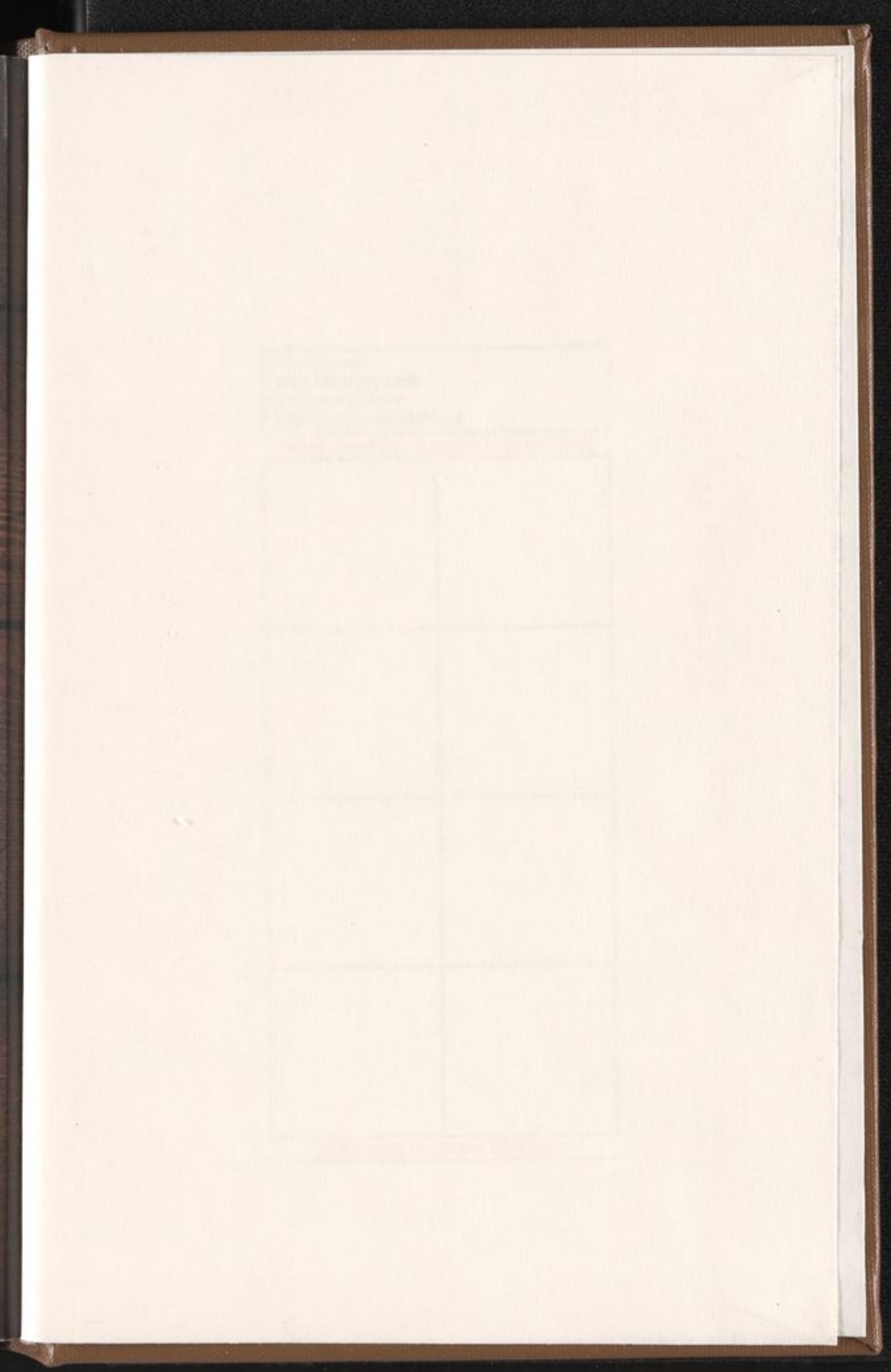
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