The Alexandrian Epitomes of Galen, Volume 1: On the Medical Sects for Beginners; The Small Art of Medicine; On the Elements According to the Opinion of Hippocrates

Galen

John Walbridge, Translator

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The Alexandrian Epitomes of Galen

VOLUME 1

On the Medical Sects for Beginners
The Small Art of Medicine
On the Elements According to the Opinion of Hippocrates

An edition and parallel English translation
of three Arabic texts, with notes and introduction, by

John Walbridge

Brigham Young University Press • Provo, Utah • 2014
Galen, author.
[Works. Selections. English]
The Alexandrian epitomes of Galen. Volume 1, On the medical sects for beginners; The small art of medicine; On the elements according to the opinion of Hippocrates. / an edition and parallel English translation of three Arabic texts, with notes and introduction by John Walbridge. — First edition.
p. ; cm. — (Graeco-Arabic sciences and philosophy)
On the medical sects for beginners
Small art of medicine
On the elements according to the opinion of Hippocrates
Includes bibliographical references and index.
Summary: “The second-century physician and philosopher Galen is not known for brevity. About fourteen hundred years ago, one or possibly several professors put together a series of epitomes of Galen’s work. This edition presents the Arabic and English versions side by side, with a translation by scholar John Walbridge.”—Provided by publisher.
Parallel English and Arabic translation of Greek text.
I. Walbridge, John, translator, writer of added commentary. II. Title. III. Title: On the medical sects for beginners. IV. Title: Small art of medicine. V. Title: On the elements according to the opinion of Hippocrates. VI. Series: Islamic translation series
R138
610.938—dc23
2014007461

Printed in the United States of America.
First Edition
To four women who cared for my wife Linda in her last illness:

Mary Lou Mayer, her doctor;
Mary Vandeveld, her sister-in-law;
Mary Edwards and April Sievert, her friends.
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Foreword to the Series

Brigham Young University and its Middle Eastern Texts Initiative are pleased to sponsor and publish the Islamic Translation Series (ITS). Islamic civilization represents nearly fourteen centuries of intense intellectual activity, and believers in Islam comprise approximately one quarter of the world’s population. The texts that appear in ITS are among the treasures of this great culture. But they are more than that. They are properly the inheritance of all the peoples of the world.

As an institution of The Church of Jesus Christ of Latter-day Saints, Brigham Young University is honored to assist in making these texts available to many for the first time. In doing so, we hope to serve our fellow human beings of all creeds and cultures. We also follow the admonition of our own tradition, to “seek . . . out of the best books words of wisdom,” believing, indeed, that “the glory of God is intelligence.”

—Daniel C. Peterson
—D. Morgan Davis
Preface

This project has bittersweet associations for me. It began as an outgrowth of research on Stoic influences in Islamic philosophy, a project I have pursued off and on for about fifteen years. In 2001, the American Research Institute in Turkey and the National Endowment for the Humanities were kind enough to fund my research on such issues in Istanbul for a summer, a time I remember with the greatest pleasure. When I looked at the manuscripts of the Alexandrian epitomes, it seemed clear to me that they ought to be published and that at least the five I plan to publish had philosophical interest. I began editing the epitome of *On the Elements According to the Opinion of Hippocrates* in my evenings in the Istanbul hostel of the American Research Institute and continued to work on the project in my idle moments during a Rockefeller Fellowship in the Department of the History of Science at the University of Oklahoma the following fall. That winter, my wife, Linda Strickland Walbridge, was diagnosed with a recurrence of breast cancer. I decided to focus on this project since text editing lent itself to hospitals and doctors' waiting rooms. I also thought it would be a good transitional project that could be finished quickly—a piece of naïveté that I doubtless share with many others who have innocently undertaken to edit a text. Linda, raḥimahā Allāh, died the following winter, by which time I had collated most of the manuscripts for two of the three texts presented here. (I had also found out that Galen's three schools of physicians are still very much with us.) Over the next five years, the project progressed slowly as I shouldered heavy departmental responsibilities and gradually put my
life back together. At any rate, the first three texts are now finished, and I hope to finish two more—the epitomes of On the Temperament and On the Natural Faculties—before too long.

I am grateful to acknowledge the following organizations for funding and other support while I was working on this project: the American Research Institute in Turkey, the National Endowment for the Humanities, the Turkish Fulbright Commission, the Rockefeller Foundation, the Department of the History of Science at the University of Oklahoma, Indiana University, the İslâm Araştıraları Merkezi (ISAM) in Istanbul, and the Guggenheim Foundation.

The publication of this book is funded in part by the Sorensen Legacy Foundation, the creation of the biotechnology pioneer James LeVoy Sorenson and his wife, education philanthropist Beverley Taylor Sorenson. I hope that this book, a testimony to the ancient human enterprise of educating those whose profession it is to fight disease and preserve health, will be worthy of their efforts in medicine and education.

The following libraries supplied photographs of manuscripts used in this edition: the British Library in London, the Süleymaniye Kütüphanesi in Istanbul, and the Manisa İl Halk Kütüphanesi in the lovely town of Manisa, near Izmir. I also used the library facilities of the Süleymaniye, the British Library, the University of Oklahoma, Princeton University, ISAM, and Indiana University, and I am grateful to the generosity and kindness of the librarians at those institutions. Only someone who has worked in the Turkish manuscript libraries—and particularly the Süleymaniye, the greatest Islamic manuscript library in the world—can appreciate the achievement of Turkish librarians over the centuries. The manuscripts that I work with are not beautiful, being doctors’ and professors’ books, usually in bad handwriting with notes in the margins and on the flyleaves and entirely without elegant illustrations; but learned princes and ministers recognized their value, brought them back as trophies to Constantinople, and saw to it that they would be cared for across the centuries. One of the manuscripts used in this project was copied by a Christian doctor in Acre when it was ruled by the Crusaders. It bears the elegant inscription of the royal librarian who checked it into the library of the Aya Sofya mosque three hundred years ago. It was carefully repaired, probably at that time, and then repaired
again sometime in the twentieth century. And it was waiting in the same collection, ready to hand as the royal donor and the long-dead librarian intended, when I called for it at the beginning of the twenty-first century. One stands humbled by the persistence of learning and professionalism represented by the survival and cherishing of these books.

I would like to thank the two graduate students who assisted me on this project, Murat Yılmaz and Naser el-Hujelan, the latter of whom has done the basic collations for the second volume of this project. Their care and enthusiasm have been a great help to me. I would also like to thank a number of individuals who have helped me in various ways, particularly during my stays in Istanbul. The staff of the American Research Institute in Turkey, particularly Tony Greenwood, assisted in a variety of practical ways when I was staying in Istanbul in the summers of 2001 and 2005, as did Nüri Tınaz, my host at İSAM in 2007–2008. I would particularly like to mention the hospitality of Hıdır Metin of the Manisa Library, who, with his assistant Ali Arı, stood on the front steps of his library for a day and a half, patiently turning the pages of manuscripts while I photographed them. Jamil and Sally Ragep were generous hosts at the University of Oklahoma. I would also like to acknowledge the staff at the Middle East Texts Initiative at Brigham Young University: Daniel Peterson and Glen Cooper, who originally commissioned the project; Morgan Davis, the directing editor; Elizabeth Watkins, who meticulously copyedited the English text; Muḥammad Eissa, who carefully reviewed the Arabic; and Andrew Heiss and Jonathan Saltzman for their skillful typesetting.

Mostly, I would like to thank my family for their patience and forbearance as I worked on this project—particularly Linda, who did not live to see the project completed, and Frances Trix, my Turkish interpreter and new bride.
Introduction

About fourteen hundred years ago, one or several professors of medicine in Egypt prepared epitomes in Greek to accompany the sixteen works of Galen that constituted the larger part of the standard syllabus of medicine in the medical schools of Alexandria. These epitomes were study guides, similar to the CliffsNotes of modern American students. In contrast to the rambling and argumentative style of Galen’s original works, the epitomes are full of the lists, tables, and systematic categorizations of concepts, symptoms, diseases, and organs that medical students have always had to memorize. Besides the Alexandrian students, others must have found them useful, for they were translated into Arabic—supposedly by the famous Christian translator Ḥunayn ibn Isḥāq—and then into Hebrew. Arabic manuscripts of these epitomes are about as common as manuscripts of the Arabic versions of the corresponding original works of Galen. Citations of them, or signs of their influence, are not difficult to find in Arabic medical literature. Thus they are historically important and worthy of closer study than they have received so far. They are also an admirably clear, if sometimes tedious, survey of Galenism as it was understood at the very end of antiquity.

The Alexandrian medical curriculum

The medical school in Alexandria

Greek medical education probably took place most often in the context of a master-apprentice relationship, commonly within a family. In the Hippocratic oath, the physician vows to pass on the art only to his sons, the sons of his own master, and sworn apprentices. Nevertheless, the oath itself is evidence that this system was changing, at least to the extent that those wishing to acquire a medical education could do so by
paying a teacher and attending his classes. In all likelihood, the most common pattern was for aspiring doctors to study locally, either in their family or with local teachers, and then—if their ambition, talent, and financial resources allowed—go on to attend lectures of internationally known teachers at one or more of the famous centers of medicine. This was how Galen himself acquired his education. He was the son of what today we might call a real estate developer, who was able to pay for his son to become a doctor. Galen studied with local teachers in Pergamon and Smyrna before going off for several years of advanced study in Alexandria.

From the time of the Ptolemies up to the fall of the city to the Arabs, Alexandria had a reputation as the best place for advanced medical education. Since we do not know the institutional details of medical instruction, it is wise to resist reifying the “Medical School of Alexandria,” as has been done with the “University of Gondeshapur.” Certainly, instruction was offered there under something like official auspices, with one or more salaried professors; but beyond that we know little. When Galen was there in the middle of the second century, Alexandria was still living off its reputation for instruction in anatomy, acquired four centuries earlier. We know still less about Alexandrian medical instruction in the century or two before the Arab conquest, when even the names of the teachers are unknown, garbled, or unhelpfully common. The medical textbooks do not say much about actual medical practice, so the social role of doctors and medical students has to be pieced together from fragmentary data—notably from the smug accounts of Christian saints whose miraculous cures humiliated proud pagan doctors.

By the fifth and sixth centuries, the triumph of Galenism in the Roman world was complete. Galen had successfully tilted with his rivals: Empiricists, Methodists, Pneumatists, and other Rationalists.

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1. On the role of formal medical instruction, see Duffy, “Byzantine Medicine.”
The professors of medicine in Alexandria had now settled down to ex-
pounding a common system based mainly on the works of Galen, with
his characteristic polemics largely removed and inconsistencies ironed
out by drawing together passages from across his writings. This instruc-
tion seems to have had a decidedly bookish quality, leading to the pro-
fessors being called “iatrosophists.” The best evidence for instructional
practices in late antique Alexandria comes from Arabic sources, which
in turn allow us to make sense of the fragmentary instructional litera-
ture in Greek. Ḥunayn ibn Isḥāq reports:

They read only these books [the sixteen books of the Alexandrian
curriculum] in the place of medical instruction in Alexandria. They
read them in the order that I have mentioned them, assembling each
day to hear one of the authoritative texts read and explained, just as
our Christian brethren do to this day in the places of instruction
called schole, where they read from the book of one of the authorities,
either one of the Ancients or one of the other books. [The Alexandrians]
would read the specialized books individually after study of these
books that we have mentioned, just as our brethren today read com-
mentaries on the books of the Ancients. Galen, however, did not
intend for his books to be read in this order. Instead, he specified that
after his book *The Medical Sects*, his books on anatomy should be read.5

In a chapter on judging the qualifications of physicians, the ninth-century
physician Isḥāq ibn ʿAlī al-Ruḥāwī writes:

Galen undertook to determine each one of these natural principles,
without which there can be no real knowledge of the states of the
human body. Having distinguished them, he wrote a book about each
one of these principles, attributing it to that principle and naming
the book by it, seeing that it contained that principle and its branches.
He continued in this manner until he had covered all the principles
of medicine. Now, the Alexandrians were those most knowledgeable
about this art, and when they met and gathered the students of the
art of medicine, they realized that most of the young men of their day
lacked the enthusiasm to read all of these books, especially those that
Galen had composed. Wishing to make the art of medicine accessible

---

5. Ḥunayn ibn Isḥāq, “Risālah,” 18–19.
to the students, they selected sixteen of Galen’s books, also making epitomes of most of them, seeking greater concision thereby. They introduced them into the *schole*—that is, the place that they had for teaching. Thus it is that nowadays anyone who claims to know the nature of the human body and that he is able to preserve health and treat diseases must know these books well in their order and must have read them with a knowledgeable teacher. Anyone who claims to know them ought to be questioned about the first of them, which is Galen’s *On the Medical Sects* [*for Beginners*].

The thirteenth-century medical historian Ibn Abī Uṣaybi‘ah says much the same:

These Alexandrians confined themselves to reading sixteen books of Galen in the medical school in Alexandria (*fī mawḍi‘ ta‘lim al-tibb bi-al-Iskandariya*). They read them systematically (*ʿalā al-tartīb*) and met every day to read and understand a part of them. Then they turned to abridgments and epitomes (*al-jumal wa-al-jawāmiʿ*) to make it easier to memorize and understand them, each one of them being assigned to comment on the sixteen books.

The medical autodidact ʿAlī ibn Riḍwān (d. 453/1061) condemned the popularity of the resulting compendia and commentaries for having made them substitutes for the original texts of Hippocrates and Galen:

In the time of Oribasius, when kingdoms had become dominated by Christianity, Oribasius thought of reviving the art [of medicine] and compiled his popular *Compendium* [*Kunnāsh*] for the laity, thus familiarizing the Christian kings with medicine. Paul [of Aegina] followed his path, and when their successors saw these two compendia, they continued to compile their own up to the present day. Even Abū Bakr al-Rāzī ordered each physician to compile a compendium for himself! Accordingly, medical books became abundant, and each doctor acquired a compendium for his own use.

Galen wrote his commentaries in order to bring the medical works of Hippocrates to perfection. His abstracts and commentaries have left nothing out. Consequently, later books are superfluous, and


to transcribe or reflect on their contents would hinder students from studying medicine. Studied closely, later compendia and similar works are found to represent the doctrine of the Methodists, whose art was rejected by Galen, for he informed us of their harmful influence on medicine. According to their tradition, the Methodists described each disease, saying that it ought to be treated with a special [group of] drugs. This is precisely what is done by the compilers of compendia, which are, therefore, as harmful to medicine as the doctrine of the Methodists. Summaries and commentaries of Galen’s books are not self-sufficient and should not replace his books. Summaries fail to encompass all Galen’s ideas, while commentaries increase the length of the art and distract [students] from studying, since, of necessity, these would have to be read for verification together with their [original] medical works.8

Ibn Riḍwān belonged to the Great Books school of medicine, and his criticisms are scarcely fair. Students struggling to master established medical theory and busy doctors trying to follow the standards of sound practice might admire classical and innovative works of medical theory, but they needed clear, reliable, and well-organized manuals. These the compendia provided, however unstimulating they might be as reading.

The Alexandrian medical syllabus

The Alexandrian medical curriculum, as it is preserved for us by ʿAlī ibn Riḍwān, was as follows:

(1) Liberal arts: intermediate knowledge of grammar, mathematics, astrology, and compounding of drugs

(2) Works of Aristotle on logic: Categories; On Interpretation (propositions); Prior Analytics (syllogism); and Posterior Analytics (demonstration)9

8. ʿAli ibn Riḍwān, al-Kitāb al-nāfiʿ, 66, 90, trans. Iskandar in “Attempted Reconstruction,” 241–42, slightly adapted. Iskandar cites al-Rāzī to show that what he actually meant was that physicians should keep notes on cases and treatments. A similar account is found in Ibn Jumayʿ, Treatise to Ṣalāḥ ad-Dīn, 18–19. A more sympathetic assessment of the compendia is given by Nutton, Ancient Medicine, 295–96.

9. Roueché, “Did Medical Students Study Philosophy?” 153–69, says that apparently they did. Logic was still required for nursing students in my own Indiana University as late as the 1970s.
(3) Works of Hippocrates: Aphorisms; Prognostics; Regimen in Acute Diseases; and Airs, Waters, Places

(4) Galen’s works:

First grade: On the Medical Sects for Beginners; The Small Art of Medicine; On the Pulse for Teuthras; and Therapeutics for Glaucon (two books)

Second grade: On the Elements According to the Opinion of Hippocrates; On the Temperament (three books); On the Natural Faculties (three books); and On Anatomy for Beginners (five books)

Third grade: On Diseases and Symptoms (six books, compiled from Galen’s On the Differentiae of Diseases; On the Causes of Diseases; On the Differentiae of Symptoms; and On the Causes of Symptoms)

Fourth grade: The Diagnosis of the Diseases of the Internal Organs (six books) and The Large Pulse (sixteen books)

Fifth grade: The Kinds of Fevers (two books) and On Crises (three books)

Sixth grade: On the Method of Healing (fourteen books)

Seventh grade: The Regimen of the Healthy (six books)\(^\text{10}\)

This yields a coherent curriculum:

(1–2) Premedical: liberal arts and basic sciences; practical pharmacy techniques

(3–4.1) Introductory survey of medicine: short medical classics (four works of Hippocrates); introductory works on differing

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A number of Arabic manuscripts of Galen’s works and commentaries on them reflect this list of sixteen works. The numbers in parentheses are the numbers of these works in table 1, in the order that these works appear in each manuscript.

Galen’s works: Aya Sofya 3593 (5–7, 3), Aya Sofya 3701 (1–5), Istanbul University A4712 (1–4), Sarai Ahmet III 2110 (7–9), Paris 2860 (1–4), Princeton Garrett 1075 (12–15), Florence Laurent. 235 (1, 2, 8–12?), Tehran Majlis 521 (1–6), Majlis 3974
scientific methodologies in medicine; introductions to the clinical application of humoral theory, diagnosis by the pulse, and therapeutics

(4.2) Scientific foundations of medicine: elements; temperaments; normal functions of the body; anatomy

(4.3) Diseases and their diagnosis

(4.4) Advanced diagnosis of internal diseases; advanced diagnosis by the pulse

(4.5) Fevers; expected course of diseases

(4.6) Advanced therapeutics

(4.7) Advanced prophylactic care

This curriculum is corroborated from other sources—particularly Arabic—and is thoroughly Galenic in spirit, as attested by the stress on the importance of a sound grounding in philosophy, logic, and science; the presence of Hippocratic works favored by Galen; and, naturally, the predominance of Galen's own works. Moreover, most of the same books, along with other similar works, are found in a similar order in the suggestions for further reading at the end of The Small Art. From our point of view, what is most important is that the works of Galen are those found in the Alexandrian epitomes, usually in that order or close to it.

Alexandria and the Islamicate medical curriculum

The Alexandrian curriculum exercised a strong but not stultifying effect on the medical curriculum in the medieval Islamic world. As with the Alexandrians, we know surprisingly little about actual medical instruction; again, what we know best are the textbooks and reference works (see table 1). Here, as in philosophy, Ibn Sinā played a key role as systematizer. The enduring popularity of his Canon of Medicine no doubt

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(9, 10, 3, 11, 14, 12, 13), Majlis 6400 (14, 12, 13), Tehran University Med. Fac. 291 (8, 9), Escurial 797 (14, 13, 12), Escurial 799 (5, 6), Escurial 848 (6, 7), Madrid Bib. Nac. 130 (5, 6). Commentaries: Yahyā al-Naḥwī, Ikhtīṣār British Library Or. 17 (1–14, 16, 15). Ibn al-Ṭayyīb, Tafsīr Manisa 1772 (1–4).

See also the schematic tables in MS Vienna med. gr. 16 containing Greek tabular summaries of works 1, 2, 4, 3, 9; Hunger and Kresten, Katalog der griechischen Handschriften, 2:60–62; and Gundert, “Tabula Vindobonenses.”

Table 1. The sixteen books and other ancient texts studied in Alexandria

<table>
<thead>
<tr>
<th>English Title</th>
<th>Greek Title</th>
<th>Latin Title</th>
<th>Arabic Title</th>
<th>Editions or Manuscripts</th>
</tr>
</thead>
<tbody>
<tr>
<td>On the Medical Sects for Beginners (hereafter The Medical Sects)</td>
<td>Περὶ αἱρέσεων τοῖς εἰσαγομένοις</td>
<td>De sectis ad eos qui introducuntur</td>
<td>Firaq al-ṭibb li-l-mutaʿallimin</td>
<td>K 1:64–105; ed. Helmreich; trans. Frede</td>
</tr>
<tr>
<td>On the Pulse for Teuthras</td>
<td>Περὶ σφυγμῶν τοῖς εἰσαγομένοις</td>
<td>De pulsibus ad tirones</td>
<td>Fi al-nabḍ al-ṣaghīr ilā Ṭuthrūn</td>
<td>K 8:453–92</td>
</tr>
<tr>
<td>Therapeutics for Glaucon</td>
<td>Πρὸς Γλαύκωνα θεραπευτικῶν</td>
<td>Ad Glauconem de methodo medendi</td>
<td>[Fi mudāwāt al-amrāḍ] ilā Ighlīqūn</td>
<td>K 11:1–146</td>
</tr>
<tr>
<td>On the Temperament</td>
<td>Περὶ κράσεων</td>
<td>De temperamentis</td>
<td>Fi al-mizāj</td>
<td>K 1:509–63; trans. Singer</td>
</tr>
<tr>
<td>On Anatomy for Beginners, comprising the following five books:</td>
<td></td>
<td></td>
<td>Fi al-tashriḥ li-l-mutaʿallimin</td>
<td></td>
</tr>
<tr>
<td>English Title</td>
<td>Greek Title</td>
<td>Latin Title</td>
<td>Arabic Title</td>
<td>Editions or Manuscripts</td>
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<tr>
<td>----------------------------------</td>
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<td>------------------------------</td>
</tr>
<tr>
<td>Anatomy of the Bones</td>
<td>Περὶ ὀστῶν τοῖς εἰσαγομένοις</td>
<td>De ossibus ad tirones</td>
<td>Tashriḥ al-ʿiẓām</td>
<td>K 2:732–78</td>
</tr>
<tr>
<td>Anatomy of the Muscles</td>
<td>Περὶ μυῶν ἀνατομῆς</td>
<td>De musculorum dissectione</td>
<td>Tashriḥ al-ʿaḍal</td>
<td>K 18B:926–1026</td>
</tr>
<tr>
<td>Anatomy of the Arteries</td>
<td></td>
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</tr>
<tr>
<td>9 On Diseases and Symptoms, comprising the following four books:</td>
<td>Fī al-ʿiḥāl wa-al-ʿārāḍ</td>
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<tr>
<td>English Title</td>
<td>Greek Title</td>
<td>Latin Title</td>
<td>Arabic Title</td>
<td>Editions or Manuscripts</td>
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<tr>
<td>The Diagnosis of Diseases of the Internal Organs,</td>
<td>Περὶ τῶν πεπονθότων τόπων</td>
<td>De locis affectis</td>
<td>Fi ta’arruf ʿilal al-aḍāʾ al-ālimah (al-Mawāḍiʿ al-ālimah, ʿIlal al-aḍāʾ al-bāṭinah)</td>
<td>K 8:1–452; trans. Siegel</td>
</tr>
<tr>
<td>also known as On Affected Parts</td>
<td></td>
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<tr>
<td>The Large Pulse, comprising the following books:</td>
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<tr>
<td>The Kinds of Pulse</td>
<td>Περὶ διαφορᾶς σφυγμῶν πραγματεία</td>
<td>De pulsibus</td>
<td>al-Nabḍ al-kabīr (Fi al-nabḍ)</td>
<td>K 8:493–765</td>
</tr>
<tr>
<td>a The Kinds of Pulse</td>
<td></td>
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</tr>
<tr>
<td>b Diagnosis by the Pulse</td>
<td>Περὶ διαγνώσεως σφυγμῶν</td>
<td>De differentia pulsuum</td>
<td>Aṣnāf al-nabḍ</td>
<td>K 8:766–961</td>
</tr>
<tr>
<td>c Causes of the Pulse</td>
<td>Περὶ τῶν ἐν τοῖς σφυγμοῖς αἰτίων</td>
<td>De causis pulsuum</td>
<td>Asbāb al-nabḍ</td>
<td>K 9:1–204</td>
</tr>
<tr>
<td>d Prognosis by the Pulse</td>
<td>Περὶ προγνώσεως σφυγμῶν</td>
<td>De praesagitione ex pulsibus</td>
<td>Taqdimat al-maʿrifah min al-nabḍ (Sābiq al-ʿilm bi-mā yadillu ʿalayhi al-nabḍ)</td>
<td>K 9:205–430</td>
</tr>
<tr>
<td>On Crises</td>
<td>Περὶ κρίσεων</td>
<td>De crisibus</td>
<td>al-Buḥrān</td>
<td>K 9:550–768</td>
</tr>
<tr>
<td>Days of Crisis</td>
<td>Περὶ κρίσεων ἡμερῶν</td>
<td>De diebus decretorii</td>
<td>Ayyām al-buḥrān</td>
<td>K 9:769–941</td>
</tr>
<tr>
<td>The Kinds of Fevers</td>
<td>Περὶ διαφορὰς πυρετῶν</td>
<td>De typis febrium</td>
<td>Aṣnāf al-ḥummayāt</td>
<td>K 7:273–405</td>
</tr>
<tr>
<td>English Title</td>
<td>Greek Title</td>
<td>Latin Title</td>
<td>Arabic Title</td>
<td>Editions or Manuscripts</td>
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<tr>
<td>The Regimen of the Healthy</td>
<td>Ὑ γιεινῶν λόγοι</td>
<td>De sanitate tuenda</td>
<td>تadbīr al-aṣiḥḥāʾ, Fi al-ḥīlah li-ḥifẓ al-ṣiḥḥah</td>
<td>K 6:1–452</td>
</tr>
<tr>
<td>On the Constitution of the Art of Medicine</td>
<td>Πρὸς Πατρόφιλον περὶ συστάσεως ἰατρικῆς</td>
<td>De constitutione artis medicae ad Patrophilum</td>
<td>Fi ithbāt al-ṭibb</td>
<td>K 1:224–304 [?]</td>
</tr>
<tr>
<td>On the Humors</td>
<td>Περὶ χυμῶν?</td>
<td>De humoribus</td>
<td>Fi al-akhlāṭ</td>
<td>Unidentified; cf. GAS 3.130</td>
</tr>
<tr>
<td>On Medical Experience</td>
<td>Περὶ τῆς ἰατρικῆς ἐμπειρίας</td>
<td>De experientia medica</td>
<td>Fi al-tajribah al-ṭibbiyah</td>
<td>ed. Walzer, trans. Frede</td>
</tr>
<tr>
<td>An Outline of Empiricism</td>
<td>Υποτυπώσεις ἐμ πειρικαί</td>
<td>De subfiguratio empirica</td>
<td>Fi jumal al-tajribah</td>
<td>ed. Deichgräber, trans. Frede</td>
</tr>
<tr>
<td>On the Uses of the Parts of the Human Body</td>
<td>Περὶ χρειας τῶν ἐν ἀνθρώπου σώματι μορίων</td>
<td>De usu partium corporum humani</td>
<td>Manāfiʿ al-aʿḍāʾ</td>
<td>K 3–4, ed. Helmreich, trans. Tallmadge</td>
</tr>
<tr>
<td>English Title</td>
<td>Greek Title</td>
<td>Latin Title</td>
<td>Arabic Title</td>
<td>Editions or Manuscripts</td>
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<tr>
<td><strong>Works of Hippocrates</strong></td>
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<tr>
<td>Aphorisms</td>
<td>Αφορισμοί</td>
<td>Apherismi</td>
<td>al-Fuṣūl</td>
<td>Littré 4:458–609</td>
</tr>
<tr>
<td>On the Nature of Man</td>
<td>Περὶ φύσιος ἀνθρώπου</td>
<td>De natura hominis</td>
<td>Ṭabīʿat al-insān</td>
<td>Littré 6:32–68</td>
</tr>
<tr>
<td>Prognostics</td>
<td>Προγνωστικόν</td>
<td>Prognosticon</td>
<td>Taqdimat al-маʿrifah</td>
<td>Littré 2:140–90</td>
</tr>
<tr>
<td>Regimen in Acute Diseases</td>
<td>Περὶ διαίτης ὀξέων</td>
<td>Regimen acutorum</td>
<td>Ṭadbir al-amrāḍ al-ḥāddah</td>
<td>Littré 2:224–376</td>
</tr>
<tr>
<td><strong>Works of Aristotle</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Categories</td>
<td>Κατηγορίαι</td>
<td>Categoriae</td>
<td>al-Maqūlāt</td>
<td>Bekker 1–15</td>
</tr>
<tr>
<td>On Interpretation</td>
<td>Περὶ ἑρμηνείας</td>
<td>De interpretatione</td>
<td>al-ʿIbārah</td>
<td>Bekker 16–24</td>
</tr>
<tr>
<td>Prior Analytics</td>
<td>Αναλυτικὰ πρώτα</td>
<td>Analytica priora</td>
<td>al-Qiyās</td>
<td>Bekker 24–70</td>
</tr>
<tr>
<td>Posterior Analytics</td>
<td>Αναλυτικὰ δεύτερα</td>
<td>Analytica posteriora</td>
<td>al-Burhān</td>
<td>Bekker 71–100</td>
</tr>
<tr>
<td>Physics</td>
<td>Φυσική</td>
<td>Physica</td>
<td>al-Ṭabīʿah</td>
<td>Bekker 184–224</td>
</tr>
<tr>
<td>On the Heavens</td>
<td>Περὶ οὐρανοῦ</td>
<td>De caelo</td>
<td>al-Samāʾ</td>
<td>Bekker 268–313</td>
</tr>
<tr>
<td>On Genesis and Corruption</td>
<td>Περὶ γενέσεως καὶ φθοράς</td>
<td>De generatione et corruptione</td>
<td>al-Kawn wa-al-fasād</td>
<td>Bekker 314–38</td>
</tr>
</tbody>
</table>
owes as much to its clarity and excellent organization as to its reliability. There are five books: (1) medical theory; (2) simple drugs, arranged alphabetically with an introduction on their preparation and use; (3) diseases of particular organs, arranged from head to extremities; (4) systemic diseases, such as fevers; and (5) compound drugs. The first book, entitled General Matters (al-Umūr al-kullīyah), is what corresponds to our curriculum. Ibn Sinā begins with the definition and subject matter of medicine, which correspond to the beginning of The Small Art and, to a lesser degree, the beginning of The Medical Sects. He then moves immediately to the elements, the temperaments, the humors, basic anatomy, and bodily faculties, corresponding to On the Elements, On the Temperament, On Anatomy for Beginners, and On the Natural Faculties, which form section 4.2 of the curriculum and the fifth through eighth books of the Alexandrian epitomes. The chapter on anatomy is arranged in the same order as the epitomes. The next major subsection deals with diseases, causes, and symptoms, corresponding to On Diseases and Symptoms and The Diagnosis of Diseases of the Internal Organs; the pulse, corresponding to The Large Pulse; and diagnosis by urine and feces, which has no counterpart in the Alexandrian curriculum but which is important in Galenic medicine and is mentioned among the subjects for additional reading in The Small Art. Together, these form sections 4.3 and 4.4 of the Alexandrian curriculum. The next section deals with the care of healthy patients, corresponding to The Regimen of the Healthy, which is section 4.7. The chapter closes with general therapeutics, corresponding either to the general parts of On the Method of Healing, which is section 4.6, or perhaps Therapeutics for Glaucon, which was covered in 4.1. At any rate, the treatment of particular diseases is covered in detail in the third and fourth books of the Canon. Ibn Rushd’s General Matters follows the same outline, though it omits the introductory sections on elements, temperaments, and humors. A similar outline prevails in other Islamic medical textbooks.

The Alexandrian epitomes

We know the Alexandrian epitomes mostly through their manuscripts, which, unfortunately, do not tell us much about their origins, purposes, authorship, or histories.

**Genre, form, and title**

_Jawāmiʿ_ is a common term for various sorts of abridgments, epitomes, short commentaries, introductions, and study guides based on some other text read by students. The root meaning of the Arabic term is “to collect,” and the term is used as a collective plural. Whatever the precise meaning of _jawāmiʿ_ might be, it was commonly used for short expositions of famous philosophical and medical texts. Some sixty _jawāmiʿ_ of Greek medical texts are known by mention or manuscript in Arabic. How they differ from other, similar kinds of short works such as _ikhtiṣār, mukhtaṣar, talkhīṣ_ (all of which mean “abridgment”), and _thimār_ (literally, “fruits”) is not clear. The term _jawāmiʿ_ only tells us that these are comparatively concise works intended to aid in reading the books they comment on.

Some of the manuscript title pages of the Alexandrian epitomes add _ʿalā al-sharḥ wa-al-talkhīṣ_ (by means of commentary and abridgment). This expression clearly had a technical sense and does seem to be a good description, since—as the notes to the translations will show—the epitomes are divided into short sections that typically either elaborate on some point that Galen mentions briefly or in passing or else provide a clarifying summary of Galen’s original text. This explains how an “epitome” can be only slightly shorter than the original text and thus “short” only in comparison to a full-scale commentary.

I have used the term “epitome” to render _jawāmiʿ_ following the rendering used for Ibn Rushd’s _jawāmiʿ_ of Aristotle’s works. Our epitomes have been most commonly known to scholarship as the _Summaria Alexandrinorum_ (Alexandrian summaries). I have avoided this, both in deference to the venerable tradition of the Latin Averroes translations and because this book is already burdened with three languages—Arabic, English, and the presumed Greek—and there seemed no particular reason to give a Latin title to a book that never existed in Latin. In any case, “summary” seemed a particularly bad term for what is going on in the epitomes. Fuat Sezgin speculates that the Greek title
though there is no direct evidence.\textsuperscript{13}

**Style and content of the epitomes**

As a rule, the epitomes edited and translated here do not make continuous arguments. Instead, they list and categorize topics that Galen had dealt with in a less organized fashion, or they restate and explain particular points in Galen’s text. Reading the epitomes side by side with Galen’s texts makes it perfectly obvious why they were written. Galen meanders, interrupts himself to expand on some side issue, partially develops alternative categorizations, interrupts himself again to savage at length some opponent over a long-forgotten theoretical dispute, and in the end convinces the reader that Galen’s vast literary output was achieved by not wasting time on revision. “Musawwadatuhu mubayyadatuhu” (His rough draft was his fair copy), as a biographer remarked about a particularly long-winded Islamic scientist. The epitomes give the student reader the background he needs to understand the text in a clear and comprehensive manner.

**History and authorship of the epitomes**

*Internal evidence.* Each text starts with some variant of “The Alexandrians’ epitome of Galen’s book x, translated by Ḥunayn ibn Isḥāq,” and there is usually a similar colophon. Both vary considerably, so presumably they were not part of the original text. There are glosses by Ibn al-Tilmidh and others (of which more is said below). One manuscript has introductory glosses to the collection as a whole and to most of the individual books that it contains; but these glosses do not say anything of bibliographical interest, confining themselves to such worthy but unhelpful topics as the order in which Galen’s books should be read by the student.

\textsuperscript{13} GAS 3:249. Though there are medical works from late antiquity with this title, I have not identified a case where a Greek work entitled σύνοψις is translated as jawāmiʿ, but I know of one such work whose title is translated as jumlah and another as jumal; see Ḥunayn ibn Isḥāq, “Risāla,” item 66, “Jumlat kitābihi al-kabīr fī al-nabq,” and item 111, “Fi jumal al-tajribah.”
Greek literary evidence and parallels. So far as I know, not one of these texts, in full or in part, exists in Greek or in Latin translation; nor do we have clear references to them or to all the individuals who are mentioned as their authors in Arabic sources. What we do have are examples of similar texts, usually in fragmentary form, with ambiguities of authorship, date, authenticity, and relationship to other similar texts. The nonspecialist attempting to make use of this literature is quickly disabused of any illusion that classicists have done everything there is to do in their field. For earlier periods, generally speaking, only classic works have survived, while the messy notebooks, lectures, and half-finished drafts have perished. For the late Alexandrian period, though, a substantial body of miscellaneous medical literature survives, much of it in the form of commentaries on works of Hippocrates and Galen taught in Alexandria, including several on The Medical Sects. These commentaries show varying degrees of completeness and polish, ranging from fragmentary notes on lectures to carefully composed expositions. Because they discuss the same texts for the same classes, they tend to overlap so much that it is not always clear whether they are variations of the same work or different works drawing on the same sources. There are usually questions of authorship, with manuscripts giving ambiguous identifications. In addition, these works survive in Greek, Latin, and Arabic in manuscripts copied—and, occasionally, printed—over a thousand-year period, not always by people who knew what they really were. Finally, many of these works, including almost all those in Arabic, have yet to be edited, studied, or translated into a modern language. This means that even in the occasional case where there happens to be a modern edition and study, it is not yet possible to be sure how that particular work relates to the rest of the surviving literature.

Nevertheless, it is clear that the Alexandrian epitomes are typical of the late antique study guides composed in the form of commentaries, questions and answers, tables, and diagrams for the use of medical students. Similar works also exist for other disciplines, notably philosophy. Such works continued to be written in the Islamic world until works such as Ibn Sinā’s Canon supplanted the actual works of Hippocrates and Galen for student use.

Arabic literary evidence. Arabic sources are much more helpful than Greek sources in understanding Alexandrian medical instruction, providing descriptions of methods of instruction and lists of books studied.
In particular, they stress the role of epitomes, short commentaries, and compendia as teaching tools. The most specific account of the origin of the epitomes comes from the thirteenth-century medical historian Ibn al-Qifṭī in a biography of Anqīlāʾus:

Anqīlāʾus was a learned physician and natural philosopher, an Egyptian who lived in Alexandria. He was one of the Alexandrians who undertook to epitomize Galen’s teaching and abridge his books. The excellence of their abridgments, composed as questions and answers, indicates their knowledge of the whole of Galen’s teaching (jawāmiʿ al-kalām) and their mastery of the art of medicine. This Anqīlāʾus was their chief. He was the one who collected from Galen’s scattered remarks thirteen books on the secrets of movements, which he compiled for him who has sexual intercourse and in which he mentioned when it is indicated [reading *yadillu* with Şāʾid] and how to prevent its harm.14 This Anqīlāʾus compiled the books and wrote most of them. For this reason, most people attributed the epitomes to him. Ḥunayn ibn Ishāq mentioned this in his translation of them from Greek into Syriac.

The Alexandrians were those who administered the school (*dār al-ʿilm*) and the classes in Alexandria. They read Galen’s books and assigned what was to be read each day. They prepared commentaries and epitomes on them, summarizing their contents and making it easier for the reader to memorize them and to summarize15 them in notebooks. According to what Ishāq ibn Ḥunayn wrote, the first of them was Stephanus of Alexandria, then Gesius, Anqīlāʾus, and

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14. In both Ibn al-Qifṭī and Şāʾid al-Andalusi, this sentence reads: “Wa-kāna Anqīlāʾus ḫādhā raʾisahum wa-huwa ʾlladhī jamaʿa min manthūr Jālīnūs thalāth ʿashar maqālah fī asrār al-ḥarakāt allafāhā fī man jāmaʿa wa-bihī ʿilla muẓminah wa-dhakarah mā yūlidu [“yadillu,” in Şāʾid] ʿalayhi dhālika wa-mā yudfaʿu bihi dararu hu.” Given the recurrence of the root j-m-ʿ, it seems more likely that there is a problem with the text caused by additional biographical tidbits being inserted and that the meaning is something like “This Anqīlāʾus was their leader. (He was the one who collected thirteen books on the secrets of movements from throughout Galen’s writings.) He collected them from those who had made epitomes. He had a chronic illness and discussed what caused it and what prevented its harm.” For one thing, thirteen books would be almost a thousand pages in Kühn, nearly as long as *The Method of Healing*, which seems like rather a lot for this particular topic, important though it may be for men of a certain age.

15. Reading *jamīʿ* for *ḥaml*. 
Marinus. These four were the chiefs of the Alexandrian physicians, and they were the ones who prepared the epitomes and commentaries. Anqīlāʾus was the one who put them in order in their final form, as was explained before.\textsuperscript{16}

Ibn al-Qīfṭī has little more to say about these individuals other than that Yaḥyā al-Naḥwī was associated with them, that Stephanus of Alexandria wrote a commentary on the categories, and that Anqīlāʾus’s name was sometimes given as Niqulāʾus.\textsuperscript{17} A similar account is given in Ibn Juliul’s Classes of Physicians and Philosophers:

When the sovereignty of Jesus Christ was manifested and his call spread throughout the lands, victorious everywhere, a group of expert philosophers appeared in Alexandria. They examined carefully the contents of the ancient books that they had found. They abridged all of Galen’s works, laying out their contents in summaries and epitomes (\textit{al-jumal wa-al-jawāmiʿ}) in order to make it easier for them to memorize and understand them but without altering their content. The translator Ḥunayn found these books both in the original and in the form of epitomes (\textit{ʿalā al-aṣl wa-al-jawāmiʿ}), in which form they exist up to this day. The chief of the Alexandrians was Anqīlāʾus of Alexandria.\textsuperscript{18}

The \textit{Fihrist} of Ibn al-Nadīm alludes to the epitomes but without its usual bibliographic detail:

Iṣḥāq ibn Ḥunayn said, “There were 815 years between the death of Galen and the year 290 of the Hijra [903 CE], the year in which the discussion between Ibn Firās and Ibn Shimʿūn took place.\textsuperscript{19} The physicians who have been mentioned from the days of Galen up to this year were Stephanus the Alexandrian, Gesius the Alexandrian, Anqīlāʾus the Alexandrian, and Marinus the Alexandrian. These four Alexandrians were among those who commented on the books of Galen and epitomized

\begin{itemize}
\item[18.] Ibn Juliul, \textit{Ṭabaqāt al-aṭibbāʾ}, 51.
\item[19.] If solar years are meant, this would put Galen’s date of death in 88 CE, and in about 113 if lunar years are meant. Both are about a century too early.
\end{itemize}
and abridged them, making their texts concise, especially the sixteen books.”

A more thorough list is given by the eleventh-century Baghdad Christian physician Ibn Buṭlān in his controversy with ʿAlī ibn Riḍwān:

That would be more useful and rewarding for [Ibn Riḍwān] than criticizing in front of the young people that which was written by the Alexandrians in their commentaries and epitomes to the sixteen books. [The Alexandrians] were Stephanus, Marinus, Gesius, Arkilāʿus, Anqīlāʿus, Palladius, and John the Grammarian [Philoponus]. Perhaps he may be excused for not knowing their names correctly in Arabic. These were the commentators on the books of the art of medicine. I fail to understand how he can blame them for producing epitomes of the books in which they commented on the original texts and explained their content.

Ibn Buṭlān is also quoted in a passage by Ibn Abī Uṣaybiʿah:

Al-Mukhtār ibn Ḥasan Ibn Buṭlān said, “There were seven Alexandrians who epitomized the sixteen books of Galen and commented on them. They were Stephen, Gesius, Theodosius, Arkilāʿus, Anqīlāʿus, Palladius, and John the Grammarian. They were all Christians. It is said that Anqīlāʿus of Alexandria was the first among the Alexandrians and that he was the one who compiled the sixteen books of Galen.”

Finally, a gloss in MS Aya Sofya 3588, f.2a, mentions eight “commentators”: the seven mentioned by Ibn Abī Uṣaybiʿah’s quotation from Ibn Buṭlān, with the addition of Abū al-Faraj ibn al-Ṭayyib, a commentator of the Islamic period.

These accounts differ somewhat in detail, but the sources generally portray a process leading to the compilation of the epitomes rather than a single event—a literary trend to produce such works culminating in the Alexandrian epitomes that we now have in Arabic.

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21. Schacht and Meyerhof, Medico-Philosophical Controversy, 93–94 (Eng.), 59–60 (Arab.); my translation.
### Possible authors of the epitomes

There are nine individuals named in one source or another as associated with the production of the Alexandrian epitomes:

**Table 2. Supposed authors of the Alexandrian epitomes in Arabic sources**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>Gesius [of Petra] (Jāsiyūs)</td>
<td>d. ca. 520</td>
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<tr>
<td>Anqilā’us</td>
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<tr>
<td>Akilā’us</td>
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<td>Arkilā’us</td>
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<tr>
<td>Palladius [of Alexandria] (Fallādiyus)</td>
<td>ca. 550–600</td>
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<tr>
<td>John Philoponus (Yaḥyā al-Naḥwi)</td>
<td>ca. 490–570</td>
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<tr>
<td>Stephanus [of Athens or Alexandria] (Iṣṭafan)</td>
<td>6th–7th century</td>
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<tr>
<td>Theodosius (Thāwdhusiūs)</td>
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<tr>
<td>Marinus (Mārīnūs)</td>
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<td>Abū al-Faraj ibn al-Ṭayyib</td>
<td>d. 1043</td>
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* Identified as leader of the group
As can be seen from the table and the passages cited earlier, there are three accounts of the authorship. The first, apparently deriving from a remark by Ḥunayn ibn Ishāq in his translation of the epitomes into Syriac, mentions only Anqīlāʾus, identifying him as the one who put them into their final form. The second, deriving from the History of the Physicians, by Ḥunayn’s son Ishāq, and quoted by Ibn al-Nadīm, Ibn al-Qīfīṭī, and Ibn Abī Uṣaybiʿah, mentions four individuals, one of whom—Marinus of Alexandria—is not mentioned elsewhere. The third version, deriving from Ibn Buṭlān, mentions seven, three of whom are also in Ishāq’s list, though Ibn Abī Uṣaybiʿah’s quotation of Ibn Buṭlān substitutes Theodosius for Marinus.

Gesius (or Gessius) of Petra, who died about 520, was a well-known professor of medicine in Alexandria. He studied philosophy under Ammonius of Alexandria (ca. 440–520), the Neoplatonic commentator on Aristotle who also taught Philoponus. Gesius was more interested in medicine than philosophy and became wealthy and famous. Ibn Abī Uṣaybiʿah mentions that “the best of [the Alexandrian commentaries and epitomes] is the commentary of Gesius on the sixteen books, for he shows learning and discernment in it,” a judgment confirmed by the Suda, a tenth-century Byzantine encyclopedia. None of his works are extant, with the possible exception of the Latin commentary on The Medical Sects otherwise attributed to Agnellus, which is attributed to Gesius in one manuscript.

Anqīlāʾus, whose name is also given as Niqlāʾus, is mentioned by all the sources that give names of the compilers of the epitomes, some specifically naming him as the leader of the group. Vivian Nutton alluded to the possibility that he might be the Archelaos or Arch[. . .]des who was the author of an extant Greek commentary on The Medical

23. Bayard Dodge identifies “Jāsiyūs” as Cassius Felix (or Iatrosophista) and dates the latter to the early fifth century. He was the obscure author of a small work on difficult medical questions and is usually dated between the first and third centuries. I do not find this suggestion convincing. Ibn al-Nadīm, The Fihrist, trans. Dodge, 2:689, 976.


Second, Nutton also considered the possibility that he is the Angeleus mentioned by Stephanus as an early commentator on Galen. He could be Agnellus of Ravenna, a sixth-century iatrosophist to whom a Latin commentary on The Medical Sects is attributed in one of its two manuscripts. Finally, the name could be a misreading of Asclepius, but this seems unlikely because Asclepius was a familiar name and thus unlikely to be completely distorted. Moreover, the form Anqīlāʾus appears in what seem to be independent sources. Thus, barring the discovery of a new Greek source, any attempt to identify Anqīlāʾus is mere speculation.

Arkīlāʾus occurs twice—in Ibn Buṭlān’s controversy with Ibn Riḍwān and in a gloss in manuscript S. It appears in the form “Akīlāʾus” in the quotation from Ibn Buṭlān in Ibn Abū Uṣaybiʿah; but since we have a direct text from Ibn Buṭlān with the spelling Arkīlāʾus, corroborated by the gloss in S, speculations based on the form Akīlāʾus can be dismissed. Thus, the Greek name must be Archelaus, as Meyerhof and Schacht long ago suggested.

Yaḥyā al-Naḥwī, John the Grammarian, is a notorious problem. He is conventionally identified with John Philoponus, otherwise known as John the Grammarian or John of Alexandria, a major philosopher and scientist of the sixth century (ca. 490–570). Ibn Abī Uṣaybiʿah, citing

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27. Dickson, Stephanus the Philosopher, 35.


30. These speculations are that it is a double of Anqīlāʾus—as Max Meyerhof argues in “Von Alexandrien nach Bagdad,” 397, n. 4—or that it derives somehow from the name of the city of Aquileia in northern Italy, as Irvine and Temkin, “Akīlāʾos,” 19–24, have suggested.

31. Schacht and Meyerhof, Medico-Philosophical Controversy, 93, n. 9.

32. Sorabji, Philoponus and the Rejection of Aristotelian Science. See also appendix 1, s.v. “Philoponus.” Translations of a number of his works have recently been published in the Ancient Commentators on Aristotle series; none have to do with medicine.
several earlier Arabic sources and “Christian histories,” reports that John was a sailor who became interested in scholarship and studied with the scholars who happened to travel on his ship. Having come late to scholarship, he was discouraged at his poor prospects; but inspired by the example of a persistent ant, he applied himself and soon excelled, writing a large number of books on medicine and philosophy. If we are to believe Ibn Abī Uṣaybi‘ah, who places him both at the Council of Chalcedon in 451 and the conquest of Egypt by ʿAmr ibn al-Āṣ in 641, he would have been over 230 when he died, which would explain how he overcame his late start in scholarship. Modern scholars are more inclined to assume that as many as three lesser-known individuals have been conflated with the famous philosopher John Philoponus. If so, our John is presumably the John of Alexandria (fl. first half of the seventh century?) to whom a commentary on The Medical Sects is tentatively attributed. A set of Arabic commentaries on the works of the Alexandrian curriculum attributed to him is very much in the style of the Alexandrian epitomes, as is a commentary to On the Uses of the Parts. For our purposes, the exact identification is not critical; it is clear that there was a John writing medical works in the general style of our epitomes in sixth- or seventh-century Alexandria.

Marinus cannot be identified with certainty and is perhaps unknown in Greek sources. There was a prominent physician named Marinus about two generations before Galen, but he must be excluded on chronological grounds. It is possible that the name is a corruption of Magnus of Nisibis, a prominent lecturer on medical theory in Alexandria late in

34. Savage-Smith, “Ophthalmology,” 127. GAS 3:157–60 gives references to the works attributed to him in Arabic. Numerous other references can be traced through the indices to the volumes of GAS under “Johannes Alexandrinus,” “Johannes Grammatikos,” and “Yaḥyā al-Naḥwī.” See also Meyerhof, “Johannes Grammatikos.”
35. John of Alexandria, Commentaria.
36. British Library Arund. Or. 17; cf. Temkin, “Late Alexandrian Medicine,” 414. They have not been studied seriously.
37. His name is given as Bārsīyūs (Persius) in the manuscript of Ibn Buṭlān’s Medico-Philosophical Controversy, but this was corrected—rightly, given the forms found in Ibn Ishāq ibn Hunayn and the sources dependent on him—by Schacht and Meyerhof. Schacht and Meyerhof, Medico-Philosophical Controversy, 93, n. 9; cf. Irvine and Temkin, “Akilāōs,” 19.
the fourth century. Even less likely is that he was Marinus of Neapolis, Proclus’s successor and biographer at the Academy in Athens.

_Palladius of Alexandria_ is presumably the iatrosophist who wrote several commentaries on works of Hippocrates and Galen, including an extant fragment of a commentary on _The Medical Sects_ rather similar to the Alexandrian epitomes. He is placed, without strong evidence, in sixth-century Alexandria. (An older reference book unhelpfully dates him between the third and ninth centuries, since he quotes Galen and is quoted by al-Rāzī.)

_Stephanus of Athens_. There are three possible individuals named Stephanus: Stephanus of Athens, a medical writer; Stephanus of Alexandria, the last significant philosopher in Alexandria before the Persian and Arab conquests; and a Stephanus to whom an alchemical work is attributed. It is possible, though not certain, that they are the same person. At any rate, three surviving medical works are attributed to Stephanus of Athens—two commentaries on Hippocrates and one on Galen’s _Therapeutics for Glaucon_, a work in the Alexandrian curriculum. If we accept the identification of the Athenian and Alexandrian Stephanus, we can add a work on urine and a commentary on Aristotle’s _On Interpretation_.

_Theodosius_ remains unidentified.

Abū al-Faraj ibn al-Ṭayyib occurs in a list of commentors on the Alexandrian canon but does not concern us here, he being an author of the Islamic period.

Though only one or two of these individuals can be identified with certainty—and some are perhaps relics of the difficulties of transmitting foreign names accurately in Arabic script—two points are striking. First, all of those who can be both tentatively identified and dated are in roughly the same period of the fifth to seventh centuries: (1) Gesius, fifth to sixth century; (2) John of Alexandria, mid-sixth to mid-seventh century; (3) Palladius, sixth century; (4) Stephanus, sixth to seventh century; and (5) Archelaus, sixth century. Second, all of those whose writings are either extant or attested wrote commentaries on works of the Alexandrian curriculum: Gesius and John of Alexandria commented on the entire corpus, Palladius and Archelaus commented on _The Medical Sects_, and Stephanus commented on the _Therapeutics for Glaucon_.

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40. See appendix 1, s.v. “Ibn al-Ṭayyib.”
Introduction

Plausibility of the Arabic accounts and dating the epitomes

The above survey of individual authors associated with the composition of the epitomes leads us to two conclusions. First, the general account given in Arabic sources of the production of the epitomes is plausible. At least some of the people listed as associated with the project were in Alexandria at about the right time and were engaged in writing commentaries of various sorts on works of Galen, as well as Hippocrates. Other similar works also seem to have emerged from Alexandria around this time. Second, we cannot assume that these four to seven individuals formed a sort of committee charged with drafting medical textbooks; their ages are not close enough. Gesius, for example, was evidently already a person of standing during the reign of Zeno, which seems to make him considerably older than any of the others. The most plausible overall explanation is that during the sixth century, it was customary for iatrosophists—the professors of medicine in Alexandria—to write such works, of which we have a number of whole or fragmentary examples in Greek, Latin, and Arabic. Anqīlāʾus, probably toward the end of the period, compiled the works we know as the Alexandrian epitomes, drawing from similar works written by some or all of the other individuals whose names are associated with the project. These works should thus be taken as representing the tradition of sixth-century Alexandria as it was codified sometime around the year 600.

The Arabic translation

So far as we know now, the translator of the epitomes was the famous Ḥunayn ibn Ishāq (809–873). Most of the manuscripts for the three texts in this volume say so explicitly, and none gives another translator. The manuscripts that I have examined of the other epitomes are similar. The clearest indication of his authorship of the translations is an offhand remark in the biography of Anqīlāʾus: “Ḥunayn mentioned [that Anqīlāʾus had compiled the epitomes] in his translation of them from Greek into Syriac.”41 Ibn Juljul confirms this somewhat obliquely: “The translator Ḥunayn found these books both in the original and in the form of epitomes (ʿalā al-aṣl wa-al-jawāmiʿ), in which form

41. Al-Qifṭi, Tārikh al-ḥukamāʾ, 71.
they exist up to this day.” On the other hand, Hunayn does not mention them in the list of his Galen translations—but, of course, these are not Galen’s books as such. The other early sources, notably the Fihrist, do not attribute translations of the epitomes to Hunayn. Moreover, translations of Greek material into Arabic are invariably ascribed to the famous Hunayn unless they are very clearly stated to be by someone else. It does not help that at least two other major translators—Hunayn’s nephew Hubaysh and his son Ishāq ibn Hunayn—had names that could easily be corrupted into the more familiar Ḥunayn. There also seem to be discrepancies between renderings of Greek terms in the epitomes and those in the translations of the underlying works. Nevertheless, it is plausible enough that Hunayn translated these works through a Syriac intermediary, as he did with many other medical works. The other difficulties are easy enough to account for. If these books happened not to circulate widely and were not in Hunayn’s autobibliography, they could easily have escaped the attention of bibliographers like al-Nadīm. As for inconsistencies between the translations of the original texts and the epitomes, anyone who has done technical translations knows how easily such inconsistencies may occur. Given the sheer volume of translations that passed through Hunayn’s office, inconsistencies are not surprising. Moreover, according to Hunayn’s own list of the translations he had done of Galen’s works, by the time he was about forty he had translated Galen’s The Medical Sects, The Small Art, and On the Elements, so the epitomes could easily have been translated much earlier or much later, allowing time for Hunayn’s choice of renderings to change.

A further complication is the existence of three different recensions. One version is unquestionably late and can thus be disregarded for purposes of determining authorship, but one might speculate that the two earlier recensions might be an example of when Hunayn went back to revise a translation he had done earlier, as we know he sometimes did.

As for the style of the translation, these books are written in the tone of wooden pedantry first adopted by authors of textbooks at the dawn of civilization and faithfully maintained down to our own day. Their virtue is clarity and information, not elegance. There are many

42. Ibn Juljul, Ṭabaqāt al-ṭibbāʾ, 51.
43. Ḥunayn ibn Ishāq, “Risālah,” items 4–6, 9–10; Meyerhof, “New Light.”
44. See pp. lxiv–lxvi below.
deviations from what we would now consider standard classical Arabic. Some could be charitably excused as Middle Arabic, though the copyists bear some of the blame, as in the case of one scribe who spells ḥādir as ḥāẓir. Even conceding that most dialects of spoken Arabic reduce both ٰ and ざ to ざ, it is a startling solecism for anyone literate in Arabic. Another curiosity is the habit in one group of manuscripts of using ākhar (other) in place of thānī (second) in lists. Other errors are best explained as grammatical and spelling errors resulting from a text being written from dictation. Yet others can scarcely be explained as anything other than grammatical error: problems of gender agreement with numbers, for example. Nevertheless, deviations from the norms of classical Arabic are too systematic to be solely the fault of Christian or Jewish copyists and point to an author who either was not a native speaker of Arabic or did not come from a literary community that stressed classical grammar.

Galen’s three texts and their Alexandrian epitomes

The three texts edited and translated here were chosen for their general interest and, in particular, for their philosophical significance. They include a work on scientific method as applied to medicine, a survey of medicine that includes a discussion of the epistemology of diagnosis and choice of treatment, and a discussion of theories of the elements as applied to basic physiology. Since the epitomes make most sense in the context of the three works of Galen that they are based on, I will discuss each of Galen’s works in turn along with its epitome.

On the Medical Sects for Beginners (Περὶ αἱρέσεων τοῖς εἰσογομένοις; De sectis ad eos qui introducuntur; Firaq al-ṭibb li-l-muta'allimin). The first text is an essay on the methodological issues separating three schools of Greek medicine: the Dogmatists or Rationalists, the Empiricists, and the Methodists. Galen lived at the end of a period of theoretical ferment in

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45. This is probably a calque from the original Greek, for Galen commonly uses ἕτερος in lists to mean “second”; for example, see Small Art in K 1:367, 369, 385.
medicine, with groups of medical theoreticians linked with the various Hellenistic philosophical schools in ways that are not always clear. Galen wrote *The Medical Sects* as an introduction to the theoretical issues involved in the disputes among the medical schools. This little book, particularly when considered with two works on empiricism, is thus one of the more important texts on philosophy of science from ancient times. Ḥunayn remarked:

He wrote it for beginners with the intention of describing what each class of the three differing sects had to say in defense of their claims and how they refuted the views and criticisms of those who disagreed with them. I would correct this by saying that they differ in genus, since each one of these three sects contained other sects differing in species. The one who is beginning in medicine learns to distinguish the views of one from another so that at the end, after careful study, he knows what the worth is of each group of them and how each distinguishes truth from error. Galen wrote this when he was young, about the time he went to Rome for the first time.48

The Rationalists were, in Galen’s view, Hippocrates and his followers, ancient and modern, though the earlier among them would certainly not have known themselves as such. The Rationalists used reason to infer the inner states of the body and from them were able to infer the correct treatment. The Rationalists therefore needed a thorough scientific understanding of the functioning of the body. In that sense, Galen was a classic Rationalist; and it is mainly from the Rationalist physicians that late antique and medieval medical theory came.

The Empiricists were the direct rivals of the Rationalists. Nominally, they rejected all theoretical speculation about the nature of the body and its inner states in favor of long and careful observation of its behavior under various circumstances. An Empiricist physician, having seen a patient recover after a particular treatment, would try the same treatment on another patient with similar symptoms. Galen interpreted the

49. The more common modern term for this school was “Dogmatists;” but though the term did not then bear its modern pejorative sense, “Rationalist” seems to me a better rendering.
Empiricists’ acquisition of experience as an exercise in memory. In practice, it was more complex than that, since there were techniques for discovering new treatments by analogy—known as “transfer”—and for using written sources to supplement the personal experience of the physician. There was, in other words, a systematic quality to the Empiricists’ acquisition of medical experience. Since transfer is really a form of analogy, the whole Empiricist method seems to have been induction guided by analogy. Despite his deeply theoretical bent, Galen was surprisingly respectful of the Empiricists and wrote two more advanced works on their theories: The Outline of Empiricism and On Medical Experience. ⁵⁰

The Methodists held, generally speaking, that all disease was caused by the improper flow of atoms through the microscopic pores of the body. The physician could examine the patient and see by external signs whether he was in a state of constriction or dilation, thus eliminating the need to make inferences about the internal states of the patient. He needed only to decide whether the patient was in a state of dilation or flux—something that should be obvious from cursory examination—and treat accordingly. The physician did not need to make inferences about the internal states of the patient, as the Rationalists thought necessary, or possess extensive experience of patients in various conditions, as the Empiricists claimed. ⁵¹ As the epitome observes, “The Methodists profess to reject experience and the use of syllogism; but, in fact, they

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⁵⁰ Περὶ τῆς ἰατρικῆς ἐμπειρίας (Fi al-tajribah al-ṭibbiyah, On Medical Experience); and Ὑ ποτυώσεις ἐμπειρικαί (Fi jumal al-tajribah, An Outline of Empiricism). They are translated in Galen, Three Treatises, 23–106. The last survives mainly in Arabic.

employ both of them.\textsuperscript{52} This seems a fair methodological criticism—if we are to believe Galen’s hostile account of them. Galen, however, was more critical of their failure to take other medically relevant factors into account; he accused them of malpractice rather than bad theory. They claimed, he indignantly reported, that one and the same treatment was appropriate regardless of the patient’s age, the climate, the season, or any of the other factors affecting the patient’s constitution. Whereas Hippocrates had said that life is brief, but the art of medicine is long, the Methodists said that medicine needs only six months.\textsuperscript{53}

Experienced readers of Galen will not be surprised to find that his ideal Empiricist and Methodist, particularly the latter, smell strongly of straw; and elsewhere Galen cited individual Methodists with more respect than his theoretical discussion would indicate. But whatever may be the defects of \textit{The Medical Sects} as medical history, it is deeply interesting as an exercise in the philosophy of science. Galen had recommended it as an introductory work. Arabic sources listed it as the first of Galen’s works to be studied.\textsuperscript{54} Late antique epitomes and commentaries of various sorts on this book survive, attributed to John of Alexandria, Agnellus of Ravenna, Palladius, Archelaus, and Yahyā al-Naḥwī. The long popularity of the work is intriguing. Clearly, teachers continued to find the book useful, despite the extinction of the schools it criticized, using it as a way to introduce students to medical epistemology.\textsuperscript{55} It seems to have finally dropped out of the curriculum with Ibn Sinā, whose \textit{Canon} contained no counterpart to it. Although it continued to be copied, both by itself and in the form of the Alexandrian epitome, the last independent works on the topic that I know of are Abū al-Faraj ibn al-Ṭayyib and ʿAlī ibn Riḍwān, both in the eleventh century.\textsuperscript{56}

The Alexandrian epitome of \textit{The Medical Sects} follows the order of Galen’s book closely and tends to either elaborate or clarify Galen’s less

\begin{itemize}
\item 52. See p. 12 below.
\item 55. Epitomes and commentaries on \textit{The Medical Sects} and its place in the Alexandrian curriculum are discussed in Pormann, “Jean le Grammarien,” 233–63; Pormann, “Alexandrian Summary”; and Temkin, “Alexandrian Medicine,” 405–30.
\end{itemize}
organized presentation. It does not quote the text being explained, though once in a while the glosses in some of the manuscripts do. Thus, the epitome begins with an account of the parts of medicine, giving alternative divisions into two or five parts. This is followed by a historical introduction listing the prominent members of the three schools—knowledge that Galen could presume in his audience. Galen’s first chapter dealt with three things: a definition of the aim of medicine, the problem of the relative importance of theory and experience in medicine, and the various names by which the Rationalist and Empiricist schools were known. The epitome gives two additional definitions of medicine; categorizes the causes of health and disease, a topic mentioned in Galen’s definition of medicine; glosses Galen’s account of the disagreement between the Rationalists and Empiricists; and gives a more systematic account of the various names by which the sects are known and the principles by which such names are derived.

This is typical of the organization of the three epitomes edited here. The basic unit is a paragraph elaborating on something mentioned by Galen, though sometimes it is not clear exactly what part of Galen’s text is being referred to. The text is thus not a continuous exposition or a summary of Galen’s text, but a series of notes, often without any transition or even connection between one paragraph and the next. The information presented is not drawn solely from the text being epitomized but comes also from other sources, mostly from Galen’s other works. The epitomist is particularly fond of lists and categorizations, something that we know to have been characteristic of Alexandrian medical writing.57 There is no reference to clinical experience, except when Galen himself has mentioned a case. The personality of the author is totally absent, and there is no attempt at any literary effects. The epitomes are roughly the same length as the original text.

56. GAS 3:80 lists eight surviving MSS, the earliest a copy that had supposedly belonged to Ibn Sinā in the fifth/eleventh century (though there is suspicion that the owner’s mark is a forgery), and the latest an exquisite undated Ottoman manuscript, Aya Sofya 3557; but this last was produced by a professional scribe for an imperial library rather than by a scholar for practical use. For the Thimār of Abū al-Faraj ibn al-Ṭayyib (d. 435/1043), see GAS 3:82, 146; it is preserved in one manuscript, Manisa 1772/1, ff. 1b–37a; cf. Dietrich, Medicinalia Arabica, 22. For the commentary of ʿAlī ibn Riḍwān, see Ibn Abī Uṣaybiʿah, 2:103; cf. GAL G1.484.

The [Small] Art of Medicine (Τέχνη ἰατρική; Ars medica, Ars parva, Microtechne, Tegni; al-Ṣināʾah al-ṣaghīrah fi al-ṭibb). The second work of Galen, whose epitome is presented in this volume, is an admirably clear and organized introduction to medicine that retained its popularity into early modern times. Ḥunayn remarks:

Galen did not intend this book for beginners, since the benefit in reading it is not confined to beginners to the exclusion of those more advanced. That is because Galen’s purpose in it was to describe concisely all the general principles of medicine, which is useful both to beginners and to the advanced. It allows beginners to conceive the whole of medicine in their minds by way of description and then return to each part of it later and learn the commentary, abridgment, and demonstrations of it from the books that explain it in detail. For those who are more advanced, it serves as a review of all that they have read and learned through detailed exposition. The professors who taught medicine in the past in Alexandria placed this book after The [Medical] Sects; after it, they put On the Pulse for Beginners [for Teuthras], then, after that, Therapeutics for Glaucion, treating them as a single work of five books [Therapeutics for Glaucion having two books], to which they gave the title “For Beginners.”

Galen began with a review of the possible approaches to teaching a subject, explaining that in this book he was using the method of dialysis of the definition, in which the subject is expounded in accordance with the parts of its definition, a method that makes it easy for the student to understand and remember what he is learning. Galen then went on to analyze the basic concepts of medicine: health, disease, and what is neither healthy nor diseased; the various classes of healthy, diseased, and indifferent causes and signs; and the concept of the temperament and its balance. He then discussed the signs of the simple and composite temperamental imbalances in the brain, eyes, heart, liver, and testicles; in the body as a whole; and in the stomach and lungs. He then moved on to organic defects—diseases in which parts of the body were missing.


excessive, or deficient in size or number, or deformed. He then analyzed signs and causes in reference to prognosis and diagnosis of acute and chronic diseases. He next discussed surgery, the general principles of therapy, and prophylaxis. He concluded, in proper textbook fashion, with recommendations for additional reading. This being Galen, they were all his own works and comprised most of the books in the Alexandrian curriculum. The Small Art constituted an admirable introduction to Galenic medicine and was still being reprinted, translated, adapted, and commented on for the use of practicing physicians and medical theoreticians at least as late as the seventeenth century. It was, as well, held in honor by the inhabitants of Sir Thomas More’s Utopia.\textsuperscript{60} 

Since The Small Art is well organized to begin with, the epitome is able to follow it closely, using the Alexandrians’ characteristic method of elaborating on points that Galen alludes to, filling in details, and summarizing Galen’s arguments. It has an elaborate logical introduction on the methods of instruction. Its most striking feature is the use of tables or numbered lists (the manuscript families disagree on how this information is presented) giving all the possible combinations of various sets of categories. The first, for example, gives the nine possible combinations of body, sign, and cause with healthy, diseased, and neither. These sometimes produce results that border on the incomprehensible, as in “a sign prognosticating a state that is neither healthy nor diseased in the extreme.” This is the nonclinical abstractness for which the iatrosophists are criticized, though we might also fairly interpret such oddities as classroom exercises. Certainly, the stress on the many possible relations of signs and symptoms to underlying diseases would not be out of place in a modern medical classroom.

\textit{On the Elements According to the Opinion of Hippocrates} (Περὶ τῶν καθ’ Ἰπποκράτην στοιχείων; De elementis secondum Hippocratem; Fi al-istiqsāt ‘alá ra’y Ibbuqrāṭ),\textsuperscript{61} the third work of Galen whose epitome appears in this

\textsuperscript{60} See, for example, Galen, \textit{Galen’s Art of Physick}, trans. Culpepper. More’s reference to it is in chapter 6 of \textit{Utopia}. Ottosson, \textit{Scholastic Medicine and Philosophy}, examines Renaissance medical theory through the commentaries on \textit{The Small Art} written by European professors of medicine.

\textsuperscript{61} There are three modern editions of \textit{On the Elements}: K 1:413–508; Galen, \textit{Galeni De elementis}, ed. Helmreich, 1–69; and Galen, \textit{On the Elements}, ed. De Lacy. De Lacy’s edition is a model of classical philology whose only serious defects are
volume, is a polemical defense of the views on the elements and humors expressed in Hippocrates’s *On the Nature of Man* 1–7. Galen explained that he referred to Hippocrates’s work as “On the Elements” because contemporary authors tended to use that title for works of this sort, though earlier authors had used some variant of the title “On Nature.”

Galen conceived of this work as one of a series, to be followed by *On the Temperament, The Method of Healing*, and other works. It is not dated but is generally thought to have been written during Galen’s second residence in Rome, around 169. There is also reason to suppose that it was written in two parts, breaking at the end of chapter 9. (The Greek tradition, though not the Arabic, divided it into two books.) In it Galen launched spirited attacks on various other medical theorists, with the most bile reserved for Asclepiades and Athenaeus. Topics arose as the rhetoric of the argument happened to demand. It thus differs in character from its epitome, which is a passionless catalogue of theories, methods, and medical entities that came up in Galen’s discussion, with little attempt at overall expository or argumentative structure. Though the epitome is less spirited than Galen’s text, it makes a far better textbook. Ḥunayn summarized the content of Galen’s book as follows:

His purpose in this book is to explain that all bodies subject to genesis and corruption—the bodies of animals, plants, and the materials that are generated in the bowels of the earth—are compounded from four principles, which are earth, water, air, and fire. These, he explains, are the remote first principles of the human body. The proximate secondary principles from which are constituted the bodies of human beings and every animal having blood are the four humors—that is, blood, phlegm, and the two biles. This is one of the books that absolutely must be read before *The Method of Healing*.

Galen began by defining “element” (στοιχεῖον). He then criticized the Atomists, arguing that there must be more than one element and that Atomism could not explain how a living body was affected and able to feel. He made similar arguments against those who held that the

ฐานะกับความเสี่ยงที่เกี่ยวข้องกับการค้นหาข้อมูลของฉันเกี่ยวกับเรื่องนี้


63. Ḥunayn ibn Ishāq, “Risālah,” item 11.
body was composed of only one of the four humors. He criticized the Ionian physicists for their accounts of the transmutations of elements, each of which involved the compression or rarefying of a single element. Galen insisted that, contrary to what some interpreters had claimed, the views of Hippocrates and Aristotle on the four elements and their transmutation are in harmony. Moving to a discussion of qualities, Galen criticized Athenaeus for his theory that the elements are visible and argued that he had confused qualities with elements. He then defended Hippocrates against the charge that he had done the same thing. He next discussed the humors, alluding to how tissues and organs were formed from them. The humors, he claimed, like many of the tissues and organs, were common to all animals having blood—as opposed to those, such as worms, that did not have blood. He then addressed the question of whether the body was created from blood only or from all the humors, as Hippocrates had held. He pointed out that blood is a mixture, as can be seen from its variation, and that it has aspects of the other humors. He criticized Asclepiades for his account of the way that drugs worked to purge humors.

The epitome seems particularly disjointed—often more a series of glosses than a coherent and organized text. It roughly follows the order of Galen’s text, though it is sometimes difficult to be sure, since it is not always obvious what passage the epitome is referring to. Sometimes it presents a summary or clarification of Galen’s argument, sometimes an explication of something that happens to be mentioned in the text, sometimes background that Galen assumed but that students might not have. Not surprisingly, there is a fair amount of repetition. Some sympathy for the epitomist is in order, however; Galen’s text defies easy summary.

The edition and translation

Previous versions, editions, and translations

The works known as the Alexandrian epitomes apparently do not survive in Greek, nor do they seem to have been translated into Latin. The Arabic version of the Alexandrian epitomes was translated into Hebrew as Kibbutzei Galenos by Shimshon ben Shlomo in 1322.64 Sezgin

lists an *ikhtiṣār* (abridgment) by Yahyā al-Naḥwī (John of Alexandria) and a *thimār* (selection) by Abū al-Faraj ibn al-Tayyib, but it is not yet clear whether these are works of a similar sort based on Galen’s underlying texts or abridgments of the Alexandrian epitomes as such.\(^{65}\)

The entire Arabic text of the epitomes has been published in the form of a facsimile of Fatih 3588–89—my manuscript F—with Tehran Majlis 6037 supplying the three works missing from the Fatih MSS: *Days of Crisis, The Method of Healing,* and *The Regimen of the Healthy.*\(^{66}\) Muḥammad Salīm Sālim quotes many short passages from the three texts presented here as glosses to his editions of the Arabic translations of *The Medical Sects, The Small Art,* *On the Pulse for Teuthras,* and *On the Elements.* These passages were edited from manuscripts Aya Sofya 3588 and British Library Add. 23407—herein designated S and D, respectively. In the case of *On the Pulse for Teuthras,* S and Istanbul University A6158—my manuscript U—were used. Sālim identifies these passages, oddly and incorrectly, as from *Sharḥ Hunayn* (Ḥunayn’s commentary). The section on the anatomy of the nerves has been published with translation and commentary by Ahmad M. Al-Dubayan.\(^{67}\)

**Descriptions of manuscripts**

There are twenty-two manuscripts known or thought to contain one or more of the Alexandrian epitomes. Ten are known or said to contain one or more of the works edited here. The present edition is based on six manuscripts that contain both *The Medical Sects* and *The Small Art* and eight that contain *On the Elements,* including all of those copied prior to the sixteenth century. I will discuss them in roughly chronological order and grouped by family—at least as the families appear in the first two epitomes (see table 3). The comments on the relationships among the manuscripts apply mainly to those of the epitomes on *The Medical Sects* and *The Small Art;* the manuscript relations for *On the Elements* will be discussed separately.\(^{68}\)

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\(^{65}\) GAS 3:146–49 passim, 159; cf. Pormann, “Jean le Grammarien,” where Yahyā al-Naḥwī’s version of *The Medical Sects* is discussed and edited. The manuscripts in which these two texts are found are respectively British Library Arund. Or. 17 and Köprülü, Fazel Ahmed Paşa 961.

\(^{66}\) Sezgin, *Alexandrian Compendium.*

\(^{67}\) Galen, “Jawāmiʿ tashrīḥ al-ʿaṣab.”

\(^{68}\) I have found a number of problems with the cataloging and identification of the manuscripts of the Alexandrian epitomes and related works. I plan to discuss the bibliography of these texts in a separate article.
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<td></td>
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<td></td>
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<td>F: Fatih 3536*</td>
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<td></td>
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<tr>
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<td>1242 (17th c.) 13th c. 1240</td>
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<td>13. Ayyām al-Buḥrān</td>
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<td>14. Aṣnāf al-Ḥummayāt</td>
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<td>16. Tadbīr al-aṣiḥḥā’</td>
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</table>

* Manuscript seen personally.
† In place of the Alexandrian epitomes of Diseases and Symptoms, A has two similar abridgments entitled Jumal ma‘āni al-ʿilal wa-l-aʿrād and Jumal al-ʿilal wa-l-aʿrād.
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<td>Ṭuṭhrūn</td>
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<td>wa-al-a‘rād</td>
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<td>10. Tā‘arruf ‘ilal</td>
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<td>al-a‘dā’ al-bāṭina</td>
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* Manuscript seen personally.
† Incomplete at beginning.
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1. *Firaq al-ṭibb*

2. *al-Ṣinā‘ah al-ṭaghirah*

3. *Fi al-nabq al-ṭaghir ilā Thahrān*

4. *Ilā Ighliqun*

5. *al-İṭiqsāt ‘alā ra‘y Ibbuqraţ, al-Anāţir*

6. *Fi al-mizāj*

7. *Fi al-guwā al-ṣabī‘iyya*

8. *Fi al-tasriḥ*

9. *Fi al-‘ilal wa-al-‘a‘rād*

10. *Tā‘arruf ‘ilal al-‘a‘rād al-bāţina*

11. *al-Nabq al-kabir*

12. *al-Buhrān*

13. *Ayyām al-Buhrān*

14. *Aṣnāf al-Ḥumayyāt*

15. *Ḥilal al-hurr‘*

16. *Tadbīr al-aṣīḥā‘*

* Manuscript seen personally.
† A *jawāmi‘* but not confirmed to be the Alexandrian epitome.
‡ An abridgment (*ikhtiṣār*) by “one of his companions,” but it is not clear that it is the Alexandrian epitome.
<table>
<thead>
<tr>
<th>Date (est.) CE</th>
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<td>9. Fī al-ʿilal wa-al-aʿrāḍ</td>
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<td>10. Tāʿarruf ʿilal al-aʿdāʾ al-bāṭīna</td>
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</table>
| 11. al-Nabq al-kabīr | | | | | | | | *
| 12. al-Buḥrān | | | | | | | | *
| 13. Ayyām al-Buḥrān | | | | | | | | *
| 14. Aṣnāf al-Ḥummayāt | | | | | | | | *
| 15. Ḥilal al-burʾ | | | | | | | | *
| 16. Tadbīr al-aṣīḥḥāʾ | | | | | | | | *

* Manuscript seen personally.
**R:** British Library Or. 9202 (131 ff., 17.5 × 25.5 cm., 21 ll., naskh) is the oldest-known manuscript of any of our epitomes, covering only the fifth through eighth treatises. It is written in a clear, plain scholar’s hand with many marginal corrections in several hands. The manuscript is undated but can be placed at approximately the beginning of the sixth/twelfth century through a series of owners’ and collation notes. Folio 1a reports in several hands that it belonged to ʿAbd al-Wāḥid ibn Muḥammad al-Ṭabīb, then that it passed into the hands of Hibat Allāh ibn [Hay]kal al-Mutabbrīb, then ʿAbd Allāh ibn al-Ḥusayn al-Mutaṭabbīb, then his son Ḥasan. The last acquired the book on 14 Ṣafar 547/21 May 1152. A final note places it in the hands of the late Nāṣir al-Dīn Muḥammad ibn ʿAlī ibn Muḥammad al-Balīnī in 984/1576–77. Moreover, a note on the last page, 131b, reports that it was corrected against a copy read for correction to Ibn al-Tilmīdī, who died at a very advanced age in 560/1165. It is thus the oldest of our manuscripts by about a century. Unfortunately, it does not contain either The Medical Sects or The Small Art. Another volume must once have existed, since ours is labeled as volume two. It was acquired by the British Library in 1923.

**F:** Fatih 3538 (291 ff., 23.5 × 16 cm., naskh, undated) contains the first eight Alexandrian epitomes, including the earliest-known copy of the first two treatises edited here and an early copy of the third. Fuat Sezgin and the catalog of Turkish medical manuscripts assume that this was copied as part of a set with Fatih 3539, which was completed at the end of Rabīʿ I 571/October 1175 by ʿUthmān ibn ʿAlī ibn Muḥammad al-Samarqandi. This is not the case, however; Helmut Ritter and Richard Walzer—and, following them, Ahmad Al-Dubayan—date it to the seventh/thirteenth century. The manuscript of the first volume, containing all three of the treatises presented here, was in the hands of three successive physicians, natives of Asqalan. The first received it in the 610s/1210s. The remaining two were in Damascus, “Dār al-Mahrūṣa.” The owner’s notes are, as usual, not very legible. The oldest, partially

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69. Unless specifically noted, I have been unable to identify the scribes and owners mentioned in connection with these manuscripts.

70. Hamarneh, Catalogue, 222.

effaced, seems to read, “Passed into the possession of the servant in need of God . . . ibn al-Shaykh al-Makki al-Mutaṭabbib . . . on the sixth of the month of Dhū al-Qa‘da 610 [or 810/19 March 1214 or 3 April 1408]. The second note is from Manṣūr [? ] ibn Muḥammad ibn al-Zaki al-ʿAsqalānī al-Ṭabīb “now in Damascus.” The third is from another “Asqalānī “now in Damascus.” The non-Christian population of ʿAsqalān was expelled in 548/1153 after its surrender to the Crusaders. The town was again occupied by Muslims in 583–87/1187–91, reoccupied by Richard Lion-Heart in 1192, and occupied once again by Muslims in 645/1247. In 668/1270 it was destroyed and its harbor blocked. The city was not rebuilt until the twentieth century. Therefore, Muslims who identified themselves as “ʿAsqalānī, now in Damascus,” were most likely part of the population expelled in 548/1153 and probably lived before the middle of the seventh/thirteenth century, thus indicating an early date for our manuscript. Eventually it was endowed by Sultan Maḥmūd I to the Fatih mosque library and has been reproduced in facsimile.\textsuperscript{72} The text of this manuscript is most closely linked to \textit{S} but is sloppily copied and contains many readings not supported by other manuscripts.

\textbf{S:} \textit{Aya Sofya 3588} (260 ff., 24.5 × 16 cm., 22 ll., naskh) is a single volume containing the first nine epitomes. It is undated, but Ritter and Walzer plausibly date it to the seventh/thirteenth century.\textsuperscript{73} It is clearly and carefully written and contains a great many glosses, including some of those that likely came from Ibn al-Tilmīdh, but also many unique to itself. These include introductions to most of the books. The table of contents lists the sixteen books, so there must once have been a second volume. The owners’ notes, to the extent that they can be read, point to Jewish owners: “al-ʿAbd al-Faqīr” Jār Allāh al-Abrahāmī and Ibrāhīm ibn Sulaymān ibn Ḥakīm al-Ruhāwī. The text tends to follow that of \textit{F}, though not always.

\textbf{M:} \textit{Manisa 1759} (342 ff., 25.5 × 17.7 cm, 21 ll., naskh) is a single manuscript containing the first nine epitomes. It was copied by one Sallām ibn Ṣāliḥ ibn Khīḍr ibn Ibrāhīm, “known as the Teacher (\textit{muʿallim}) from Shaṭarām,” a village east of Acre. Its parts are dated between 26 April 6748 and 27 May 6749 according to the Byzantine era of the world,
corresponding to 1240–41. It is carefully written, and, for *The Medical Sects* and *The Small Art*, its text is almost identical to that of *A* (detailed below), which was copied a year later, except that here the glosses are added in the margin in a different hand. It also has the proper Alexandrian epitomes of *Diseases and Symptoms*, rather than the two sets of *jumal* found in *A*. A note at the end of *On the Pulse for Teuthras* notes that it—probably meaning the epitomes of the first three books, *The Medical Sects*, *The Small Art*, and *On the Pulse for Teuthras*—was copied from a manuscript copied from a manuscript in the hand of Abū al-Khayr Sahl ibn ʿAbd Allāh ibn Ṭūmā and that both were read for correction to Ibn al-Tilmīdh. It would seem that the first few epitomes in *A* and *M* were copied from the same manuscript written by Ibn Ṭūmā, and that Jirjis ibn Tādrus, the scribe of *A*, borrowed the original to copy when Sallām ibn Ṣāliḥ was finished with it. There is an owner’s mark of one Anṭūn al-Ḥakīm al-Yāfūtī, “Anthony, the physician of Jaffa.” There is no indication of how or when the manuscript came to be in the Manisa library. The fate of the presumed second volume is also unknown.

**A:** Aya Sofya 3609 (299 ff., 25 × 17 cm., 21–24 ll., naskh) is the first volume of what was perhaps a complete collection of the epitomes in two volumes, copied by a Christian physician in Crusader Acre. The manuscript was copied for his own use by Jirjis ibn Tādrus in Shawwāl 639/April 1242. Like *M*, it bears the note that it was copied from a manuscript copied from a manuscript written by Ibn Ṭūmā and read for correction to Ibn al-Tilmīdh. This doubtless explains why Ibn al-Tilmīdh’s glosses are written with the main text flowing around them. The copying is very accurate, in a clear but not ornate naskh. The manuscript contains various more or less illegible owner’s notes, culminating in a *waqf* notice of Sultan Maḥmūd I, who donated the books that initially comprised the Aya Sofya library. It is now stored with the rest of the Aya Sofya collection in the Süleymaniye Library. The manuscript contains the epitomes of the standard works through *On Anatomy for Beginners*; then it gives two *jumal* of *Diseases and Symptoms*, neither of which is the Alexandrian epitome proper. These were copied from a

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74. See f. 70a.
75. A very detailed description of *M* is in Dietrich, *Medicinalia Arabica*, 32–42; see also Al-Dubayan, *Galen*, 34–35.
76. See ff. 254a, 299b, the former dated 23 Ramaḍān 639/27 March 1242.
manuscript in the hand of the distinguished fourth/tenth century Jacobite physician of Damascus, Abū al-Faraj Jirjis ibn Yuḥannā ibn Sahl al-Yabrūdī, whose manuscripts of Galen’s works and whose commentaries on them were highly esteemed.77

The text of this manuscript for the first two epitomes, as well as for the glosses, is almost identical with that of M.78

Y: Yeni Cami 1179 (398 ff. total, ff. 114–243, 19 × 14 cm., 19 ll., 913/1507, naskh) is a composite volume consisting of four works of Aristotle and Ibn Rushd,79 a tenth/sixteenth-century copy of the first eight epitomes, and a much older copy of the ninth, tenth, and twelfth epitomes, that is, Diseases and Symptoms, The Large Pulse, and Crisis. 398 ff. The younger portion of the text, which is what is used in this edition, was copied by Junayd ibn Kūnj ibn Junayd [?] in the vicinity of Konya (ṣahrā-yi Qūnya) on Friday, at the beginning of Rabī‘ I, 913, which corresponds to 16 July 1507. It is likely that the younger portion of the text was copied to go with the much older existing manuscript. The copying is excellent—careful and clear—but the text is late and eclectic, drawing from both earlier manuscript groups with many additional minor variations. The older portion of the text (16.5 × 12 cm., 16 ll.) is written in oxidized brown ink and is undated, though there is an owner’s mark dated 4 Muḥarram 679/6 May 1280.80

D: British Library Or. Add. 23407 (291 ff., 13 × 24.5 cm., 18 ll., naskh) is a late manuscript containing the first eight epitomes—that is, through the Small Anatomy. Hamarneh dates it to the eleventh/seventeenth century. There is no information about the origins of the manuscript, and it does not show many signs of use. The text for the epitomes edited here is that of the late recension represented by Y. Moreover, D contains the same eight epitomes as the newer part of Y. There are enough independent differences between D and Y to indicate that neither was copied directly from the other and that the text thus comes from an earlier manuscript.81

77. Ibn Abi Uṣaybi‘ah, 2:140–43. Since Ibn al-Tilmīdh was another biblio-

78. İhsanoğlu, Fihris makhṭūṭāt al-ṭibb, 170–74; Ritter and Walzer, “Arabsiche Übersetzungen,” 40; Al-Dubayan, Galen, 35–36.


81. Hamarneh, Catalogue, 19–21, which mostly discusses the epitomes and has no information about the MS beyond what I have reproduced here.
U: Istanbul University Library A6158 (301 ff., 13.8 × 21.3 cm., 19 ll., naskh, 1174/1760), a handsomely written but useless manuscript, containing the fourth through the seventh, the ninth through eleventh, and the fifteenth epitomes. It is dated at folio 61a. Though the manuscript is in excellent condition, it was clearly written by a professional scribe who knew nothing about medicine and was working from a badly damaged original. There are errors of every sort, misreadings, words that the scribe obviously could not read and so drew in their approximate shape, and empty spaces corresponding to gaps or illegible words in the exemplar. The text is eclectic and therefore not of much use in constructing a stemma. In this edition, I have ignored its many unique readings. If it has value, it is for the epitomes of *The Large Pulse*, *On Affected Parts*, and *The Method of Healing*, for which manuscripts are much less common.

Other manuscripts: I also know of the following manuscripts that I have not used in this edition:

- Tehran, Majlis 6036, an almost-complete manuscript dated 1068/1657, missing only *The Medical Sects*, *On Diseases and Symptoms*, and most of *Anatomy for Beginners*.  
- Tehran University 4914, a seventeenth-century manuscript containing all the epitomes except for *The Large Pulse*, *The Method of Healing*, and *The Regimen of the Healthy*.  
- Haidarabad, Āṣafiya, Ṭibb 44, an eighteenth-century manuscript containing all the treatises except *Days of Crisis*, *The Method of Healing*, and *The Regimen of the Healthy*.  

For manuscripts of other epitomes not edited here, see table 3 above.

**Textual history and editing methods**

The textual tradition is too contaminated to draw a stemma. Not only is there clear internal and external evidence of cross-contamination of the manuscript traditions, but the formulaic nature of the texts often allows scribes to correct errors. Moreover, the textual history of the epitome of *On the Elements* is different from and somewhat more complex

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82. Ḥāʾirī, *Fihrist*, 20–29.
84. Al-Kantūrī, *Fihrist*, vol. 4.
than that of the other two works. However, some aspects of the texts do allow plausible judgments about their textual histories.

The epitomes of The Medical Sects and The Small Art. None of the six manuscripts that I have used to edit these two works (nor either of the two additional manuscripts of the epitome of On the Elements) seems to be a copy of another, so all six need to be considered. The six manuscripts divide into three fairly consistent families: FS, AM, and DY. Moreover, the three groups do not vary by accumulation of random copying errors but are clearly distinct recensions.

DY, the third recension, can be dealt with most easily. These two manuscripts, of the eleventh/seventeenth and ninth/fifteenth centuries respectively, almost always agree with each other; and when they disagree, it is almost always by random copying errors and in no particular pattern. These two works are about equally likely to side with either of the two other groups against the other, so in that sense they are not of great textual value; their source must have been a manuscript consulting manuscripts from both the FS and AM lines.

AM, the second recension, is a second close family, both having been copied—almost certainly from the same manuscript of the first three epitomes—in the Acre area between 1240 and 1242. Thus, for The Medical Sects and The Small Art, A and M agree closely with each other. A is the least eccentric of the manuscripts, being carefully written with very few unique readings, but M is also quite careful. For once, we can identify the source of the recension. It represents the text of the unidentified Ibn Ṭūmā as corrected by Ibn al-Tilmīdh, probably in the second quarter of the twelfth century, approximately 275 years after they were translated by Hunayn. This means that while AM is a clear witness to a form of the text at least half a century older than any of the other manuscripts, it is almost certainly not the original form of the text.

FS, the first recension, is more problematic. F has the most unique readings—almost three hundred in The Small Art—followed by S, with over 150. While they most often agree with each other, they also often diverge, agreeing either with one of the other manuscript groups or disagreeing with all. On the other hand, they do not have the evidence of systematic revision found in AM and DY. Moreover, they both—and particularly F—have an archaic feel, with many deviations from standard Arabic grammar and usage. Finally, F is simply sloppy. F and S nevertheless seem to represent the oldest form of the text. It is possible that the four hundred or so unique readings in F represent the original
form of the text, with the readings of S and DSY representing one attempt at revision and AM another. If so, it is tempting to speculate that F represents Hunayn’s original version and that S or AM represents a revision of the sort he is known to have made to his translations. However, it is also possible that F is simply the product of a careless scribe who did not spell very well, and that S, or even AM, represents the oldest form of the text. In any case, we have no evidence for how Hunayn handled this particular text. Based on these facts, I have made the following assumptions in editing the first two texts:

• FS represents the oldest form of the text.
• AM and DY represent two later recensions.
• F is a very imperfect witness to its family and thus cannot be used unless it is supported by S or by AM.

Thus, I have produced an eclectic text—a text-critical sin, to be sure, but the epitomes are neither Homer nor the Bible. I almost always follow the majority of AM, F, and S (or DSY). I have mostly omitted variants that cannot plausibly provide evidence against the readings I have chosen—particularly readings found only in one manuscript or only in the DY group—though I have kept occasional unique readings from the older manuscripts when they seem particularly interesting. In all, I have omitted about two-thirds of the variants I originally recorded.85

The epitome of On the Elements. In the epitome of On the Elements, A has broken company with M to ally itself with R, the oldest manuscript available for any of the epitomes. The textual history of this treatise is thus distinctly different from that of the previous two.

• DY again is a distinct group. Here it has a clear relationship to S, forming a group DSY, which is more faintly discernible in the previous two treatises.
• MS forms a loose group, with S more and M less associated with DY.
• AFRU forms a distinct group with F more and A less closely associated with R. The execrable U usually supports this group.

85. Readers needing all the variants will be able to find PDF files of my complete collation, which contains all the variants, through Indiana University Scholarworks, http://hdl.handle.net/2022/14416, though the text is not quite the same as my final text.
Since AFRU contains two of the three oldest manuscripts and three of the five older ones, I follow it in this edition. Where there is disagreement, I follow R if it has support from other old manuscripts. Thus, this text is somewhat less eclectic than those of the other two works, since I have four clear witnesses to what seems the oldest form of the text. Again, I omit almost all variants that cannot plausibly be used as evidence against my chosen readings.

Other editorial policies

Arabic grammar. The Arabic of these translations is not especially good. Moreover, it is clear that part of the confusion in the textual history is the result of scribes trying to correct or polish the text. In the case of the DY group, this was obviously done centuries after the composition of the text, so its improvements can be disregarded; but the situation with FS and AM is less clear. In editing the text, I have tried to walk a middle line, covering the translator’s nakedness when possible—as when gender agreement can be handled by changing dots—but otherwise letting the “errors” stand, especially when they have good manuscript support. It is, perhaps, a warning to view the grammatical exactitude of modern Arabic text editions with some suspicion. Nevertheless, I have not been totally consistent in handling this problem, for which I ask the reader’s indulgence.

Orthography. I have generally not recorded variants that are simply matters of orthography (for example, idhan and idhan); nor have I usually recorded variants consisting solely of variant placement or omission of dots (notably the very frequent variation of yā and tā in imperfect verbs, signalizing a gender or active/passive distinction). In some cases, though, I have done so where the word is significantly different and one or more manuscripts make a clear distinction, as in yubayyinūna and yuthbitūna.

Greek names. In many cases, the scribe is uncertain as to how Greek names should be spelled. More often than not, dots are omitted and even the basic shape of the word is formed ambiguously. I have reconstructed the form as best I can, having the advantage of knowing, in most cases, what the Greek name actually should be. Versions of the name in my manuscripts incompatible with the form I have chosen have been listed separately, but I have not tried to reproduce all the versions, which are useless even for reconstructing relationships among manuscripts.
Divisions of the texts

I have supplied the numbered paragraph divisions in the three texts. The chapter divisions of The Medical Sects are apparently ancient and are found in the Arabic translation and in the Alexandrian epitome. These chapter divisions differ slightly from those of modern editions of the Greek text but agree in the two Arabic texts. The divergences are noted in my text.

I have added chapter numbers to The Small Art and On the Elements and numbered them according to the chapter numbers of the modern editions. In the former, I have supplied most of the titles myself. In the latter, they are mostly supplied by a later reader (R²) of an early manuscript. Thus, in both cases they have no textual authority and are added simply as an aid to the reader. On the Elements is noticeably disorganized, so while the epitomist has more or less followed Galen’s order, he has also often pulled together points from various places in the book. Thus, my assignment of chapter numbers has been somewhat arbitrary.

The Arabic textual tradition considers On the Elements to be one book in opposition to part of the Greek tradition, which considers it to be two.86

Glosses and scholia

I have included the glosses and scholia in the apparatus and have translated almost all of them. They give an idea of the relationship between the readers and the text and are often helpful. Moreover, they convey something of the experience of reading these texts from a manuscript.87 I have not usually tried to distinguish hands, and all such additions are marked with a superscript h—for example, Aʰ—after the manuscript sigla. While some are random readers’ notes, two groups deserve special mention:

The glosses of Ibn al-Tilmidh. Throughout the epitomes of The Medical Sects and The Small Art, occasional glosses are found in manuscripts A, M, S, and sometimes Y. These are not just casual readers’ notes, since

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86. De Lacy’s introduction in Galen, Galeni De elementis, 20, 44.
87. For an example of a translation that has tried to convey the experience of reading the author’s copy by including the marginalia, see the Guyer and Wood translation of Kant, Critique of Pure Reason.
they are usually found in several manuscripts. In A, one of the older manuscripts, they are actually embedded in the text block and so were obviously planned as part of the content of the manuscript. The first such gloss is introduced as ḥāshiya li-sanadīnā Amin al-Dawla (a gloss by our authority, Amin al-Dawla), and subsequent glosses are introduced as ḥāshiya lahu (a gloss by him). This is Abū al-Ḥasan Hibat Allāh ibn Ṣāʿid ibn al-Tilmīdh, an eminent Christian physician, medical educator, and bibliophile of Baghdad who died at a great age in 560/1165. What is relevant for us is that he produced glosses on various works of Galen and Hippocrates and that he wrote a completion of the Alexandrian epitome of The Method of Healing. The glosses here are not comprehensive enough to be considered a separate work, but they could very well have been copied from the margins of a manuscript of the epitomes that had belonged to Ibn al-Tilmīdh. Most of the larger and more significant glosses seem to come from this source. Moreover, as mentioned above, at least the first three epitomes in A and M were copied from a manuscript connected with him.

The introductions to the books. S contains introductions to two of the three books edited here, as well as a general introduction. They contain the familiar “eight heads,” a standard medieval Islamic format for introducing books. They are written in a small, unpleasant, and not very legible hand, but I have transcribed and translated them as best I can. These are interesting for what they show about the views of Muslim scholars as to the place of these books and their subjects in medical literature.

Galen’s underlying texts. There are occasional quotations in the glosses from the original text (faṣṣ) of Galen’s works and, in one place (A, f. 11b, M, f. 14b to paragraph 40 of the epitome of The Medical Sects), from Abū al-Faraj ibn al-Ṭayyib’s commentary on The Medical Sects.

Thersites. One gloss occurs in all the manuscripts of The Small Art, an explanation of a reference to Thersites, a badly deformed soldier in the Greek army at Troy. The gloss accurately explaining this obscure reference must have been in the margins of Ḥunayn’s translation and, as likely as not, came from a gloss on the Greek manuscript.

88. See appendix 1, s.v. “Ibn al-Tilmīdh.”
Translation

The translation is as literal as is compatible with clarity and precision. I have had little success in giving it a grace that the Arabic—and presumably also the Greek—never had. A chronic problem is when to translate medical terms literally and when to use modern medical terminology. As a rule, medieval Arabic uses ordinary words for most medical terms, so there seems no particular reason to translate baṭn as “abdomen” when it is the usual Arabic word for “belly.” As a result, I usually use ordinary English terms when they are available rather than Latinate medical terminology, which in any case generally derives from the everyday Greek or Latin words that underlie their Arabic renderings.

Some terms posed special problems, which in many cases I discuss in notes. Ghayr majrā al-ṭabʿ might reasonably be translated as “abnormal,” the term a modern doctor would use; but “contrary to nature,” the term that English-speaking Galenists used several centuries ago, preserves the connection to the philosophical usage of “nature.” On the other hand, the terms al-aʿḍāʾ al-mutashābihat al-ajzāʾ and al-aʿḍāʾ al-murakkaba correspond almost exactly to the modern terms “tissues” and “organs.” I considered keeping the literal renderings “homoeomerous organs” and “compound organs,” since that would have preserved a distinction important in Galenic medicine; but the temptations of concision and elegance won out. Another problem has to do with the scope of terms. “Causes” for asbāb fits both traditional and modern usage when used for the causes of disease; but the text also uses it for treatments, for which a modern doctor might prefer a term like “agent.” Another problem word is mizāj, which can mean “mixture,” “constitution,” or “temperament.” I have almost always used “temperament,” though the result is sometimes odd. I have been consistent most of the time, and my usual renderings of significant terms are given in the glossary. Nevertheless, it is not possible always to render Arabic technical terms with the same English word, nor is the translator infallible.

As for translation at the level of sentences and above, the meaning is almost always perfectly clear. When it is not, the general sense is usually obvious enough that a demure obscurity of translation is able to bridge the difficult passage.
In the epitome of *The Medical Sects*, which includes philosophical terminology, I have usually followed the renderings of technical terms in Michael Frede’s translation of *The Medical Sects.*

**Annotation**

For the most part, I have not annotated the translations beyond citing the text that the epitome is commenting on and summarizing what Galen was saying at that point. Given that these epitomes were written at the very end of late antiquity, attempting to cite parallels systematically would have involved dealing with the whole literature of ancient medicine, which I did not think was either necessary or feasible. I have also identified individuals mentioned in the text. Occasionally, I gloss a passage or explain technical terms when clarity is at stake or a reader might have difficulty. In two cases, I have provided appendices. The first gives biographical and source information on individuals and schools mentioned in the introduction and text, notably the putative or possible authors of the epitomes and the members of the ancient medical sects mentioned in the epitome of *The Medical Sects*. Second, in the case of the epitome of *The Small Art*, there is a section on the eye sufficiently complex to require a short appendix explaining the terminology for the anatomy of the eye. In general, however, the texts are clear in themselves; they were, after all, written to explain the difficulties of Galen’s texts to students new to them.

I translate almost all the glosses and meaningful variants in the notes.

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89. Galen, *Three Treatises*, 3–20. Frede’s introduction is particularly valuable for indicating the philosophical issues implicit in these works of medical methodology.
### Abbreviations and Conventions

For complete information on works listed here, consult the bibliography.

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>A</td>
<td>Manuscript Aya Sofya 3609</td>
</tr>
<tr>
<td>ANRW</td>
<td>Aufstieg und Niedergang der römischen Welt</td>
</tr>
<tr>
<td>BNP</td>
<td>Brill’s New Pauly</td>
</tr>
<tr>
<td>Br. Lib. Or.</td>
<td>British Library Oriental Manuscript</td>
</tr>
<tr>
<td>CDSB</td>
<td>Complete Dictionary of Scientific Biography</td>
</tr>
<tr>
<td>D</td>
<td>Manuscript British Library Or. Add. 23,407</td>
</tr>
<tr>
<td>DK</td>
<td>Diels, Die Fragmenten</td>
</tr>
<tr>
<td>DPA</td>
<td>Dictionnaire des philosophes antiques</td>
</tr>
<tr>
<td>F</td>
<td>Manuscript Fatih 3538</td>
</tr>
<tr>
<td>G</td>
<td>Arabic translation of Galen’s original text, ed. Muḥammad Salīm Sālim</td>
</tr>
<tr>
<td>GAL</td>
<td>Carl Brockelman, Geschichte der arabischen Literatur</td>
</tr>
<tr>
<td>GAS</td>
<td>Fuat Sezgin, Geschichte des arabischen Schriftums</td>
</tr>
<tr>
<td>H</td>
<td>Galen, Scripta minora, ed. Helmreich</td>
</tr>
<tr>
<td>IGAIW</td>
<td>Institut für Geschichte der Arabisch-Islamischen Wissenschaften</td>
</tr>
<tr>
<td>IHAIS</td>
<td>Institute for the History of Arabic-Islamic Science, Johann Wolfgang Goethe University</td>
</tr>
<tr>
<td>Is. Phil.</td>
<td>Fuat Sezgin, ed., Islamic Philosophy Reprint Series</td>
</tr>
<tr>
<td>IT</td>
<td>Ibn al-Tilmidh</td>
</tr>
<tr>
<td>K</td>
<td>Galen, Opera omnia, ed. Kühn</td>
</tr>
</tbody>
</table>
KR  Kirk and Raven, *Presocratic Philosophers*
M  Manuscript Manisa 1759
MS, MSS  manuscript, manuscripts
PIHAIS  Publications of the Institute for the History of Arabic-Islamic Science
R  Manuscript British Library Or. 9202
RE  Pauly and Wissowa, *Real-Encyclopädie*
S  Manuscript Aya Sofya 3588
U  Manuscript Istanbul University A6158
Vienna  Österreichischen Nationalbibliothek Greek
ed. gr.  manuscript, medical collection
Y  Manuscript Yeni Câmi 1179

For other abbreviations used in the critical apparatus, see the section “Description of Manuscripts,” pp. liv, lix–lxiii, above.

THE ALEXANDRIAN EPITOMES OF GALEN
VOLUME 1
The table of contents of the Alexandrian Epitomes found at the beginning of MS S, in slightly different form in A and M, and in incomplete form in Y.  

1. Other MSS read: “The index of the epitomes of the sixteen books of Galen that were read in Alexandria.” Another MS mentions that they are “commentary and abridgment.” One MS has the gloss: “The first volume of the epitomes of Galen’s books on medicine, which are among what was translated by Hunayn [ibn Ishāq] the physician, beginning with [On] the Medical Sects and ending with [On] the Causes of Symptoms [the last part of On Diseases and Symptoms, which is the last treatise contained in that MS]. There were eight commentators: Gesius, Anqilāʿus, Archelaus, Palladius, John the Grammarian, Stephanus, Theodosius, and Abū al-Faraj ibn al-Ṭayyib.” On the lists of compilers of the epitomes, see pp. xxxv–xliii above.

2. One MS adds the gloss: “Two books. The first is on the word ‘nature’ and what is connected with it. After he has explained the word ‘nature,’ he begins to explain fevers and their states. The second book is on the curing of diseases.”
[محتويات التحميل]

جواب الكتب التي كانت تقرأ في الإسكندرية

وهي ست عوامات:

الأول منها

- كتاب فرق الطب
- كتاب الصناعة الصغرى
- كتاب الطب الصغير
- كتاب الطيور
- كتاب إلى الغوامين

M: + رب اختر بخير للحاضر | AM: فهرب جواب الكتب تربية عشرية جالينوس التي كانت تقرأ بالإسكندرية؟: ١: الأول من جواب الإسكندرىتيت بكتب جالينوس النسخة عشر على النحو والتقديس، وهي الكتب التي كانت تقرأ في الإسكندرية: H:؛ M: جمل أول من جواب كتاب جالينوس ما نقله جبين المتطلب متبعدًا بفرق الطب ومختصرًا بأساس الأعراض في الطب مفسروا

- ثمانية جاسيوس وأليكيدوس وأركلاس وفلاديوس يحيي القوي وسليمان وثاؤوديوس
- وأبو الفرج بن الطبيب

٢: في إسرار الطبيعة وما يتعلق بها وبعده ما تابع إسرار الطبيعة شرع إلى بيان أحوال الدنيا، ٤: وهو مقالات الأولى في إسرار الطبيعة وما يتعلق بها في الحي وآواعها والأذية

١-١
Fifth, \textit{The Elements [According to the Opinion of Hippocrates]}^{3} \quad \text{one book}

Sixth, \textit{[On] the Temperaments}^{4} \quad \text{three books}

Seventh, \textit{[On] the Natural Faculties} \quad \text{three books}

Eighth, \textit{[On] Anatomy}^{5} \quad \text{five books}

Ninth, \textit{[On] Diseases and Symptoms} \quad \text{six books}

Tenth, \textit{The Large Pulse} \quad \text{sixteen books}

Eleventh, \textit{The Diagnosis of Diseases of the Internal Organs}^{6} \quad \text{six books}

Twelfth, \textit{On the Crises} \quad \text{three books}

Thirteenth, \textit{Days of Crisis} \quad \text{three books}

Fourteenth, \textit{Fevers}^{7} \quad \text{two books}

Fifteenth, \textit{The Method of Healing} \quad \text{fourteen books}

Sixteenth, \textit{The Regimen of the Healthy} \quad \text{six books}

In all, there are sixteen treatises in seventy-three books.

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3. One MS adds: “and the Compounds of the Elements.”
4. Two MSS read: “The Temperament.”
5. One MS adds: “for Beginners,” which is part of the usual title for this work.
6. Two MSS reverse the order of this and the previous work.
7. Some MSS read: “The Kinds of Fevers.”
المحتويات النهائية

- مقالة
- كتاب الأسرة
- كتاب السياسة
- كتاب التمثيل
- كتاب الثورة
- كتاب الاعتدال
- كتاب الاعتدال
- كتاب الاعتدال
- كتاب الاعتدال
- كتاب الاعتدال
- كتاب الاعتدال
- كتاب الاعتدال
- كتاب الاعتدال

جملة هذه السنة عشرةما، ثلث وسبعون مقالة

الآن، يوافق: AM 7 المارد

لمراقب: AM 5

لمراقب: AM 6

لمراقب: AM 7

لمراقب: AM 8

لمراقب: AM 9

لمراقب: AM 10

وسبعون مقالة والكتب ستة عشرةما
(2) The Sheikh,\(^8\) may God have mercy upon him, said:

Each art has a subject peculiar to it and an end. The art of medicine has a subject and an end. Its subject is the human body, and its end is the preservation of health existing in the body or the restoration and acquisition of the health that is absent from the body. Because the human body possesses both a natural and an unnatural state, necessity compels the physician to investigate each of them in theory and in practice. The practice in the case of each state involves either something natural that is to be preserved, or something unnatural that is to be restored to its natural state. Since this is the case, medicine is divided into theory and practice. Theory is divided into the theory of natural things and the theory of unnatural things. The theory of natural things is divided into

1. the elements, which Galen discusses in his treatise *On the Elements [According to the Opinion of Hippocrates]*. Because the humors arise from

2. the mixture of the elements, he talks about them in his book *On the Temperament*; and because the organs are generated from the humors, he talks about these in his treatise *On the Humors*.\(^9\)
قال الشيخ رحمه الله:
كل صناعة لها موضوع يفسّرها وغاية. وصناعة الزبّ صناعة لها موضوع وغاية. وموضوعها بدن الإنسان وغايتها حفظ صحة موجودة فيه أو ردها جعل صحّة قد فقدت منه. ولأن بدن الإنسان توجد له حالات طبيعية وغير طبيعية تؤد الطيب الضرورة إلى النظر فيها جميعًا وعملهم وعملهما. وعمل فيها جميعًا إما الأمر الطبيعي فإن يحفظ. فإما الخارج عن الطبيعة فإن يرد إلى الحال الطبيعية. وإذا كان الأمر على هذا تقسيم إلى العلم والعمل. والمعلم تقسيم إلى علم الأشياء الطبيعية وعلم الأشياء الخارجية عن الطبيعة، وعلم الأشياء الطبيعية تقسيم إلى آ. علم الإسطفاسات. وجالينوس يتكلم فيها في كتابه في الإسطفاسات. ب. ولأن الأخلاط تحدث بالمرابطة الإسطفاسات فهو يتكلم فيها في كتابه المراج. ولأن الأخلاط تكون عنها الأعضاء، فهو يتكلم فيها في مقالته في الأخلاط.
3. From the tissues are compounded the organs, so he talks about these in his treatise *On Anatomy [for Beginners]*.

4. These organs have faculties, so he talks about those faculties that are natural in his treatise *On the Natural Faculties*, about the vital faculties in the treatise *On the Pulse*, and about the psychic faculties in the treatise *On the Doctrines of Hippocrates and Plato*.

5. Our organs have functions, so he discusses these in his treatise *On the Uses of the Parts*.

6. The theory of unnatural things is divided into diseases, the causes of diseases, and the symptoms attendant upon diseases. He teaches us about symptoms in his treatise *On Diseases and Symptoms*.

7. Since some diseases are manifest and can be observed, while others are hidden and have indications, he speaks about the latter in the treatise *On the Affected Parts*. This is *The Internal Diseases*.

8. Because some common diseases are fevers, which have so many classes, it is therefore not excessive for him to devote a treatise to enumerating *The Species of Fevers*.

9. or because one of the indications is the pulse, he teaches us about that in the treatise *The [Large] Pulse*.

10. Because crisis is a correlate of diseases, he teaches us about that in *On Crises*.

11. Because crises occur on particular days, he teaches us about that in his treatise *Days of Crisis*.

12. Instruction is also divided in the first instance into the preservation of natural things, which he discusses in the treatise *The Regimen for the Healthy*,

13. and into the reversal of unnatural things, which he discusses in the treatise *The Method of Healing*.

14. As for his treatise *To Glaucon*, it is derived from the treatise *The Method of Healing*.

15. His treatise *The Small Pulse [for Teuthras]* is derived from *The Large Pulse*.

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*Elements*, a work that is considered in some Greek manuscripts to consist of two books, the second of which does deal with the humors. Since the Arabic tradition always considers it as a single book, it is possible that this gloss depends on a Greek source.

10. The scholiast accidentally added a number in the middle of this entry, which I have corrected in the text and translation.
ج. ومن الأعضاء المتشابهة تترك الآية. فهو يتكلم فيها في كاتبه في التشبيه.

د. وللهذه الأعضاء قوى فهو يتكلم في الطبيعة منها في "كاب القوى الطبيعية" وفي الخيوانية في "كاب النبض" وفي النسائية في "كاب بقراط" وأفلاطون.

ه. ولأصحاب أعمال. فهو يتكلم فيها في كاتبه "في مناع الأعضاء".

و. فأما علم الأشياء الخارجة عن الطبيعة فنقسم إلى الأمراض وأسباب الأمراض والأعراض من الأعراض. فهو يعثنا من الأعراض في "كاب العلل والأعراض".

ز. ولمكاوات الأمراض منها ظاهرة ولهما مشاهدة ومنها خفية وهذه لها دلال، فهو يتكلم فيها في "كاب مواضع" [كما] "الألمة". وهوالأمراض الباطنة.

ح. ولكن من جملة الأمراض الحيات وأقسامها كثيرة. فهذا ما أوفر لها كذلك.

عدد منها أنواع الحيات.

ط. أولاً. أحد الاستدلالات النبض، فهو يعثنا عنها في "كاب النبض".

ي. ولأن يلزمها البراق فهو تأثينا عنه في "البراق".

يا. ولأن البراق له أيام معرفة فهو تأثينا عنها في كاتبه "في أيام البراق".

ب. فأما العلم فيقسم أيضاً إلى علم حفظ الأشياء الطبيعية وهو يتكلم فيها في "كاب تدير الأفواه".

بج. وإلى رذال الأشياء الخارجة عن الطبيعة وهو يتكلم فيها في "كاب حيلة البر".

بي. فأما كابه "إلى الأفواه" فإنه فرع على "كاب حيلة البر".

اي. وكابه "في النبض الصغير" فرع على كابه "في النبض الكبير".
16. His treatise *The [Small] Art [of Medicine]* is, as it were, a complete summary of all of his books.

17. *[On the Medical] Sects* is an introductory book that should be read before any other theoretical or practical book, so that a person will know the path that should be taken in discovering what drugs are appropriate.

This is the order followed by Galen’s books on medicine.

[A gloss on the art of medicine]

(3) Some arts are theoretical, like the art of geometry; some purely practical, like the arts of the carpenter and blacksmith; and some both theoretical and practical, like the art of music. The musician is the one who sings and performs the variations by which the melody is formed into the melody. Our art is both theoretical and practical, for the physician needs knowledge of the disease, the cause of the disease, and its indications. It is his place to administer drugs and perform surgery. It is not one of the arts that pursues an end unrestrictedly, but, rather, is one of those that is for the sake of some good. What is it that would make you forget the path that the rule requires and will require? It may be that you will attain the goal, and it may be that you will not.
صناعة الطب

 لماكئ من صناعة الطب

٥

محتويات النص

كما في "صناعة" يجري جرى الجملة لكتبه بأسرها.

وراءوء كلمات "الفرق" هكما مقدمة تجب قراءته قبل الكتب بأسرها العلمية والعملية.

والله لم تبت من الحساس الطريق التي يجب أن يسلكها في استباق ماب يجب من الأدوية.

فهل هذا يجري ترتيب كتاب جالينوس في الطب؟

صناعة الطب

 Sản: حجاشية

 لنكات الصناع منها علمية كصناعة الهندسة ومنها عملية حسب كصناعة

التجار. والدعاية، ومنها علمية وعملية كصناعة الموسيقى، فإن الموسيقي، وهو الذي

ينغ وبرق الظل التي من أجلهما صارت هذه النطمة تركيب هذه النطمة. فصناعتنا

عامية وعملية. فإن الطبيب مفتقر إلى معرفة المرض وسبب المرض ودلاله، وشأنه

أن يعطي أدوية ليستعمل الحديد. وليس من الصناع الذي ينتمي غرضًا لا محاولة كله هي

مما لحودة، فما هو أن ينساك؟ الطريق التي أوجبها يوجها القانون، وقد يجوز أن

تصيب 더ارم يجوز ألا تصب.
The Alexandrian Epitome of Galen’s Book
[On] the Medical Sects
In the Name of God, the Merciful, the Compassionate!¹

The Alexandrian Epitome of Galen’s Book

[On] the Medical Sects

<Entitled Hairesis>²

Using the method of commentary and abridgment

[The parts of medicine]³

(1) Some people divide medicine into two parts, and some divide it into five parts.

(2) Those who divide it into two parts say that some of it is theory⁴ and some is practice.⁵ The theory is divided into three parts: first, the theory of natures; second, the theory of causes; and, third, the theory of

¹ Five manuscripts add formulas, such as “My Lord, make it easy by Your mercy,” that are not part of the original text.

In a late MS, a reader has copied the following sensible bit of doggerel:

“Among the sayings of al-Shaykh al-Raʾis Abū ʿAlī Ibn Sīnā [Avicenna] is:

Medicine all in two verses is found;  That brevity ever gives beauty is sure.
If little you eat, then from eating refrain,  Good health in digestion will always be yours.
The heaviest burden to be laid upon souls  Is food thrust straight down upon food.”

² Replacing the following phrase in some MSS.

³ Paragraphs 1–4 are introductory material not epitomizing a specific section of Galen’s book.

⁴ This word could also be translated “knowledge” or “science.”

⁵ The outline of medicine given here is the one used in Ibn Sinā’s Canon. It
في فرق الطب
على المنشط والفلبس
المستشرق إراسيس

[أجزاء الطب]

(1) إن بعض الناس قسمت القلب قسمين ومعهم قسمة خمسة أقسام.
(2) والذين قسموه قسمين قالوا إن منه علم ومنه عمل، والعلم يقسم ثلاثة أقسام، أحدها علم الطبائع، والثاني علم الأسباب، والثالث علم العلامات والذالك، وعلم

وحسن القول في البيتين درج
تجلب فالشفاء في الانهضم
وليس على الفوس أشد حالاً

٢٠٩٠٠٥٠٠٦

FS: ﻋﻠﻰ ﻟﻺسكندران: + قمة + AD: مسيرة وقّ: ٦
signs and symptoms. The theory of natures comprises six things: first, the theory relating to the elements; second, the theory relating to the temperaments; third, the theory relating to the humors; fourth, the theory relating to the organs; fifth, the theory relating to the faculties; and, sixth, the theory relating to actions. The theory relating to the causes comprises the theory of antecedent causes, the theory of preceding causes, and the theory of cohesive causes. One part of the theory of signs and indications is the knowledge of what is presently the case. Such signs are specifically called “indications.” Another part is the knowledge of what will be, which is called “prognosis” of what will be.” The last part is the knowledge of what formerly was, which is called “mnemonics.” Practice is divided into two parts, one of which is hygiene and the other therapy. Hygiene is divided into three parts: first, hygiene itself; second, prophylaxis; and, third, nutrition and recuperation by regimen. This regimen may be a regimen for the bodies of old men, a regimen for the bodies of children, or a regimen for those convalescing has parallels in Galen’s On the Parts of Medicine and fits with the curriculum implied by the sixteen books of Galen studied in the Alexandrian curriculum. See Galen, On the Parts of Medicine, 24–49. This particular work is lost in Greek but survives in Arabic and Latin translation. It has, incidentally, a good deal to say about the views of the Empiricists.

6. Three manuscripts contain the following marginal gloss: “A gloss by our authority Amin al-Dawla [Ibn al-Tilmīdh]: There is no need to mention spirits, since they are included under the humors, the spirits being their vapors.” This apparently refers to the science of the faculties, corresponding to Galen’s On the Natural Faculties, also part of the Alexandrian medical curriculum and of which the Alexandrians made an epitome. This is the first of the glosses apparently by the eminent Baghdad physician Ibn al-Tilmīdh; see pp. lxvii–lxviii above and appendix 1, s.v “Ibn al-Tilmīḍh.”

7. In Greek, καταρκτικόν, προηγούμενον, and συνεκτικόν, respectively. They refer respectively to the sensible external conditions leading to disease or health, such as exposure to cold; the internal, not directly sensible conditions of the body that lead to disease, such as an imbalance in the humors; and the sufficient cause for a state of disease or health. The last is also translated in Arabic as sabab màsik and in English as “containing cause.” For the historical issues connected with these terms, see Galen, On Antecedent Causes, esp. 31–37 and 81–125.

8. Some MSS read: “knowledge.”

9. Some MSS add: “and is no more.”

10. One MS has the marginal gloss: “It might be asked how the regimen of healthy people may be divided into regimens for children and old men, without mentioning adolescents and young adults. The reply is that only the two extremes are mentioned, and the other two are contained within them.”
الطبران يجري ستة أشياء، أحدها العلم بأمر الأسطح، والثاني العلم بأمر الأضلاع، والثالث العلم بأمر الأفراض، والرابع العلم بأمر الأقعاس، والخامس العلم بأمر التقوي، والسادس العلم بأمر الأفعال. فما أن العلم بأمر الأسباب فنفه العلم بأمر الأسباب البادية، ومنه العلم بالأسباب السابقة، ومنه العلم بالأسباب الواضحة. ومن فنفه العلم بما لا يجوز ويتال له هذه العلامات خاصة دلال، ومنه العلم بما يكون، ويتال لهذا سابق النظر ماداً ما يكون. ومنه العلم مما قد سلف، ويتال لها مذكرة بما قد سلف ومضى. وأما العلم فنفه قسم من شروح الصفة، والآخر اختلاف الصفة، وحروف الصفة يقسم ثلاثة أقسام، أحدها حروف الصفة، والآخر اختلاف الصفة، والأخير التقدم بالحروف، والثالث النحو والإيضاح بالتدبير، وهذا التدبير منه تدبير أبدان الشيوخ ومنه تدبير أبدان الصبيان، ومنه تدبير أبدان التالين من الأعضا، وأما اختلاف الصفة، فإنه ما يكون بالتدبير ومنه ما.
from diseases. Therapy may be accomplished by regimen, by surgery,\textsuperscript{11} or by the use of drugs. Surgery may be to the flesh (such as incision,\textsuperscript{12} stitching, cutting, or cauterizing), or it may involve the bones (setting a broken bone or reducing a dislocated bone).

(3) Those who divide medicine into five parts say that its parts are the theory of natural things, which are the six that we mentioned; the theory of causes, which are the three previously mentioned; the theory of symptoms, which are the three we described before; hygiene; and therapy. They say that hygiene is divided into three parts: first, the part that preserves the healthy temperament as it is, which is said to be hygiene strictly speaking; second, the part that removes the causes from which diseases arise\textsuperscript{13} while the body is healthy, which is called prophylaxis; and, third, nutrition and recuperation by regimen. The kinds of regimen are those three that we mentioned.\textsuperscript{14} They say that therapy is also divided into three parts: first, the regimen of food and drink, exercise and rest—both of the soul and of the body—and sleep and wakefulness; second, surgery and its varieties, which are those we mentioned before; and, third, the use of drugs, both those that cause change and those that purge.

\textsuperscript{11} Literally, “treatment by the hand,” translating the Greek χειρουργία, “working by hand,” or surgery.
\textsuperscript{12} A late MS adds the gloss: “That is, to be cut.”
\textsuperscript{13} One MS has the gloss: “In a general sense, disease occurs by the introduction of that which is not natural and which is such as to cause actual harm in the first instance.”
\textsuperscript{14} A gloss in several MSS reads: “That is, the regimen of the old, the young, and the middle-aged.”
في فرق الظُبّ

يكون بعلاج اليد ومنه ما يكون باستعمال الأدوية، والعلاج باليد منه ما هو في الله مثل البط وصلخ الحياة والقطع وثاني، ومنه ما هو في العظام مثل جبر العظام المكسور، وإصلاح العظام المكسورة.

(3) وأما الذين تعمموا الطب خمسة أساقم، فقالوا إن أساقم العلم بالأشياء الطبيعية، وهي تلك السبعة التي ذكرها، والعلم بالأشياء، وهي تلك الثلاثة التي تقدم ذكرها، والعلم بالدلائل، وهي تلك الثلاثة التي وصفناها قبل، وحفظ الطبعة واجتلاف الطبع، وقولوا إن حفظ الطبعة يقسم ثلاثة أساقم، أهدها الجزء الذي يحفظ المرس.

اللصفي على ما هو عليه، وقيل له حفظ الطبعة المالطة، والإخبار بالتدبير، وأصناف التدبير هي تلك الثلاثة التي ذكرناها. وأما تدبير الطبع، فقولوا إن تقاسما أ_issues ثلاثة أساقم. أهدها التدبير بالمطعم والمشروب والحركة والسكن ما كان من ذلك للنفس وما كان منه للبدن والثوب والبوصة، والآخر علاج اليد وأصنافه هي تلك التي ذكرناها قبل. والثالث استعمال الأدوية ما كان منها يغر وما كان منها يستفع.
[The sects of medicine]^{15}

(4) There are three sects of medicine: first, the sect of Empiricists,\(^{16}\) whose adherents employ experience alone; second, the sect of Rationalists,\(^{17}\) whose adherents employ both experience and inference; and, third, the sect of the Methodists,\(^{18}\) who employ neither experience nor inference. The prominent adherents of the Empiricist sect were Acron of Agrigentum,\(^{19}\) Philinus of Cos,\(^{20}\) Serapion of Alexandria, Sextus [Empiricus], and Apollonius [Empiricus]. The prominent adherents of the Rationalist sect were Hippocrates, Diocles [of Carystus], Praxagoras, Philotimus, Erasistratus, and Asclepiades. Those who arose to support the Methodist sect were Themison of Laodicea, Thessalus [of Tralles], Mnaseas, Menemachus, and Soranus.\(^{21}\)

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15. The Arabic word *firqa*—like the Greek *aíresi*ς, which it translates—does not necessarily carry all the connotations of the English “sect” and may mean no more than a shared trend of thought. It does tend to be a term used to refer to those one disagrees with.
16. Rendering *ἐμπειρικοί*, “experienced.”
17. Rendering *λογικοί* (Rationalists), or *δογματικοί* (Dogmatists). The Arabic name is literally “the companions of *qiyās*,” which can mean syllogism, analogy, or inference.
18. *Aṣḥāb al-ḥiyal* (the people of tricks), a slightly pejorative rendering of the Greek *μεθοδικοί*.
19. Appendixes 1 and 2 below contain a discussion of these lists of prominent members of the three medical sects, as well as information on the various ancient and medieval physicians and schools mentioned here and elsewhere in this volume.
20. The MSS read this name as the more familiar Philip. I have corrected it, but since there is no MS support for the correction, the error could have been present in the Greek.
21. MSS A and M probably read: “Themison, Thessalus, Menedotus, Menemachus, Mnesitheus, and Mnaseas.”
فرق الطب

(٤) فرق الطب ثالثة، الواحدة فرق أصحاب القبرة. وأهلها يستعملون القبرة، وحدها، والآخرة فرق أصحاب القياس، وأهلها يستعملون القياس وقياس معًا، والثالثة فرق أصحاب الحيل، وأهلها ليس يستعملون القبرة ولا القياس، والذين قاموا بتعبت فرق أصحاب القبرة أقرن الأقراغنيطي وفيلوس التراقي، وسارافون الإسكندري وسفنس، وأبوليوس، والذين قاموا بتعبت فرق أصحاب القياس إنبرط، وديلويس، وفكاسا غورس وبولوثوس وأراسطراطيس وأستيلياذس، والذين قاموا بتعبت فرق أصحاب الحيل ثامينس، الأوديتي، وثاسيس، ومنماخوس ومناساس وسورانوس.

٢٠
Commentary on chapter 1 of Galen’s book
On the Medical Sects

[The definition of medicine]

(5) Soranus defined medicine in this way: “Medicine is the knowledge of matters related to health, matters related to disease, and matters that relate neither to health nor to disease.” Herophilus said, “Medicine is the knowledge of matters related to health, which are healthy bodies, causes preserving or effecting health, and signs indicating health; matters relating to disease, which are diseased bodies, causes effecting disease, and signs indicating disease; and matters related neither to health nor disease, which are the body that has that state, the cause effecting it, and the signs indicating it.”

(6) Causes are of two kinds, some healthful and some causing disease. There are two species of healthful causes: some preserving existing health, and some restoring and bringing health after it has been destroyed. There are also two species of causes leading to disease: those that preserve existing disease, and those that attract a disease that had not been there before. The causes of health that preserve existing health are called the regimen of the healthy and are based on food,
شج الباب الأول
من كتاب جالينوس في الفرق
حد الظله

(5) قال سورانوس في حد الظله إن الظله معرفة الأمور الصحيحة والأمور المرضية والأمور التي ليست بحقيقية ولا مرضية. وقال إيرو فيلس إن الظله معرفة الأمور الصحيحة وهي الأسباب الحافظة والناطقة للحقيقة والعلامات الدالة على الصحة والأمور المرضية. وهي الأسباب المرضية والأسباب الفاعلة للمريض والعلامات الدالة على الظرف. والأمور التي ليست بحقيقية ولا مرضية. وهي البديل الذي حصل هذا الحال، والسبب الفاعل لذلك والعلامات الدالة عليه.

(6) الأسباب صنفان منها صحيحة ومنها مرضية. والصحيحة نوعان منها ما يحفظ الصحة موجودة ومنها ما يجرجج للصحة بعد فسادها. والمرضية أيضًا نوعان. منها ما يحفظ المرض الموجود. ومنها ما يجهل مرضًا لم يكن. وما كان أيضًا من أسباب الصحة حافظًا للصحة الموجودة. فهو يسمى تدبير الأصحاء، وكون

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| DSY ٣٥ | والأمور التي | .. مرضية | .. صحيحة |
| S: A \^ ٣٧ |: DSY ٣٦ | والعلامة |: هذه |
| حاشية له |: حاشية له |: S\(^h\) |: S\(^h\) |
|: A\(^h\) |: A\(^h\) |: فقه له |: قوله |
|: مطافع |: مطافع |: قوله |: قوله |
|: ل مطماع |: ل مطاع |: الذي |: الذي |
|: ينفي على أن الحال |: ينفي على أن الحال |: ليست بحقيقية ولا مرض |: ليست بحقيقية ولا مرض |
|: ولا مرض قول |: ولا مرض قول |: عليه أن الحال |: عليه أن الحال |
|: داخلي للحقيقة والمريض الذي |: داخلي للحقيقة والمريض الذي |: ينفي عليه أن الحال |: ينفي عليه أن الحال |
|: يعد السبب أسبابًا لهما فقط |: أسبابًا لهما فقط |: لا يوجد ему |: لا يوجد العلة |
|: أيضاً |: أيضاً |: ينفي عليه أن الحال |: ينفي عليه أن الحال |

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| AM ٤١ |: D: ٤٠ |: يحدث |: M |

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| DSY ٣٦ | والامة |: حشة |: هذه |
| S: A |: DSY ٣٥ | والامة |: هذه |
| حاشية له |: حاشية له |: S\(^h\) |: S\(^h\) |
|: A\(^h\) |: A\(^h\) |: فقه له |: قوله |
|: مطافع |: مطافع |: قوله |: قوله |
|: ل مطماع |: ل مطاع |: الذي |: الذي |
|: ينفي على أن الحال |: ينفي على أن الحال |: ليست بحقيقية ولا مرض |: ليست بحقيقية ولا مرض |
|: ولا مرض قول |: ولا مرض قول |: عليه أن الحال |: عليه أن الحال |
|: داخلي للحقيقة والمريض الذي |: داخلي للحقيقة والمريض الذي |: ينفي عليه أن الحال |: ينفي عليه أن الحال |
|: يعد السبب أسبابًا لهما فقط |: أسبابًا لهما فقط |: لا يوجد ему |: لا يوجد العلة |
|: أيضاً |: أيضاً |: ينفي عليه أن الحال |: ينفي عليه أن الحال |

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| AM ٤١ |: D: ٤٠ |: يحدث |: M |

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| DSY ٣٥ | والامة |: حشة |: هذه |
| S: A |: DSY ٣٦ | والامة |: هذه |
| حاشية له |: حاشية له |: S\(^h\) |: S\(^h\) |
|: A\(^h\) |: A\(^h\) |: فقه له |: قوله |
|: مطافع |: مطافع |: قوله |: قوله |
|: ل مطماع |: ل مطاع |: الذي |: الذي |
|: ينفي على أن الحال |: ينفي على أن الحال |: ليست بحقيقية ولا مرض |: ليست بحقيقية ولا مرض |
|: ولا مرض قول |: ولا مرض قول |: عليه أن الحال |: عليه أن الحال |
|: داخلي للحقيقة والمريض الذي |: داخلي للحقيقة والمريض الذي |: ينفي عليه أن الحال |: ينفي عليه أن الحال |
|: يعد السبب أسبابًا لهما فقط |: أسبابًا لهما فقط |: لا يوجد ему |: لا يوجد العلة |
|: أيضاً |: أيضاً |: ينفي عليه أن الحال |: ينفي عليه أن الحال |

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| AM ٤١ |: D: ٤٠ |: يحدث |: M |

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| DSY ٣٦ | والامة |: حشة |: هذه |
| S: A |: DSY ٣٥ | والامة |: هذه |
| حاشية له |: حاشية له |: S\(^h\) |: S\(^h\) |
|: A\(^h\) |: A\(^h\) |: فقه له |: قوله |
|: مطافع |: مطافع |: قوله |: قوله |
|: ل مطماع |: ل مطاع |: الذي |: الذي |
|: ينفي على أن الحال |: ينفي على أن الحال |: ليست بحقيقية ولا مرض |: ليست بحقيقية ولا مرض |
|: ولا مرض قول |: ولا مرض قول |: عليه أن الحال |: عليه أن الحال |
|: داخلي للحقيقة والمريض الذي |: داخلي للحقيقة والمريض الذي |: ينفي عليه أن الحال |: ينفي عليه أن الحال |
|: يعد السبب أسبابًا لهما فقط |: أسبابًا لهما فقط |: لا يوجد ему |: لا يوجد العلة |
|: أيضاً |: أيضاً |: ينفي عليه أن الحال |: ينفي عليه أن الحال |

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| AM ٤١ |: D: ٤٠ |: يحدث |: M |
drink, moderation in exercise, and bathing. The causes that bring about health that had not previously existed are called treatment. Some of these causes evacuate what ought to be removed from the body, such as letting blood from a vein and purging by means of a drug; and some change a state that needs to be changed—either from outside, such as by a poultice, or from inside, such as drinking cold water.

(7) All physicians are in agreement about the general purpose of medicine and share a common view, for all of them seek to acquire health for the body. However, they disagree concerning the existence of the things by which health may be gained and how they may be known. This is because the Empiricists claim that these things may become known only through experience. The Rationalists claim that they do not become known by experience alone but, rather, by experience that is combined with an inference indicating it. The Methodists profess to reject experience and the use of syllogism, but in fact they employ both of them.

(8) The first two sects are known by various names. Since the Empiricist sect seeks to know the things by which health may be acquired by experience only, they are called the empirical sect or the sect that relies on memory. The Rationalist sect, which employs deduction, is called rationalist, dogmatic, and the ones who ascend from matters apparent to sensation to matters apparent to the mind.

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referred to only in a general way. It actually falls into the two divisions of health and disease, for which reason he makes the causes causes for these two classes only.” There is a grammatical problem with the gloss, but the point is clear—to explain why the epitomist does not mention causes of states related neither to health nor disease.

25. One MS glosses this as “That is to say, drugs.”
26. Galen himself does not mention the Methodists until chapter 6.
27. K 1:65; H 2; Ga 15: τηρητικήν, μνημονευτικήν.
في فوق الطب

باللحم والشرب والقصد في الرايضة والاكلام. وما كان منها يحدث صحة ليست
بوجودة. فهو يسمى مداوأة. وبعض هذه الأسباب يستغرف من بدن ما يحتاج
إلى استفراغ بمنزلة فصد العرق والإسهال بالدواء. وبعضها يغير هيئة ما يحتاج إلى
تغييره، أما من خارج منزلة الصاعد وما من داخل منزلة شرب الماء البارد.

(7) وجمع الأطباء متفقون على تمام غرض الطب، مشتركون فيه إذ كان
جميعهم إما يطلبون إفادت البدن الصحة، إلا أنهم يختلفون في وجود الأشياء
التي تستفاد بها الصحة واستخراجها. وذلك لأن: أصحاب الطب يلزمون أن هذه
الأشياء تستخرج بالقريحة وحدها. وأصحاب القياس يلزمون أنها لا تستخرج بالقريحة
وبحدها لكن بالقريحة التي يكون معها تقياس يستدل به. أما أصحاب الحيل. فإنهم
يلتsson إرذال القريحة واستعمال القياس بالكلام، فأما بالنفع، فهم يعيدون
منهما جميعا.

(8) كل واحدة من الفرقتين الأولتين تمتنى بأسماء شقي. أما فئة أصحاب
التجربة. وهي التي تستخرج الأشياء التي تستفاد بها الصحة بالقريحة وحدها. فقال
لها الحزنة والفاصلة والمنذرة. وأما فئة أصحاب القياس التي تستعمل الاستدلال ل.
فقال لها القياسية وذات الرأي وذات الزيادة، من الأمور الظاهره للمبص إلى
Those who belong to each of these two sects are called by names derived from the names of their sects. Those who employ experience are called Empiricists and practitioners of memory. Those who employ inference are called Rationalists, Dogmatists, and ascenders from the thing that is apparent to sensation to the thing that is understood by the mind. Derived names require three things: first, that the derived name have something in common with the name from which it is derived; second, that the meaning of the derived name have something in common with the meaning of the name from which it is derived; and, third, that the final syllable of the derived name be different from the final syllable of the name from which it is derived.
الأمور الظاهرة للعقل، وأهل كل فئة من هاتين الفرقتين يسمون بأسماء مشتقة من أسماء وفِقْهِم، فأما أصحاب الّثّارب فقد قالوا لهم الجزرون والحافظون والمذگرون، وأما أصحاب القياس فقد قالوا لهم القياسون وذوي الرأي وذوي الرتقا من البنياء الظاهرة إلى الذي يعرف بالعقل. يحتاج في الأسماء المشتقة إلى ثلاثة أشياء: أُحدها أن يكون الاسم المشتق مشتركًا للاسم الذي منه استُقِب، والآخر أن يكون معناه مشتركًا معنىً. ذلك، والثالث أن يكون آخر مقطع الاسم المشتق خالقًا لآخر مقطع الاسم الذي استـقـبـهـ.
(9) Experience has five parts: first, natural, such as a nosebleed, sweating, releasing the bowels, and vomiting; second, accidental, such as drinking cold water and wine and other such things; third, voluntary, those whose occurrence is from a dream, omen, or soothsayer; fourth, imitation, which is when the physician imitates, either by nature, by accident, or by incidence; and, fifth, transition from the thing to what is similar to it, either from an organ to an organ, as in transferring from the upper arm to the thigh, or from a disease to a disease, as from the disease known as erysipelas to the disease known as herpes, or from a drug to a drug, as in transferring from quince to medlar.
شرح الألب الثاني
من كتاب جالينوس في فرق الطب

المادة الطبية

(9) أجزاء الجرّة خمسة. أحدها الطبيعي بمنزلة الزعاف والعرق واستطلاع البطن والثدي، والثاني العرضي بمنزلة شرب الماء البارد والشراب وغير ذلك مما أشبهه والمثلث الإرادي الذي كونه وثباته: إما من المنام، وإما من الزجر، وإما من المتكين، والرابع المشهوب، وهو أن يشبه الطبيب إما بالطعع وإما بالعرض وإذا بالتفاق، والخامس مثل الثاني إلى ما هو مشابه به إما من عضو إلى عضو بمنزلة النقطة من المضاد إلى المضاد، وإما من علة إلى علة بمنزلة النقطة من العلة المعرفة بالحمرة إلى العلة المعرفة بثمرة.

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قال النحيل أبوها: القسمة يجب أن.. [؟ آخر] أجزية تف. .-

المشيحة والقلمة

فأما القسمة والقلمة فإفرمان مقام الألة المستخرج بها. . . المفيدة للمعجة وأما التشكيل بالظبيبة والإرادة والإلغاء. . . فجري بحي الماداة التي. . . F: الإرادي 67

فم: العضل
(10) This division may be made in another way, for it is said that experience has four parts: first, incidence, whether with respect to nature or with respect to accident; second, the volitional; third, the imitative; and, fourth, the transition from the thing to what is similar to it. Thirty-five Two of the four parts into which experience is divided serve as the matter from which it is drawn; these are natural and accidental incidence and the voluntary. Two serve as the instrument for the deduction of the things by which health is acquired; these are imitation and transition from the thing to that which is similar to it.

(11) There are three sorts of transition from the thing to that which is similar to it. Thirty-six The first is when drugs are transferred from a disease to another disease resembling it—as when cooling drugs are transferred from the swelling known as erysipelas to the disease known as herpes, since these are two diseases that resemble each other in heat and red color. The second is when drugs are transferred from an organ to another organ similar to it—as when something is transferred from the upper arm to the thigh, since each of the two organs resembles the other in nature and form. The third is when treatment is transferred from one drug to another—as when medlar is used in place of quince in treating diarrhea, due to these two drugs resembling each other in causing constipation.

(12) Imitation is also of three sorts. Thirty-seven This is because, in what he does, the physician follows an example either of nature, of accident, or of volition. An example of his following the example of nature is when he sees that someone afflicted by a fever of the blood has a nosebleed and that his nosebleed benefits him. Therefore, when he encounters someone else with a fever of the blood, he lets blood from a vein. An

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35. K 1:66; H 2; G a 17-18. One MS reads: “nomenclature.”
36. K 1:68; H 4; G a 20; this passage follows Galen’s order and examples exactly.
37. K 1:67; H 3; G a 18.
وقد تقسم هذه القسمة بضرب آخر، فيقال إن أجزاء القرية أربعة. أحياناً الاتفاق ما هو من مدة الطبع وإما من قبل السمع، والآخر الإرادي، والثالث يعقده وربما إلى مشبه، والرابع مثال من الشيء إلى شيء. ومن هذه الأجزاء الأربعة التي تقسم القرية عليها Reply: 

التفاقي بين مواد الماء التي تسمى منها، وها الاتفاق إم إم الإرادي والإرادي يتقاسم وربما يعنى مواد الطبع وما أنقة بغير القصة، والطبيعة إم إم الإرادي. وإم إم إم الإرادي يتقاسم الأشياء التي تستفيد بها الصغيرة، وهو التشبيه ونقل الشيء إلى ما هو شيء به.

والميزة من علة إلى علة تشبهها بمنزلة ما ينقل "الأدبية للمادة" من الموسم المعلوم بالحجة إلى علة المعرفة بالفم" لأن هاتين علنتان متشابهتان" في الحارة وحرة اللون. والثاني أن ينقل الأدبية من عضو إلى عضو تشبه به بمنزلة ما ينقل الشيء من العضد إلى نجد مشابه ككل واحد من هذين العضدين للآخر. في الطبع وفي البيئة، والثالث أن ينقل العلاج من دواء إلى دواء بمنزلة ما يستعمل في الاستطالة. مكان الفرعولة الزخرفة "للمشاهدة كل واحد من هذين الدوامين الآخر" في القلب.

والتشبيه أيضاً يكون على ثلاثة أضلاع. وذلك أن الطبيب "متكلم" فيما يفعله إما بطبع وإما بالعرض وإما بالإرادة. وامتثاله الطبع يكون بمنزلة ما إذا هو رأى أن صاحب حضه الدم لم يرفع بذلك، استعمل في غيره من أصول هذه
example of his following the example of accident is when he sees that someone who has a fever of the blood happens, for some reason, to bleed from a cut that he has received in a part of his body and that he is helped by it. The physician then cuts the vein of another such person and draws blood from him. He follows the example of what occurs by volition in the case when he sees a man in a dream, is led by an omen in his soul, or is told by a soothsayer to have blood let. He thus feels an urge to do so and submits to bloodletting by his own volition. He then benefits from the bloodletting, which the physician thus employs on others who have diseases similar to his.

(13) According to the Empiricists, there are two ways in which things are apprehended and understood: by vision, which is called autopsy, and hearing, which is called history.

(14) There are five species of experiences, which are the parts of experience: first, natural; second, accidental; third, voluntary; fourth, imitative; and, fifth, transition from something to its like. If these five parts are combined as genera, they become four: incidence, volition, imitation, and transition. There are seven if they are distinguished as species: natural; accidental; volitional; imitative; and transitional, this last including three species—from disease to disease, from place to place, and from drug to drug. This division can also be made in another way, for it is said that experience is established by two things, one of them being the matter from which the person acquires experience, and

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38. A gloss in one MS reads: “He means those things employed by the Empiricists.”

39. K 1:67; H 3; G\* 20: αὐτοψία, mushāhadah in G\* but mubāsharah here; and ἱστορία, khabar in G\* but riwāyah here. These are technical terms of the Empiricists referring respectively to one’s own accumulated medical observations and to one’s knowledge of the experience of others.

40. Three MSS have the gloss: “The natural and the accidental have been combined in incidence so that they become four, in the same way that he says concerning the natural, ‘By chance there was an incidence of nosebleed . . . ’, and concerning the accidental, ‘There was an incidence in which he was cut and blood flowed from it.’”
في فقر الطب

الذين فصد العرق. وأما مثاليه العرض، فهي مزيزة ما إذا هو رأى أن صاحب جهه الدم
عندما ألقى أن موضوع من بدنه أن يكون بسبب من الأسباب وفاسله دم، فانتفع
بذلك استعمل في غيره فضر عرق وإخراج الدم منه، وأما مثاليه الإرادة. هي مزيزة ما
إذا رأى إنسان في الليل أو وقع في نفسه بالزج أو من العكس، أن ينفد. فالت
نفسه إلى ذلك واقدح إرادته وانتفع فبصفته استعمل الظبيب في غيره من نم، وب مثل
تلك العلة فصد العرق.

(13) إدراك علم الأمراض، ومعناها تكون على ضرورتين: عند أصحاب الظبيب.

إما بالبصر ويقال له الباهز، وإما بالسمع، ويقال له الزوارة.

(14) الظبيب خمسة أنواع، وهي أجزاء التشبي، أحمد الظبيب، والثاني
المرض والثالث الإراده والرابع المشبه والخامس الناقل من التهيب، إلى شبهه،
وهذه الخمسة الأجزاء إذا حصلت أجاسا كانت أربعة. وهي الاتفاق والإرادة
والتشبي والنقل، وإذا فست أنواع كانت سبعة، وهي الظبيب، والمرضي
والإراده، والمشبه والنقل، وهو ثلاثة أنواع. إما من علة إلى علة، وإما من موضع
إلى موضع، وإما من دواء إلى دواء. وهذه القسمة تقسم على وجه آخر، فيقال إن
التجربة تثبت بضعة. أحمد المائدة، الذي تقدم منها صاحب التهيب والآخر النزول، الذي

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the other being the form that he uses. Its matter includes the things that occur by nature, the things that occur by incidence, and the things that are done by volition, whether motivated\textsuperscript{41} by a dream, an omen, or soothsaying. Its form includes imitation and the transfer of something to what is like it. Imitation occurs when the physician imitates either what is by nature, what is by volition, or what is by accident. That which is from volition follows either a dream, an omen, or soothsaying. The transfer of something to what is similar to it is either from disease to disease, from organ to organ, or from drug to drug. If nature is mentioned to you here, understand it to mean that faculty governing the body of an animal. That is because this word—that is, “nature”—is employed in three senses: first, the substance and existence of each thing; second, the governing faculty of the body of an animal; and, third, the temperament and usual state of the body.

\textsuperscript{41} Two MSS have the gloss: “That is, the one exercising volition. If that is the case, then it would be better to say, ‘Among the efficient causes of the motion to it is . . . ’”
في فق الظلم

لا يستعمله ووامذها هي الأشياء التي تكون بالطبع والأشياء التي تكون بالاتفاق.
والأشياء التي تعمل بالإرادة وتكون "الحركة" إليها إما من المناخ وإما من الزمر وإما من التكهن، ونوعها التشبيه ونقل الشيء إلى شبهه، والتشبيه هو أن يشبه الطبيب إما بما يكون من الطبع وإما بما يكون من الإرادة وإما بما يكون من العرض،
wالذي يكون من الإرادة إما أن يبيع المناخ وإما أن يبيع الزمر وإما أن يبيع التكهن،
ونقل الشيء إلى شبهه يكون إما من علة إلى علة وإما من عضو إلى عضو وإما من دواء إلى دواء، وإذا قيل لك هاهنا طبع أو طبيعة فهم أن معنى ذلك هو "القوة المديرة لبدن الحيوان" وذلك أن هذا الاسم أعني طبعا أو طبيعة تصرف على ثلاثة وجه، أدها جهر كأي واحدي من الأشياء ووجوده، الثاني القوة المديرة لبدن الحيوان، والثالث مراح البدن وعادته له.
(15) Some of the causes that alter the body alter it necessarily. These are six: first, the air surrounding it; second, exercise and rest; third, the things that are eaten and drunk; fourth, sleep and wakefulness; fifth, evacuation and retention; and, sixth, the disturbances of the soul, such as grief, worry, fear, joy, and anger. There are other causes that do not alter it necessarily, such as the sword, beasts of prey, stones, arrows, and fire.

(16) The temperament of air may be exactly moderate, in the way that it is in spring; for the air in spring is moderate with respect to heat, coldness, moisture, and dryness. It may be immoderate overall, in the way that it is in summer and winter; for the air in summer is excessively hot and dry and in the winter is excessively cold and moist. It may be moderate in some respects and immoderate in others, as is the case in autumn; for the air in autumn is moderate with respect to heat and coldness but immoderate with respect to moisture and dryness, since it is inclined to be dry. In another respect, it is immoderate with respect to heat and coldness because its temper in the day is...
شرح الباب الثالث
من كتاب جالينوس في فرق الطب

(15) الأسباب المفيرة للفقس منها مالا بدمن أن يفيّره ضروة، وهي ستة:
أحدها الهواء المحيط به اللتين الحركة والسكون، والثالث: الأشياء التي تؤكل
وتشرب، والرابع النوم واليقظة، والخامس الاستفراغ والاحباس، والسادس
عوارض النفس مثل القم والهم والهف والفرح والغضب، ومنها ما ليس تلبسها أياه
ضروة مبزجة السيف والسع والسحر والسهم والثار.

(16) وترجع الهواء إما أن يكون علي غاية الاعتدال مبزجة ما يكون كذلك
في الربيع، فإن الهواء في الربيع "معتدل" في الحر والبرد والزروتية واللبس، وإنما
أن يكون حلف الاعتدال جملة مبزجة ما يكون كذلك في الصيف أو في
الشتاء، فإن الهواء في الصيف يفرط عليه الحر واللبس وفي الشتاء يفرط عليه البرد
والزروتية. وإنما إن يكون في بعض الحالات معتدلًا وفي بعضها غير معتدل مبزجة ما
يكون كذلك في الخريف لأن الهواء الخريف معتدل في الحرارة والبرد ودهشة غير معتدل في
الزروتية واللبسية، وذلك أنه إلى اللبس لحيه من جهة أخرى أيضًا غير معتدل
في الحرارة والبرودة لأن مراجه في النها ركّة لا يستوي، وذلك أنه بالعودات يكون

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| إحدى: ADMY 96 | في واستوى |
| في: ADMY 98 | في
uneven, since in the early morning it is colder, while in the middle of the day it is hotter. The temper of the air can be divided in another way, for it is said that the temper of the air can be moderate in the way that it is in spring; for even though people think that it is hot and moist, it is not actually so but is actually moderate. It may be hot and dry in the way that it is in summer, or cold and moist in the way that it is in winter. Finally, it may be moderate with respect to heat and coldness but immoderate with respect to moisture and dryness in the way that it is in autumn, when people imagine that it is cold though it actually is not.

(17) The temper of the air must either be natural—which is the temper appropriate to the time of year, as we have described above—or unnatural. If it is unnatural, then it has changed. Its change is either because its substance has changed—which gives rise to epidemics—or because its quality has changed. The change of its quality can occur in one of two ways: either because its natural quality has increased, as can occur in summer when the heat and dryness are excessive, or because it has changed and been converted into an opposite quality, in the way that summer can become moist if there is excessive rain. The change of quality in each of these two ways can occur either in the four seasons of the year, or in three of them, or in two, or in one. The natural temper of the air occurs in accordance with the current time of year and in accordance with the country. That is because some lands are northern and thus cold and dry, some southern and thus hot and moist, some eastern and thus moderate in temper, and some western and thus moderate in temper. Change of air may also occur in accordance with the orientation of the place, for it may face north, south, east, or west.

avoid being exposed to them, unlike swords and wild beasts. Galen mentions most of these in his third chapter but not systematically. Since Galen nowhere lists the six in the form that became known later, the Alexandrians may be their source. On the six non-naturals, see Rather, “Six Things Non-Natural”; Jarcho, “Galen’s Six Non-Naturals”; and Fitzpatrick, “Galen’s Six Non-Naturals.”
في فرق الطبل

أبرد و في إنسان النهار آخر، وقد يقسم مراة الهواء كلمة أخرى، فيقال إن
مراة الهواء إذا معتدل معيزملة ما يكون كذلك في الزَّيْن الذي ظَنَّ قوم أنه حار رطب ولبس هوكذلك بل هو معتدل. وإذا حار يابس معيزملة ما يكون كذلك في الصيف، وإما بارد رطب معيزملة ما يكون كذلك في الشتاء وإما معتدل في الحَر والبرد غير
معتدل في الطاقة واليس معيزملة ما يكون كذلك في الريف الذي ظن قوم أنه بارد ولبس هو بارد.

(17) و تماة الهواء لا يخلو من أن يكون إما طبيعة، وهو المزاج الذي يكون

بحسب الوقت الحاضر من أوقات السنة كما وصفنا قبل. وإما خارجًا عن الطبيعة،
وإذا كان كذلك فقد ينقر، وتغيره يكون إما لأن جوهره يتغير وحيد عن ذلك ويا،
وإما لأن كيميته يتغير، وتغير كيميته يكون على أحد وجهين، إما لأن كيميته الطبيعية
تزيد معيزملة ما يعرض للصيف فإن يكون مغرط الحرارة مفتوح الهواء، وإما لأنه ينقر
وينقلب إلى كيمياء مضادة لكيميته، معيزملة ما يعرض للصيف فإن يكون مغرط الطر رطبًا.
وتغير الكيمياء في كل واحد من هذين الوجهين يكون إما في أربعة أوقات السنة وإما في
ثلاثة منها وإما في أربعًا واحد في واحد. و تماة الهواء الذي هو طبيعة يكون بحسب
الوقت الحاضر من أوقات السنة و بحسب البلد. وذلك لأن البلدان منها شبهة، وهي
باردة يابسة. ومنها جوية، وهي حارة رطب، ومنها شديدة. وهي معتدلة المزاج,
ومنها جوية. وهي معتدلة المزاج. وتغير الهواء أيضًا يكون من قبل وضع الموضع
إذا يكون يتقلب إما الشمال وإما الجنوب وإما الشرق وإما الغرب.

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F100  يتعير... لكيّمته= ينتقل إلى خلفها | F ٩٩  يتعير... مغرة

AM: A^3 M^3 ١٠٠ | الوضع
The effect of exercise\textsuperscript{44} and rest varies in that exercise has two effects, for if it is moderate it tends to warm,\textsuperscript{45} while if it is excessive it tends to cool.\textsuperscript{46} Rest has a single effect since it is always followed by coldness; and moisture always follows coldness since there is no heat to destroy the moisture. The effects of motion vary in three ways: first, the quality of the motion; second, its quantity; and, third, the quantity of the rest that is mingled with it. If its variation with respect to quality is because it is extremely strong and harsh, it heats, dries, and becomes harder; but if it is because it is weak and is not harsh to the one who does it, in this case its effect is much less, as we have explained. It varies with respect to quantity in that if it is frequent it has the same effect as strong exercise, whereas if it is infrequent it has the same effect as light exercise. It also varies with respect to the quantity of the rest that is mingled with it, for if the mixture is rapid and continuous, it will have the same effect as strong exercise; but if it is slow and intermittent, it will have the same effect as weak exercise. Another kind of variation can be associated with motion: the variation with respect to the matter used in the profession in which the person is engaged. In the case of the man who is a bath attendant, his profession heats and moistens, whereas the profession of the fisherman cools and moistens, as does that of the seafarer. The profession of the hunter heats and desiccates, as does the profession of blacksmiths and goldsmiths; but the art of the plowman cools and desiccates.

\textsuperscript{44} Literally, “motion.”
\textsuperscript{45} A late MS adds: “and moisten.”
\textsuperscript{46} A late MS adds: “and dry.”
في فرق الظلم

(18) الحركة والسكون فعليهما مختلفون. وذلك أن الحركة تفعل ضعفاً لأنها إذاً كانت معتدلة فإن شأنها أن تحمى، وإن أفرطت فإن شأنها أن تزيد. وأما السكون فإنه يفعل فعلاً واحداً لأنه في كل وقت إذاً تتبعه البرودة وتتبع البرودة رطوبة فقد الحارة التي ت défini الزيتونة. أفعال الحركة مختلف من ثلاثة وجهة، أحادية

كينية الحركة، والآخرى قدحاً. والثالث مقدار السكون بحالة من السكون. واحترامها

من قبل الكيفية يكون لأنها إذاً أن تكون قوية شديدة عينة فقط يخف وتصلب

أثر. وإذاً إن تكون ضعيفة لا تضعف بصاحتها، فكأنها فعلاً لما وصفنا أقل. وإذاً

احترامها من قبل مقدارها. فهو أنها إذاً أن تكون كاليرة، ففعل ما تفعله الحركة القوية. وإذاً إن تكون يسيرة فعلما تفعلها القوية. وإذاً اختلافها من قبل

مقدار ما يختلفها من السكون وهو أنها إذاً إن تكون سيئة متوازته. ففعل ما تفعله القوية. وإذاً إن تكون بطة متوازته. ففعل ما تفعله الضعيفة. وقد يتبع الحركة

أيضًا اختلاف آخر من قبل اختلاف المادة التي تستخدمها أصحاب الصناعات. وهي

أن يكون الإنسان قميّا حمأ. فإن هذه الصناعة تحمي وتربن. أو يكون صياد

المثل لأن هذه الصناعة تبز وتربن. وكذلك المادة. أو يجعلها. أن تكون

هذى الصناعة تحمي وتخفع. وكذلك صناعة الحديد والصناعة أو أن يكون

حرارًا لأن هذه الصناعة تبز وتخفع."

٢٠
(19) Water is used necessarily in some circumstances, as when it is used for drink, and in some places not necessarily, as in bathing. There are various kinds of water. Consider stagnant water, which does not flow and is coarse and foul. There is also spring water, which is excellent. The best is from flowing springs, for it heats and cools quickly and is light in weight; and if you look at it, you will see that it is clear and pure, without any discernible qualities, whether of taste or of odor. It is cold in summer and warm in winter. There is also rainwater, which is also excellent, though it quickly becomes putrid. Water from snow and ice is the coarsest in substance, the worst, and the coldest. Some water contains pharmacological potencies, such as salt water, which has the same power as salt; the water that comes from tar pits and whose temper and potency resembles that of tar; sulfurous water, which resembles sulfur in its potency; and the water that comes from alum mines, whose potency also resembles that of alum.

(20) Some foods dry the body—for example, dry bread, millet grain, and rice. Some foods moisten, such as succulent herbs and meats. Some foods warm, such as the foods taken with mustard and pepper; and some cool, such as fruit and the two kinds of cucumber. Some drinks, such as cold water, cool and moisten. Some drinks warm and moisten, such as new wine. Some warm and dry, such as spiced honeyed wine, and some cool and dry, such as drinks made from vinegar and water.

47. “Necessarily” is used in the sense of The Small Art, B23, K 1:367, where it refers to the six non-naturals—the six categories of things that affect health but that cannot be avoided; see pp. 18–19, n. 43, above. Two MSS put a section heading before this paragraph: “On the kinds of waters.”

48. Al-qithāʾ and al-khiyāʾ, respectively the Arabic and Persian words for cucumber. While it is possible that only one Greek word is being translated, several kinds of cucumber were known and used medicinally from ancient times; see Encyclopædia Iranica, s.v. “Cucumber.”

49. Khandīqūn. The readers of this text were not sure what it meant. Ibn al-Tilmīdh glosses it as “A drink of honey with spices.” Another MS has the gloss: “A plant put into a drink.” It is mentioned in the epitome of The Small Art as a warming drink, where the MSS read it variously as khadiqūn, fandiqūn, khandiqūn, and gandiṭūn; see paragraph 70, p. 21, below. The justification for my translation is Ibn Sinā, Qānūn (Bulaq ed.), 3:368, which gives two recipes in which various spices were mixed with honeyed wine.
في فوق الظل:

19) الماء يستعمل في بعض المواقع ضرورة بمنزلة ما يستعمل في الشرب. وفي بعضها أخرى ضرورة بمنزلة ما ليستعمل في الاستحمام. أوصاني الماء مختلف، وذلك أن منه أجسام لا يجري وهو غليظ، وحقوقي الذي، وحقوقي الجلده وهو جذع وأفلاسه ما كان يخرج من عيون غائرة وحقوقي يبرز سريعاً وهو خفيف الوزن. فإذا نظرت إليه رأيت صاخبًا ولا، وليس فيه شيء من الكفيات ظاهرة لا في المذاق ولا في الزائفة وكون في الصيف بارد وفي الشتاء حار. وحقوقي الماء الأطارات، وهو أيضاً جيد غير أن العفوية تسر إليه، وحقوقي الماء الجلده، وحقوقي أن جوزراً وأبداً وأعله برد. وحقوقي الماء توجد فيه قوى، ذاتية بمنزلة ماء اللام الذي قوة قوة اللام وللما الذي يخرج من عيون القرير الذي يشبه مراجه وقوته قوة القرير، وللما الكابر بار، وهو الذي يشبه الكبري في قوته، وحقوقي الذي يخرج من معدن الشْب وقوته أيضاً قوة الْبِ. 

20) والأطعمة منها ما يخفف البدين بمنزلة الخيز الابيس والمعدس للماء والزيت ومنها ما يزيد منزلة ما يخفف من الأطعمة بالخز وحفو، ومنها ما يزيد منزلة الفاكهة والقهوة والخيار، والأطعمة منها ما يزيد و英特 منزلة الماء البارد. ومنها ما يزيد وتجارب منزلة الشراب الحديث. ومنها ما يزيد وتجارب منزلة المقدسين. ومنها ما يزيد وتجارب منزلة الأشربة التي يخفف بها لحل وملاء.
(21) Sleep and wakefulness have various effects in the body, since sleep strengthens the natural faculty and weakens the psychic faculty. Wakefulness does the opposite, strengthening the psychic faculty and weakening the natural faculty. Sleep is followed by the retention of what is evacuated from the body, whereas wakefulness results in the evacuation of what had been retained in the body. The exact effect of sleep varies in accordance with what it encounters in the body. If it encounters matter in the body that has not been processed or food that has not been assimilated, it processes the matter, digests the food, and heats and moistens; whereas, if it encounters the body pure and empty, the heat is drawn to the innate moisture by which it subsists and destroys it, after which the coldness is left in the body. If sleep encounters the body when there is matter in it whose quantity does not overpower the faculty, it is also beneficial and strengthens the natural heat. If it encounters the body when the quantity of the matter in it overpowers the faculty, it quenches the natural heat. This occurs, for example, in the beginning of periodic fevers at the time when the physician will come in to the sick person and command him to stay awake.

(22) One knows the quality of the things by which health is acquired from the species of the disease that they are intended to treat, and one knows their quantity from the things that are called the “daughters of
(٢١) أن النوم يؤدي القوة الطبية، وخرج القوة النفسية والبطاقة بعقل ذلك تقوى القوة النفسية وترخي القوة الطبية، والنوم يتعرض ما يستفرع من البدن. والبطاقة يتعرض استفراغ ما هو محتفظ في البدن. وضع النوم خصائص مختلفة يوجد بعض منجو تميدي، والنوم الماذة، و помощ الغذاء وأحسنت وربط، وإن صادف البدن نقياً، فالنح الطبيعية تحتوي على القوة النفسية التي تؤثر بها فأنت تعلم عليها عقب ذلك برودة البدن. وإذا صادف النوم البدن أيضاً وليس فيه ماذة مقدارها قاهر القوة، فإن ينافس فيه ماذة مقدارها قاهر القوة، طفلاً الحارة الطبية بينئزة ما يعرض ذلك في ابتداء نوات القوى النفسية، في الوقت الذي يتقدم فيه إلى المريض وتأمر أن يكون نقياً.

(٢٢) كيفية الأشياء التي تستفاد بها الصفة تعرف من نوع الصلة التي يقصد بها لمداواتها، ومقدارها يعرف من الأشياء التي تقابل لها بناة الأركان.
the elements,"50 the evidences upon which the decision on treatment is based. These are, for example, the age of the patient, which can be either childhood, adolescence, middle age, or old age; the temperament of the patient; the present time of year; the weather that day; the place to which he resorts;51 his customary habits; and the trade he engages in. There are nine kinds of temperament: four simple kinds, which are hot, cold, moist, and dry; four composite, which are hot and dry, hot and moist, cold and dry, and cold and moist; and one moderate. There are also various kinds of habits; for some men are in the habit of drinking wine, some are in the habit of drinking water, some are in the habit of eating once a day, some are in the habit of eating twice or three times a day, some are accustomed to having evacuation, and some are not. There are four times of the year: first, spring, which is moderate; second, summer, which is hot and dry; third, autumn, which is dry, moderately cool, but with uncertain weather; and fourth, winter, which is cold and wet.

[The differences between the Empiricists and the Rationalists]52

(23) The Empiricists use the symptoms following from diseases to deduce what it is that they have done many times that has been beneficial. The Rationalists use them to deduce what they ought to do. Take, for example, swelling.53 All swelling is generated from matter belonging to one of the humors that flows into one of the organs. There are four

50. K 1:70; H 5; Gα 25. Galen mentions these as factors that the Rationalist physician must consider when determining the proper treatment for a particular patient; but his text here, at least, is not the source for the term “daughters of the elements,” as a term for the humors.

51. One MS reads: “for the patient to live in.”

52. Commentary on the fourth chapter, according to the modern editions, begins here.

53. K 1:70; H 5; Gα 24–5: An elaboration of Galen’s example, showing how the Rationalist’s methods would cause him to diagnose and treat a hematoma differently than would the Empiricist. Galen gives a similar argument involving rabies; see K 1:73; H 7–8; Gα 30–31.
في فرق الظبط

وهي الشواهد التي عليها مبني الأمر بمثلة سنّ المريض التي إنما أن يكون سنّ صحي وسنّ الشاب وإما سنّ الكهول وإما سنّ الشيوخ. ومراج المريض والوقت الحاضر من أوقات السنة. وحال الهواء في ذلك اليوم، والبلد الذي يأويه، والعادة التي جرى عليها والصناعة التي يعجها. وأصناف المراج، تنسب منها أربعة بسيطة.

وهي الجز والبارد والصيف والبست، ومنها أربعة مركبة. وهي الجز الباس والجز الرطب والبارد الباس والبارد الرطب. ومنها واحد معتدل. والعادة أيضًا أصناف وذلك أن من الناس من عادته شرب الشراب. ومنهم من عادته شرب الماء. ومنهم من قد اعتاد أن يأتي مرة في اليوم. ومنهم من قد اعتاد أن يأتي مرتين أو ثلاثة، ومن الناس من قد اعتاد بالاستمرار. ومنهم من ليعتد ذلك. وأوقات السنة أربعة: أحدها الربيع، وهو معتدل، والآخر الصيف، وهو حار، والثالث الخريف وهو جاد معتدل البرودة معتدل الحال. والرابع الشتاء، وهو بارد رطب.

[فرق بين أصحاب الثمرة وأصحاب القياس]

(٣٢) الأعراض التابعة للأمراض يستدلون بها أصحاب التجارب على ما قد فعلوه مشاركة كثيرة ففعت. ويستدلون بها أصحاب القياس على الشيء الذي ينبغي أن يفعله، مثل ذلك اليوم. فإن كل ورم إنما يتولد من ماده تنصب إلى واحد من

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| الوقت | A\(^{M}_{2}\) | القاهرة
|-------|---------------|-----------|
| ADMY ٢٣٦ | ٢٩٠ | A\(^{M}_{2}\)
| A\(^{M}_{2}\) | الريح: + | F ٤٤٤ | F ٤٤٤ | + البارد | F ٤٤٤ | + البارد |
| ADMY ٢٤٤ | في اليوم | + البارد | F ٤٤٤ | + البارد | F ٤٤٤ | + البارد |
| ADMY ٢٤٥ | + شتاء | F ٤٤٤ | F ٤٤٤ | + شتاء | F ٤٤٤ | + شتاء |
| ADMY ٢٤١ | + شتاء | F ٤٤٤ | F ٤٤٤ | + شتاء | F ٤٤٤ | + شتاء |
humors: blood, which is hot and moist; phlegm, which is cold and moist; yellow bile, which is hot and dry; and black bile, which is cold and dry. Four kinds of swellings are generated from these four humors. The hematoma known as a phlegmona arises from blood. The soft swelling known as an edema arises from phlegm. There is no swelling arising from yellow bile, but the swelling known as erysipelas results from blood tainted with yellow bile. Herpes, not erysipelas, results from yellow bile alone. Finally, from black bile arises the firm swelling, known by its hardness, which is called scirrhus. Suppose that this swelling that we are using as an example is the one that comes from blood and is thus the one known as a phlegmona. When this swelling occurs, the symptoms that follow from it are the inflation of the swollen organ, redness, distention, painfulness, hardness, and resistance to touch. When these symptoms appear, the Empiricist is reminded by them that he has treated swellings like this many times in early stages with garden nightshade and in later stages with chamomile, fenugreek, and linseed, and that these drugs were helpful and beneficial. The Rationalist will deduce from these symptoms that he needs to evacuate the matter that has accumulated in that organ and the excess that has flowed into it and that the organ must be strengthened so that thereafter it will not allow them to flow into it. These two approaches differ from each other. That is because strengthening the organ so that it will not accept anything excessive can only be accomplished by things that restrain and by things that return the organ from excess in temperament to moderation. On the other

54. Reading li-al-mass (to touch) for li-al-kiss (to sensation).
55. A gloss of IT reads: “That is, excessive, meaning additional to what is sufficient.”
الأعضاء من واحد من الأخلطات والأخلطات أربعة. الدم وهو حار رطب، والبلغم وهو بارد رطب، والرئة الصفراء وهي حارزة يابسة، والرئة السوداء وهي باردة يابسة. ينولد عن هذه الأربعة الأخلط أربعة أجناس من الأورام، فتصبح عن الدم الورم الدموي الذي يقال له فلغموي، وتصبح عن البلغم الورم الزخال الذي يقال له أذنبا. وتصبح عن الرئة الصفراء لأن الصفراء، وحدها إذا تحدث عنها اللثة لا ترحة. وتصبح عن الرئة السوداء الورم الجمسي للورم بالصلاة. وهو الذي يقال له سفير وس. فأنزل: "أن هذا الورم الذي مثناه هو ورم من دم، وهو الذي يقال له فلغموي. فإن هذا ورم إذا حدث تبعتها هذه الأعراض، وهي انتفاخ العضو الورم وحمته وتمدده وجهه وصلاحته ومدافعته للحس. وإذا ظهرت هذه الأعراض تذكر بها صاحب التجربة أنه قد اجلم مثلا هذا الورم مراً أكبر في مبدأ أمره بنبئ القبل، وفي آخره بالسماح بالصلاة وزرع الكن، فنفعه ذلك وأنجح فيه. وأما صاحب الفياس، فإنه يستدل بها على أنه يحتاج إلى استراق ما قد حصل في ذلك العضو من الماء والفضل. الذي أنصبت إليه وتقوية العضو حتى لا يقبل ما ينصب إليه منها بعد ذلك، والسبيل في كل واحد من هؤلاء الخضرين غيره في الأخر. وذلك أن تقوية العضو حتى لا تقبل شيئا من الفضائل إذا يكون بالأشياء القابضة، والأشياء التي ترم الفضائل وإفراز المارج إلى اعتداء، وأما
hand, the evacuation of what flowed into it can be accomplished by two means. First, the matter may be blocked and sent back, which is done at first by astringents. Second, what has accumulated and is not going back and is not being restrained or expelled must be evacuated. In later stages that is accomplished by things that warm and relax, for the drugs that hinder and repel are those that are astringent and cooling, while the ones that evacuate are those that warm and relax.56

(24) There are three genera of faculties in the body.57 First, there is the genus of the psychic faculty, which is in the brain. Inferences can be made about it on the basis of the health or weakness of the volitional actions. Second, there is the genus of the vital faculty, which is in the heart. Inferences can be made about it by means of the pulse. Third, there is the genus of the natural faculty. The source of this faculty is the liver. Inferences can be made about it on the basis of the urine and the feces, similar to the wash water of fresh meat just after slaughter.

(25) If the occurrence of the hematoma is from an antecedent cause, such as a blow or stroke, it must be treated at first with things that warm and relax it in order to evacuate the humor that is causing it. If it occurs due to a preceding cause that existed before—that is, from a plethora occurring in the body—it is first necessary to restrain and block the matter until it is evacuated from the body. After that, one returns to things that warm and relax, and the swelling is treated with them. The signs indicating plethora are that the patient is afflicted with sluggishness and torpor, so that he does not move and feels a heaviness in his entire body; he is flushed; his arteries inflate more than is natural; and

56. A gloss of IT reads: “Clear in the manuscript. That is, because some of the drugs that expel this excess from the organ do so by repelling; but if the excess has become such that it cannot be expelled, the expulsive drugs will not be used. Other drugs are evacuant—the ones that warm and relax—so, therefore, they are the ones that are used in the later stages, since, in expelling the excess, one does not wish to damage the essence.” The last two words differ in the MSS, but the sense seems clear.

57. It is not clear why the faculties are discussed here.
استفزاغ ما قد حصل مما انصب إليه. فيكون بأمرٍ، أَحَدُها قَمِّ المَادَة وَرَدَّهَا إلى خلف. وَذَلِكَ يكون في مبدأ الأمر بالأشياء القابض، وَالآخِر استفزاغ ما قد حصل وصار لا يرجع ولا يقتَمَع ولا يندفع. وَذَلِكَ يكون في آخر الأمر بالأشياء التي تحق وترجح لأن الأدوية منها قاعدة، وهي التي تقبض وتبرد، ومنها ما تستفزغ، وهي التي تحق وترجح.

٢٤) أَجَمَاس ما في البَدن من القوى ثلث. أحدها جنس القوة النفسية، وهي التي في الدماغ. وَيَسِدَّل عليها صحة الأفعال الإرادية وضعفها، والآخُر جنس القوة الحيوانية، وهي التي في القلب ويستدَّل عليها بالنضج، والثالث جنس القوة الظيفية. ومبدأ هذه القوة الكبد. ويستدَّل عليها بالبول والبراز الشبيه بفسحة اللَّه الْقُرِّي الْقُرِب العهد بالذَّخُوه.

٢٥) إن كان حدوث الورم الدموني من سبب بِدِيمِنَزِلة الضريرة والصدمة. فَينَهيَ أن يعالج في أول الأمر بالأشياء التي تحق وترجح كما يستفزغ للخلط الفاعل له، وإن كان حدوثه من سبب سابق متقدم، أعني من اعتلاء حافل في البدن. فَينَهي أَوِّلًا أن تقوم المادَّة وتمَعَّح حتى إذا استفزُغ البَدن رجع إلى الأشياء التي تحق وترجح فموجَّل بها، وعلامات الدالة على الامتلاء هي أن يكون الإنسان يعترف كِسْل وقوّة الحركة ويجد نِجَالاً في بِقِيع بَدْنِه. وَيَصِير لَوْنُه أحمر ينتَفَعَ عَرُوْهُ.
his body is distended. Treatment varies in the quantity of that by which it is treated, as occurs when a greater or smaller quantity of blood is removed; in the means that are employed, as occurs when the thing is expelled several times or only once; or else in the entire genus altogether, as occurs when a constricting poultice is employed instead of evacuation.

(26) The things indicating evacuation\(^{38}\) are plethora; the health of the faculty; adolescence; the season of spring; temperate air;\(^{39}\) the habit of evacuation; and a trade whose practitioners need evacuation, such as those trades not involving physical labor.\(^{60}\) The things indicating that evacuation ought not to be employed include weakness, whether of the psychic, vital, or natural faculties. In the case of the psychic faculty, this is whether it involves the faculties of sensation, motion, or governing and deliberation; and in the case of the natural faculty, whether it involves the attractive faculty, the retentive faculty, the transformative faculty, or the expulsive faculty. These factors [indicating against evacuation] also include age, specifically childhood or old age; the season of the year, specifically if it is summer or winter; the place, if it is extremely

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38. K 1:70–71; H 5–6; G* 26–27: Galen is discussing the circumstances under which a patient with a plethora of blood should be treated by bloodletting.

39. One MS adds: “and place.” A gloss of IT reads: “A manuscript reads ‘having matter, temperate air, and place.’”

60. A gloss of IT reads: “There is something to consider. He ought to have mentioned ‘in the place’; and, in fact, it is that way in Galen’s original text. When he says, ‘and temperate air,’ that is not already implied when he says, ‘and the season of spring’; for they are in the habit of saying, ‘and the season of the year and the state of the air that day.’ If that had been added, it ought to have said, ‘and temperate air and place,’ which is what is actually found in some manuscripts. When he later mentions the opposite case—the things that indicate that there ought not to be evacuation—he only mentions the place if it is extremely hot or cold. Therefore, the first ‘and a temperate place’ is correct in Galen’s original text, for he said, ‘and the place is temperate.’” The point is that while Galen mentions the season of spring as appropriate for bloodletting, he does not specifically mention the weather being mild; while, on the other hand, Galen specifically mentions that the place, as well as the season, should be temperate, which the epitomist omits to mention. The syntax of the gloss is murky.
في فراق الظل

أكثر ما كان عليه بالطمع وتمدد جلده. المداواة تختلف إذا ما في مقدار شبيه الذي يداوى به منزلة ما يرضي ذلك إذا استفزاع من الدم مقدماً أو أقل، وإذا في الوجه الذي يستعمل به ذلك الشيء، منزلة ما يرضي ذلك عندما يستفزاع الشيء مراكز أو مرارة أو مراقتهم. وإذا في الجنس كله حملة منزلة ما يرضي ذلك إذا استفزاع مكان الاستفزاع ضداد قابض.

(٢٢) الأشياء التي تدل على الاستفزاع هي الامتلاء، وصحّة القوة، وسن الشخص وبوق الزيت وأعداد الدواء. وعادة الاستفزاع والصناعة التي يحتاج لها إلى الاستفزاع منزلة العنوان التي لا تعب فيها. وإذا الأشياء التي تدل على أنه لا ينبغي أن يستعمل الاستفزاع في ضعف القوة، فإن كانت فضائية، وإن كانت حيوانية، وإن كانت طبيعية. ومن الفضائية، أيضاً إن كانت قوة الحس وإن كانت قوة الحركة وإن كانت قوة التذبيب والنساء ومن الطبيعية. وإن كانت القوة الجاذبة وإن كانت القوة الماسكة وإن كانت القوة المجردة وإن كانت القوة الدافعة، والمسّ إذا كان صغيراً وشقيقاً، والوقت لماض من أوقات السنة إذا كان صيفاً.

| ADMY: ٢٦٦ | وفترة: F٦ | الحاجة إلى | DSY: ١٦٥ | AM: ١٨٨ | M٦ | DFY: ٦٦٩ | F٦ | والبلد: 
| ظباً أبداً: | DFY: ٦٦٩ | غاية له خ | ٦٦٩ | + | + A٦ | + | مثيلة ضعية
| + | A٦ | ٦٦٩ | مثيلة ضعية | + | DFY: ٦٦٩ | + | + A٦ | + | أبداً ضعية
cold, like the land of the Slavs, or extremely hot, like the land of the Ethiopians; and lack of habituation to evacuation.

(27) The Empiricists and the Rationalists know precisely the same things—that is, sickness and the evidences that determine how the treatment is to be performed—but the Empiricists know them by memory and observation and the Rationalists by deduction. The Rationalists deduce from the state of affairs what they ought to do in that case. Thus, they deduce from each thing that is according to nature that it ought to be preserved and continued and from each thing that is outside nature that it ought to be rooted out and extirpated. There are three things that are unnatural: disease, its cause, and the symptom correlated with it.

(28) Some causes, such as blows and bites, afflict the body from outside and are called antecedent causes. Some, such as plethora and putrefaction, move in the body from inside and are called preceding causes. Some have other causes prior to themselves and are the causes most nearly associated with the occurrence of diseases; for example, the heating of the heart in a fever. These are called cohesive causes.

61. Galen’s original text—and presumably the Greek original of the epitome—mentions Scythians, the Slavs not yet having appeared in history, whereas the Arabic translation of The Medical Sects and the present epitome mention Slavs, the Scythians having disappeared by then.

62. One MS glosses this as “the daughters of the elements”; see pp. 22–23, paragraph 22, above.

63. K 1:72–74; H 7–9; G a 27–31. Galen demonstrates that the Rationalists differ from the Empiricists in seeking to know the cause of the disease, since it is sometimes necessary to know the cause in order to determine the correct treatment.

64. Or “outside of nature,” which are to be distinguished from the natural things, such as air and exercise, and which were later known as the non-naturals.

65. A gloss of IT reads: “Here he gives plethora and putrefaction as two examples of preceding causes. Hunayn said in his Questions that putrefaction is the cohesive cause of septic fever. You should know that plethora and putrefaction can occur without heating the heart; and so as long as the putrefaction does not heat the heart, the putrefaction is also a prior cause. When it begins to heat the heart and brings about a fever, it is a cohesive cause. That is why he confines himself to mentioning it here, enumerating putrefaction as a preceding cause, even though he said, ‘and putrefaction.’ When he mentioned putrefaction, Hunayn said that putrefaction is one of the cohesive causes, giving as an example the putrefaction that causes fever. He did not say ‘like putrefaction’ without qualification.” Regarding the passage from Questions mentioned in this gloss, see Hunayn ibn Ishāq, Masāʾīl, 261–63; Hunayn ibn Ishāq, Questions on Medicine for Scholars, 84, which translates sabab sābiq as “antecedent cause” rather than “preceding cause.”

66. On these three causes, see p. 2 above with n. 7.
أوشتنا، والبلد إذا كان شديد البرد يمنع من بنزولة بلاد الأشجار، وأوشتنا الحر يمنع من بنزولة بلاد الحشيشة، وقلت الاعتقاد لا يستنكر.

(27) أصحاب الغبار وأصحاب القياس يرون أشياء واحدة بأعينهم، أعني للمرض والشفاء، التي عليها مبني الأمر في الأشياء التي يداول بها إلا أن أصحاب الغبار يرون ذلك بالحفظ والرصد وأصحاب القياس بالاستنكار.

وأصحاب القياس يستندون من نفس الأمر على أن يفعل في، فيستندون من كل شيء هو في الطب على أنه ينفي أن يفعل ويستنكر ومثل شيء هو خارج عن الطبع على أنه ينفي أن يفعل، ويستنكر، والأشياء الخارجية عن الطبيعة ثلثة، الرض وسببه والمرض اللازم له.

(28) والأسباب منها ما يبر على البدين من خرج، ويقث لها أسباب بادية بمزدوجة الضرية والتهيئة، ومنها ما يتحرك في البدين من داخل، ويقال لها أسباب سابقة بمزدوجة الامتلاء والعرفة، ومنها ما يتقذمها أسباب أخرى، وتعتبر هي أقرب الأسباب إلى حدوث الأمراض، ويقال لها أسباب وصلة بمزدوجة حمونة القلب في الحمى.
(29) Venomous animals have different kinds of poison. One kind causes excessive dryness, resulting eventually in convulsions—as is the case with rabies, which does most of its damage in the brain. Some poison chills excessively, so that the patient imagines that he has been struck with a freezing stone—as happens with a scorpion’s venom, which does most of its damage to the heart. Some heats excessively, as is the case with snake and viper venom, which putrefies the organ and consumes it with its sharp burning.

(30) Some symptoms indicate the disease itself, some indicate the cause of the disease, and some indicate the location of the disease. For example, the variation of the speed of the pulse during fever indicates the fever itself. The signs indicating plethora indicate the cause of the fever—for example, sluggishness, heaviness of the body, inflation of the blood vessels, and flushing. The symptoms occurring in the patient with pleurisy indicate the location of the disease. They are acute fever, coughing, shortness of breath, and prickly pain.

(31) A lesion may occur from an internal cause from within or from an observable cause manifest from without. An internal cause from within is, for example, a pungent humor that consumes and burns or a plethora that distends and separates. An external cause originating from without is either some body that has a soul, which is a body that grows, or a body that does not have a soul, which is one that does not grow. A lesion that occurs from a body that does not have a soul is either from a body that stretches, such as a rope; from a body that cuts, such as a sword; from a body that burns, such as fire; from a body that bruises, such as a stone; or from a body that pierces, such as a spear. The lesion that results from a body that has a soul is, for example, the

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67. K 1:74; H 7–8; Gsa 29–31: Galen mentions the bite of a rabid dog or poisonous snake as an example of when a Rationalist would need to know the antecedent cause—that is, the external cause of the disease—since the symptom itself would not be sufficient to indicate the proper course of treatment. See also pp. 41–42, paragraph 46, below.

68. K 1:72–73; H 7; Gsa 27–28: Galen refers vaguely to the use of symptoms to indicate appropriate treatment or the cause of a disease. This paragraph gives a more precise account of the use of symptoms in diagnosis.

69. K 1:73–74, 88–90; H 8, 18–19; Gsa 30–31, 62–63: Qaṛḥa (lesion) can refer to a wound, ulcer, sore, or lesion—the common meaning being an injury or disease of some sort visible on the exterior of the body. “Lesion” seems the most neutral translation, so long as it is remembered that it does not refer to internal abnormalities.
في فون الطب

(29) سموم الحيوان ذوات الدم المتفتت. فنها ما يعفف تجفيفاً مفرطًا حتى أنه يحدث تشنجًا بمزناة سم الكلب الذي أكثر فضله للدم. ومنها ما يمزج تبريدًا مفرطًا حتى ينفل الدم أتمر بجارة البرد بمزناة سم العقرب الذي أكثر فضله القلب. ومنها ما يعفف إضحاً مفرطًا بمزناة سم البخاة. وسم الأفاعي الذي يعنف العضو وماكله ويرقه يحده.

(30) ومن الأعراض أشياء تدل على نفس المرض. ومنها أشياء تدل على سبب المرض. ومنها أشياء تدل على موضع المرض. مثل ذلك أن اختلاف النبض في وقت نزلة الحمى في النزول يدل على نفس الحمى. والعلامات الدالة على المزدوج تدل على سبب الحمى بمزناة الكلب عن الحركة ونقل اليد وانتفاخ البروت وحميرة اللون والأنعاس بالمزدوجة بصحابة ذات الجانب تدل على موضع العلة والمرض. وهي الحمى الحادة والمزح والضيق النفس والرجع النازخ.

(31) حدوث الفرحة يكون إما من سبب باطن من داخل وإما من سبب ظاهر من خارج. والسبب الباطن من داخل بمزناة خطط حاذية يأكل وينقص أو يملأ يزيد وينقص. وإذا السبب الظاهر من خارج فإما أن يكون جسمًا من الأجسام ذات النفوس. وهي الأجسام النافية. فإما من جسم لا نفس له. أي غير نازخ. والفرحة الحادثة عن جسم لا نفس له يكون إما من جسم يد بمزناة الحبل. فإما من جسم يقطع بمزناة السيف. فإما من جسم يرق بمزناة الفطر. فإما من جسم ينقب بمزناة السهم. فأما الفرحة التي تحدث عن جسم ذي نفس. فمربطة
lesion resulting from the bite of an animal. Animals that bite either have venom or do not have venom. The lesion resulting from the bite of an animal not having venom is always similar to the lesion resulting from a body not having a soul, there being no distinction or difference between them. On the other hand, the bite of a venomous animal is inevitably followed by injurious symptoms whose like does not occur from bodies not having souls. These injurious symptoms may occur only in the later stages, so that, in the beginning, there is no difference from the lesion produced by a body without a soul; or they may occur immediately. The lesion in which the injurious symptoms occur in the later stages is like the bite of a rabid dog, for in the first days this lesion is like other lesions, but in the later stages injurious and deadly symptoms appear, such as hydrophobia and convulsions. In the case of some of the lesions in which the injurious symptoms occur immediately, the resulting symptoms may be only in the lesion itself—for example, lesions accompanied by putrefaction, the destruction of some organ, or blackness appearing in the lesion. In other cases, the symptoms resulting from the lesion affect the entire body—for example, lesions that cause convulsions because the venom damages the brain, fainting resulting from damage to the heart, or loss of color and jaundice resulting from damage to the liver.

(32) Those who are bitten by venomous animals are treated externally by pungent, hot, absorbent drugs placed upon the wound to draw out the venom. They are treated internally by drugs that dry and absorb the venom, such as theriac70 and its equivalents.

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70. A master antidote containing specific antidotes to a large number of poisons.
الفرحة الحادة عن نهضة حيوانٍ، والحيوان الذي ينعش لا يعلوا من أن يكون إما حيوانٌ له سمٍ وأما حيوانٌ لا سم له، والفرحة الحادة عن نهضة حيوان لا سم له لا يزال دائمًا شبهة بالفرحة الحادة عن جسم لا نفس له لا خلاف بينهما ولا فرق. فأما الفرحة التي تحدث عن نهضة حيوان ذي سم فلا بد من أن يشعها لا محالة أعراض رديئة لا يكون مثلها في الفرحة الحادة عن الأجسام التي لا نفس لها، وهذه الأعراض الرديئة إذا أن تتب الفرحة في آخرين أمرٌ ثُكون في مبدأ أمرها لا فرق بينها وبين الفرحة الحادة عن جسم لا نفس له. وإنما أن تتبها في أوّل الأمر، والفرحة التي يشعها الأعراض الرديئة في آخرين أمرٌ هي مثل الفرحة الحادة عن نهضة الكلب الكبيرة، فإن هذه الفرحة تكون في الأيام الأوّل شبهة بسائر القروح. ثم إنها في آخرين أمر حد أعراض رديئة مهلكة بمنزلة تفزع من الماء والشجع، وأما الفرحة التي يشعها الأعراض الرديئة في أوّل الأمر، فينها ما يكون الأعراض التابعة له في الفرحة وحدها منزلة الفرحة التي تكون معها غفونةٍ أو عطب غرضاً من الأعضاء أو من سواد يظهر فيه. ومنها ما يكون الأعراض التابعة له تم الأبدن كله منزلة القروح التي تحدث عنها الشخص عندما يضيق السم بالدماغ أو الناش عند ما يضر بالقلب أو إجالة الدّون والبرقان عندما يضر بالكبيرة (٣٣) الذين تهمهم الحيوانات ذات المخاطم بدوان من خارج بأدوات حادة حازرة جاذبة توضع على الفرحة كما تجذب السم ومن داخل بأدوات تجفف وتشفف السّم بمنزلة التّريا و ما أشبههه.
Commentary on chapter 4 of Galen's book *On the Medical Sects*  

[The Rationalists' criticism of the Empiricists]

(33) The Rationalists condemn the Empiricists on three grounds. First, some—for example, Asclepiades—say that experience has no stability. He said that since bodies are constantly changing, never remaining in a single state, it is impossible to remember what was beneficial in a great many cases. It is not fair to criticize them on this ground, since even though bodies are constantly changing, their change is not so great that a drug will not be helpful twice; for physicians seek sensible change, not the change as it exists in the nature [of the body]. Second, they say that experience is insufficient for what is needed, as Erasistratus has said. He was convinced that simple, noncomposite things could be found on the basis of experience by which simple, noncomposite diseases could be treated; but he denied the existence of treatments using composite drugs for composite disease based on experience. This, too, is not a fair criticism of them. Just as experience can certainly discover treatments for simple, noncomposite diseases, likewise it is possible for it to find and discover treatments for composite diseases. The reason is that diseases can be simple and noncomposite—for example, throbbing, tertian fever, and phlegmatic fever. Others are composite—for example, the hematoma that throbs

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71. Corresponding to the first half of chapter 5 of the modern edition; K 1:75–76; H 9; G* 32–35. The epitome follows Galen's text closely but fills in the arguments.
72. Galen gives this as the first objection of the Rationalists to the Empiricists. Galen disapprovingly quotes at length arguments of Asclepiades against the possibility of coherent medical experience, especially in *On Medical Experience*; see Galen, *Three Treatises*, passim. See appendix 1, s.v. “Asclepiades.”
73. This misses the point that Galen attributes to Asclepiades here, which is not that there is too much experience to remember, but, rather, that things do not recur in exactly the same way. The fault is probably in the Arabic translation, since both John of Alexandria (*Commentaria, 4va4–10*) and Agnellus (*Lectures 36r*) are clear about the fluidity of experience.
74. A gloss reads: “That is, the nature of man, which is manifest to sense.”
75. The scribes seem to have read the uncommon word ḍarabān (throbbing) as the dual ḍarbān and inflected it accordingly.
شرح الباب الرابع
من كتاب جالينوس في فرق الطب

[احتياج أصحاب القياس على أصحاب الفقه]

(32) أصحاب القياس يعتمدون على أصحاب الفقه من ثلاثة وجوه، أحدهما أنهم قالوا إذا التغيرة لا ثبات لها بمزولة أتسلبياً ذات، فإن هذا قال إنه لما كان الأبدان دائماً التغيرة لا تقف على حال واحدة بناء صبر حفظ ما قد نفع مرآة كبيرة مما لا يمكن ولن ينصف هذا في طمنه على القوم، وذلك أن الأبدان وإن كانت دائماً التغيرة فليس من تغيرة أن يكون الدواء لا ينفع مرآة لأن الأطباء إنا يطلبون التغيرة للحموس لا التغيرة الموجود في الطبع، والوجه الثاني أنهم قالوا إذا التغيرة ليس كمالما يحتاج إليه بمزولة إراسطراطس، فإن هذا يتر بان الصل البسيطة المفردة توجد مداواتها وأشيا ببسيطة مفردة بطرق الغراب. فأما وجود مداواة عل مركبة بأدوية مركبة بطرق الغراب. فذل ذلك علبهما لله يتكر. وهذا أيضاً لينصف في الطعن عليهم، وذلك أنهما إذا أن التغيرة تستخرج وتجد مداوات الأراضي البسيطة المفردة. كذلك قد يجوز أن تجد وتستخرج مداوات الأراضي المركبة. لأن الأراضي منها ببسيطة مفردة بمزولة الضريرين وهي الغرب. وهي البلغم. ومنها مركبة بمزولة الورم الديمي الذي يضرب في الجمرة والحدي المركبة من حي الغرب ومن حي البلغم.
due to erysipelas, the fever compounded from tertian fever and phlegmatic fever, and the fever known as hectic when it is accompanied by a putrid fever. The same is true of the things by which diseases are treated. Some are simple and noncomposite, such as purslane and garden nightshade; and others are composite, such as collyria and electuaries. Third, they say that experience has no technical method. In this respect, Athenaeus said that it is not in accordance with the technical method by which the practitioners arrive at the principles of their art. This criticism of them is justified, since anything that has no reason is not part of an art, as Plato said.

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76. As a Pneumatist, Athenaeus held a variant of the humoral theory and, in issues of epistemology, would have sided with the Rationalists. Galen does not mention Athenaeus here, nor does he give his view of this criticism. See appendix 1, s.v “Athenaeus.”

77. Perhaps this refers to the passage on mimetic arts at the end of the *Sophist*. A gloss in one MS reads: “Any man who has not comprehended the cause of his craft is not a craftsman.”
في فرق الطبق

واللحي المعروفة بالذق إذا كانت معها حمي من عفونته. وكذلك الأشياء التي يداوي
بها الأمراض، منها أشياء بسيطة مفردة بمنزلة البقلا الحماء، وعنب التغلب. ومنها
أشياء مربعة بمنزلة الأكل والمجونات. والوجه الثالث أنهم قالوا إن التربة ليس
لها مذهب صناعي بمنزلة ما قال أثيناوس. فإن هذا قال إنها غير زمرة للطريق
الصناعي الذي نبيعه صناعياً وصلون إلى أصحاب الصناعات إلى أحكام صناعاتهم.
وقد
أنصرف هذا في طعنه عليهم. وذلك أن كل أمر لا قياس معه، فهو غير صناعي؟ كما
قال أفلاطون
Commentary on chapter 5\textsuperscript{78} of Galen’s book

On the Medical Sects

[The Empiricists’ criticism of the Rationalists\textsuperscript{79}]

(34) The Empiricists condemn the Rationalists on three grounds. First, some of them say that inference can only affirm something insofar as it is better known, clearer, and more convincing; but as for its being able to discover the truth itself and the entity existing in nature—no. Second, one group of them says that, even if inference could be used to discover an existent entity in nature—which they deny is possible—it is nevertheless useless. Third, yet another group of them says that, even if something useful can be discovered by inference, it is not something that is really necessary but only something extra, since what can be discovered by experience is sufficient for what is needed.

(35) The Rationalists particularly seek to know three things that the Empiricists are not interested in.\textsuperscript{80} First, there is the nature of the body—by which I mean here every nature within the scope of this investigation. Second, there are the causes of diseases—that is, the preceding causes and the cohesive causes, since the antecedent causes might equally well be investigated and considered by the Empiricists. Third, there are the powers of the things by which health can be acquired, for the Empiricists do not investigate the primary effects of drugs, nor do they study the power by which each drug has the effect that it has.

\textsuperscript{78} K 1:76–79; H 9–12; G\textsuperscript{a} 36–43; corresponding to the second half of chapter 5 of modern Greek editions. A gloss in two MSS notes that “the chapter heading is omitted in many manuscripts,” as is the case with F, though it is added by a collator. Some MSS omit: “Of Galen’s Book on the Sects of Medicine.” This section of Galen’s text deals mainly with the dispute between the two groups about the legitimacy of the Rationalists’ use of anatomy, deduction, and logic.

\textsuperscript{79} K 1:76–77; H 10; G\textsuperscript{a} 37–39, of which this paragraph is a close paraphrase.

\textsuperscript{80} K 1:76; H 10; G\textsuperscript{a} 37.
شرح المباب الخامس
من كتاب جالينوس في فرق الطب

[اختيار أصحاب القرية على أصحاب القياس]

(34) أصحاب المباب يبتكون على أصحاب القياس من ثلاثة وجه. أحد هما أن بعضهم قال إن القياس إنما يوجب الشيء من طريق ما هو أو لوي وأشبه وأتقع. فأما أن يكون قادر على استخراج نفس الحق ونافذ اللوجود في الظيع فلأ. والآخر أن قومًا منهم قالوا إنه وإن كان القياس يمكن أن يشترط به ما أنكره أولئك من الأمل وجود في الظيع فإنه ليس ينتفع بذلك. والثالث أن قومًا آخرً منهم قالوا إنه وإن كان ما يشترط بالقياس مما ينتفع به فليس مالاً يد فيه ضرورة لكنه مهماً، ففضل إذ كان ما يشترط بالتجربة بي ما يحتاج إليه.

(35) أصحاب القياس خاصية يطلبون معرفة ثلاثة أشياء لا يطلبونها: أصحاب التجربة. أحدثها طبيعة البدن. أعنى بقولي هاهنا طبيعة جميع باب النظر في الظيع. والثاني أسابط الأحمر. أعنى الأساسيات والأساسيات الواصلة لأن الأسباب البذيمة قد ينظر فيها ويطلبها أصحاب التجربة. والثالث قوى الأشياء التي تستفدها الضفة. وذلك لأن أصحاب التجارب لا ينظرون في فعل الأدوية الذي هو فعل أول ولا يطلبون ولا يبحثون عن القوة التي بها يفعل كل واحد من الأدوية ما يفعل.

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33 On the Medical Sects

(36) The sect of Rationalists has three tools that they particularly use and that are not employed by the sect of the Empiricists: anatomy, deduction from the thing itself to what ought to be done with it, and the science of logic. There are two approaches to anatomy, for there is what occurs by chance, such as the opportunities that occur in war, and there is what occurs by art, using either a living animal or a dead animal. By means of anatomy learned from a living animal, it is possible to know the actions and uses of the organs, while by means of the anatomy learned from a dead animal, it is possible to know the substance of each organ specific to it; its structure, size, number, and orientation; and its commonalities with other organs. The Empiricists condemn the study of anatomy on two grounds: first, they claim that it cannot be used to discover that which is actually needed; and, second, if it does discover something, it is not something that really must be known in the art of medicine.

(37) Something that is not manifest may be not manifest by nature, as is the case with everything not accessible to the senses but known by the mind. The method by which it is known and the inference that leads to it are called analogism, which is inference to the hidden by means of the manifest. On the other hand, what is not manifest may not be hidden by nature nor to the art, but, rather, be hidden at some particular time. This is the case, for example, with something that is by nature sensible but that is concealed because it is too far away, is very small in quantity, or is being sought with a sense foreign to it.

81. K 1:77; H 10; G a 38–40, ἀνατομή, ἕνδειξις, and διαλεκτικὴ θεορία. The discussion of the methods of anatomical research is not based on Galen’s text here, but these methods are discussed in detail in Galen’s On Anatomical Procedures 1.2, 2.1–2. Human dissection and vivisection were rarely, if ever, practiced in Roman or medieval times.

82. K 1:77; H 11–12; G a 40–42. Galen’s discussion concerns whether a special kind of scientific deduction is needed in medicine or whether only the informal inductive inference used in everyday life is necessary.

83. Ἀναλογισμὸς. Similar definitions for this word and for ἐπιλογισμὸς (epilogism) are found in Galen, On Hippocrates’ Prognostics I, in K 18B:26. In An Outline of Empiricism, Galen remarks that the Empiricists “call their own form of reasoning ‘epilogism,’ and the form of reasoning characteristic of the Rationalists ‘analogism,’ since they do not care to agree even in their terminology. In the same way, they also call their most concise accounts not ‘definitions’ but ‘descriptions.’” The term “epilogism” apparently arose in Hellenistic philosophical debates about inductive inference, particularly in ordinary life; see Michael Frede, in Galen, Three Treatises, xxiii, 62–63.

84. Some MSS have the gloss: “or because there is an obstruction in front of it.”
(٣٢) ولفرقة أصحاب القياس ثلاث آلات يستعملونها خاصة ولا تستعملها فرقة أصحاب القارب. وهي التشريح، واللاستدلال من نفس الشيء، على ما ينبغي أن يفعل به وعلم الملحق. والتشريح يكون على ضرير. وذلك أن منه ما يقع بالتفاقيه بنزلة ما يعشر من ذلك في الحرب. ومنه ما يكون من فعل الصناعة إما في حيوان حي وإما في حيوان ميت، والذي يكون في حيوان ميت يعرف به جوهر كل واحد من الأعضاء المخصوص به وخلقه ومقداره وعده ووضعه ومشاركة لما يشاركه. وأصحاب القارب يطعون على التشريح من وجهين. أحدهما أنهم يفهمون أنه ليس يستخرج به ما يحتاج إليه، والثاني أنه وإن استخرج به شيء فليس هؤلاء لا بد من ضرورة في الصناعة.

(٣٣) الشرّ الذي ليس بظاهر إما أن يكون في طبعه غير ظاهر بنزلة كل شيء. لا يقع عليه الحساب وإنما يعرف بالعقل. والباب الذي يعرف هذا والقياس الذي يدل عليه يقال له أتالوجمس، وهو القياس على الخفي بالظاهر. وإنما أن يكون ليس يخي في الطبع ولا في الصناعة. لكنه ما يتخيه وقت من الأوقات بنزلة كل شيء. هو في طبعه محض إلا أنه بعد شقته أولصغر مقادره وألأنه يطلب بحاسة غريبة منه. وقد
method by which such a thing is deduced is called epilogism, which is inference to the manifest by the manifest. The Rationalists use inference from the manifest to the hidden, while the Empiricists use inference from the manifest to the manifest, claiming that this is beneficial in refuting those who condemn what can be seen by sense, revealing what is hidden and concealed, and showing the truth about those who seek to accuse the Empiricists of errors and involve them in fallacies. The hidden thing may be hidden from us by nature, as, for example, the substance of God—may He be blessed and exalted—and the substance of the mind, soul, and nature. Things of that sort can be known only by inference from the manifest to the hidden. The hidden thing may be hidden from sense, for something can escape the senses due to four causes: being too far away, like the ship that is in the middle of the sea and is thus hidden from someone on shore; small size, such as the dust that floats in the air and is invisible to us unless it enters a sunbeam from a skylight or window; its belonging to the genus of another sense, such as sounds, which are not apparent to taste; or its being concealed and veiled, such as a stone in the depths of the sea, which is concealed by the seawater. The Empiricists dislike inference from the manifest to the hidden because irresolvable disagreement can occur. They praise inference from the manifest to the manifest on the grounds that it is a method that tends not to result in disagreement; but if disagreement does occur, it is easy to resolve. They claim that disagreement is something that indicates that the thing concerning which there is disagreement has not been comprehended, nor has its reality been grasped. It is the failure to comprehend the thing and reach its essence that is the cause of the disagreement.

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85. K 1:78–79; Η 11–12; G* 42: Κατάληψις (comprehension) is a technical term of the Empiricists, defined by Galen as “true and certain knowledge,” and is used for primary cognition in Stoic epistemology.
صارخًا، والباب الذي يدل على هذا بقوله: "أقبلًا موسى". وهما قياس بالظاهرة وفقًا للظاهرة، فما أصوات "القياس يستعملون القياس بالظاهرة الحالي؟. وأما أصوات التجارب فيستعملون القياس من الظاهرة الحالي؟. ويزعمون أن هذا نافع في الزهد على من يطعن على ما يرى حتى وراء ما قد توارى وغابت، وفي كشف أسرار القوام الذين يلجؤون أن يغطوا أصوات التجارب ويتدفعوه، "بالظاهرة". الشيء الذي فإما أن يكون في طبعه: "خانمًا من بزلة جهرة" الله أتراك وتقال، وجهو العقل والنفس والطبيعة. وما كان كذلك فإما يعرف بالقياس من الظاهرة الحالي. فإما أن يكون إنما هو خيال عند النفس، وهذا يهتم بالحس، لواحد من أربعة أسباب. إنما بعد الشقة: "بزلة السفينة التي تكون في غدة البحر" ثم قتلك على من في شاطئ البحر. وإن لصغيرة! راها بزلة الهماء الذي يثيره في الهواء. فإن هذا نافع لم يدخل شعاع الشمس من جهة أخرى من روزة لم يسبق لها، وإن الماء من جنس حادة أخرى يدخل بزلة الصوت الذي لا يثبت للمذاق، وإن الماء نشأ يطفئه ويستره بزلة الخمر في تعراض يعطيه ما الخير. أصوات التجارب يزرون القياس من الظاهرة الحالي لأنهم يقع فيه اختلاف ولا يقع عليه الحكم، ويجدون القياس من الظاهرة الحالي من طريق أنهم لا يقع فيه اختلاف وإن وقع كان الحكم فيه سهلاً، والا اختلاف زعموا أنه أمر يدل على أن نصيذ الذي فيه الاختلاف "لم يدرك ولم يوقف على حقيقته والقصور على" إدراك المشيء. ويلوغ حقيقته. هو سبب الاختلاف.

٤١٢

٤٢٢

٥١٢،
Commentary on chapter 6
of Galen’s book
On the Medical Sects

[The opinions of the Methodists]

(38) The followers of the third sect, who are the Methodists, excuse themselves from investigating causes, habits, ages, times of year, temperaments, countries, faculties, and organs of the body. When they turn to diseases, they also excuse themselves from investigating diseases in their specificity as individuals, since they are infinite. Rather, they try to discover the general communities of diseases, since these are easier to find and less trouble for the mind to acquire. They assume that there are three communities of diseases: first, flux, which is flowing; second, costiveness, which is adhesion; and, third, a compound of the two. One acquires health through therapy by regimen, surgery, or the use of drugs. Some adherents of the third sect think that these communities are communities common to all disease, including those treated by regimen, those treated by surgery, and those treated by drugs. Others among them think that the communities existent in diseases treated by regimen are flux, costiveness, and their combination, whereas they think that the diseases treated by surgery are other communities.87 This is to say that the thing that is treated can be foreign and harmful

86. K 1:79–81; H 12–13; G a 44–47; corresponding to the first half of chapter 6 of the modern Greek edition. Galen here gives a summary of the views of the Methodists, which the epitome follows closely and elaborates.

87. A “community” (κοινότης) is the pattern of perceptible signs and symptoms by which the Methodist physician recognizes the inward state of costiveness or flux; see p. xlvii above. Galen does not mention the third subsect of the Methodists. Nutton (Ancient Medicine, 192) mentions the communities treated by surgery and says that the later Methodists devised ever-finer distinctions among communities.
شرح الباب السادس
من كتاب جالينوس في فوق الطب

(38) وأما "أهل الفرقة الثالثة. وهم أصحاب الجليل. فإنهم يستمغنون من النظر في الأسباب والعادات والآثاب وأوقات السنة والأمارج، والبلدان والقوى وأعضاء البدن. وإذا صاروا إلى الأمراض استمغنوا أيضاً من النظر في الخصائص، الأفراد منها لأنها لما لا نهاية لها. وقيل أن جملة" الأمراض العامة، من قبل أنها أسهل وجوهها وأهون تحيزها في العقل، ووضعوا أن جملة" الأمراض العامة ثلث. إحددهن" الأعابث. أي الاسترسلاء، والآخر الاحتقان. أي الاستكاك، والثالثة التركيب، بلهما. اجتلال الصحة، وهو" المداواة تكون إما بالتدبير وإما بعلاج اليد وإما باستعمال الأدوية. وعند أهل الفرقة الثالثة يجعلون هذه الجملة تم Gunn all الأعراض ما كان منها يداوي بالتدبير، وما كان منها يداوي بعلاج اليد، وما كان يداوي بالأدوية. ويجمعهم جعل الجملة الموجودة في الأعابث التي تداوي بالتدبير، والاحتقان، والتركيب، منهم. وجعل الأعابث التي تداوي بعلاج اليد جملة أخرى. وهي أن يكون المريض الذي يعد" إما

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F: ٢٣٠ | S: ٢٧٨
A: ٢٣٣ | SY: ٢٣٣
| M: ٣٣١ | AM: ٢٣٢
| DSY: ٢٣٤ | MS: ٢٣٢
| D: ٢٣٥ | DY: ٢٣٥
| плот: ٢٣٥ | commuting: ٢٣٥
| AD: منج: ٢٣٨ | 학: ٢٣٨

التركيب = الاسترسلاء والتركيب
by nature, such as the stones that form in the bladder, or foreign and harmful in its place, such as intestinal rupture, which is the hernia resulting from a rupture. They are all in agreement that the diseases treated by drugs are to be treated in accordance with the communities that we have mentioned.

(39) When the followers of this sect say “costive disease,” they mean the blockage of the excesses that are continually being produced—for example, retention of the urine, constipation of the bowels, and retention of perspiration. When they say “fluent disease,” they mean an excessive evacuation of these excesses—for example, diarrhea, urine so excessive that the patient cannot retain it, and excessive sweat. When they refer to “a disease compounded of the two diseases,” they mean a disease that includes both conditions—for example, the eye when it is both swollen and running with tears. They try to treat costive diseases by inducing relaxation and flow—for example, the treatment of a swollen knee with a poultice compounded from fenugreek, sweet melilot, linseed, barley meal, and chamomile. They treat fluent diseases by retention and constriction—for example, treating diarrhea with quince. In the case of composite diseases, they pay more attention to the more serious and acute than they do to the other part. For example, in the case of a swollen eye, if the tearing is more serious than the swelling, they treat it with salves that restrain and block the matter; but if the swelling is more serious, they use resolvent salves.
في فرق الطبل

 gri wa manqara fi tiba bi beneza al-husna al-ta'ma wa ma griwa manqara fi mushayn bi beneza

 fa`anhum miqaduun mashkurun `alayhum wajjihu ma yidaawu bi yin al-jir al-dhia `an al-dawa.

 (3) va`a`al ilaa hawajjata al-waqi`yya bi al-bol `al-bol wal bu`an wa ajbha al-zaur. va`ana bawalhum
 al-bol `al-waqi`yya `al-ana`ma fii al-istatruh hawajjata al-faqit bi beneza al-hafida wal bu`an al-bol al-dhuul
 la ya`dan susuha yin bi`a`a al-zaur. va`ana bawalhum al-ayn `al-muridin al-sha`a`at al-jama`a al-`ammati bi
 beneza al-inn al-zawma kawaa `adakattu wa`arima kha`ira al-dimore maa. va`asidun la`ilad mu`as
tawal al-waqi`yya al-arba`a wa al-tsalis bi beneza maa tawa`i semka al-zawma bi`a`ad
 fa`anhum ma`qaduun fiha al-`amam al`asadi` wa`ad`i`a`wa rheech al-ta`aww bi`a`a al-shugrul. wa`asidun la`ilad mu`as
tawal al-waqi`yya al-arba`a wa al-tsalis bi beneza maa tawa`i semka al-zawma bi
 moluqin al-hafida `al-`ammati bi`a`a al-bol `al-bol al-murid. fa`anhum ma`qaduun fiha al-`amam al`asadi` wa`ad`i`a`wa rheech al-ta`aww bi`a`a al-shugrul.
 fa`anhum ma`qaduun fiha al-`amam al`asadi` wa`ad`i`a`wa rheech al-ta`aww bi`a`a al-shugrul.

 wa`traddu al-maad. wa`en kan wa`am waa fayad`awa al-ma`yata al-hafida al-adhama
Commentary on chapter 7 of Galen's book On the Medical Sects

[The differences among the sects]

(40) Each of the three sects seeks something in particular. The sect of Empiricists has two things that they seek to acquire: first, to remember what they have apprehended by experience; and, second, to follow what is manifest to sensation. The sect of Rationalists has two things that they particularly seek to acquire: first, to deduce from the thing itself what ought to be done in that case; and, second, to know that which is not manifest to sense. The sect of Methodists has two things that they seek to acquire: first, to deduce from the thing itself what ought to be done in that case; and, second, to follow what is manifest to sense. From these four things—memory, deduction, what is manifest to sense, and what is not manifest to sense—there are six combinations, two of which cannot occur, one of which is not held by any of the sects, and three that are held by these three sects. They are in this pattern:

- Memory
- Deduction
- What is manifest to sense
- What is not manifest to sense

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<th>Memory</th>
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<th>What is manifest to sense</th>
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<td>Methodists</td>
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88. K 1:81–83, H13–15; G\(^a\) 48–55; corresponding to the second part of chapter 6 of the modern Greek edition: Galen explains how the Methodists distinguish their school from those of the Rationalists and Empiricists. The epitome gives a good summary of Galen's discussion. Galen's chapter ends with his caustic comments on the famous statement attributed to the Methodists that, while Hippocrates had said that life was short and art long, medicine can actually be learned in six months.

89. Omitted in most MSS.
الفرق بين الفرق الثلاث

(۴۰) كل واحدٌ من الثلاث الفرق يقصد لشيء فرقة أصحاب التجارب تقصد لا مرین تطلبهما، أخذهما حفظ ما قد استمرد بالتجارب والآراء الفقهية ما هو ظاهر للعين. وفرقة أصحاب القياس تقصد لا مرین تطلبهما خاصة، أخذهما الاستدلال من نفس الشيء على ما ينبغي أن يفعل في أمره، والآخر فقهية لا يظهر للعين، وفرقة أصحاب الحيل تقصد لا مرین تطلبهما أخذهما الاستدلال من نفس الشيء على ما ينبغي أن يفعل في أمره، والآخر فلا يظهر للعين، فهذه الأربعة الأشياء، أغنى الحفظ والاستدلال، والأمراظ ظاهر، والأمر الذي لا يظهر للعين لا يكون منها ستة تراكيب، أثنا منهما لا ينبغي أن واحده ليس يجمعه أحد من أهل الفرق وثيقة يستحيلها أصحاب هذه الفرق الثلاث، على هذا المالّه هـ

الحفظ ليس مجتمعًا في شيء من الفرق، فلا يظهر للعين ما يجمعه في فرق أسباب القياس

الاستدلال لم يجمعه في فرقة أصحاب الحيل ما هو ظاهر للعين
The adherents of the third sect disagree about its definition, for one of them says that it is the knowledge of the communities that are manifest to sense and that relate to the end of medicine; another says that it is the knowledge of manifest communities according with the end of medicine; another group says that it is the knowledge of the manifest communities according with and following from the end of medicine; and Thessalus says that it is the knowledge of the communities proximate to the end of medicine that are absolutely necessary to it.  

The Empiricists and the Methodists disapprove of investigating entities that are not manifest to sensation. However, the Empiricists avoid doing so because they consider them to be unknowable, whereas the Methodists consider them to be unprofitable. The Methodists disagree with the Empiricists about memory and about why they feel no need for that which is not manifest to sense, and even disapprove of investigating it. They disagree with the Rationalists about sensible entities. The Methodists disagree with both in another way, for they dispense with entities that they claim are profitless. These are the causes, ages, seasons, places, and affected parts. Despite this, however, the Empiricists and the Rationalists agree about practice, for their treatment uses the very same drugs. They disagree, however, about how to discover the knowledge of the things they use in their treatments, for the Empiricists want to discover those things that they discover by means of observation and memory, while the Rationalists seek to use deduction. On the other hand, the Methodists and the Rationalists do not agree in their practice, for the Methodists investigate neither the causes nor the daughters of the elements, nor the means by which one discovers the knowledge of the drugs used in treatment, since they disregard anything that is not manifest to sense.
قد اختلاف أهل الفئة الثالثة في حدّها، فقال بعضهم إنها معرفة الجل الظاهرة للحَمَّولة التالية لقَمَب الطَّبَب. وقال بعضهم إنها معركة الجل الظاهرة للمواقيعة لقَمَب الطَّبَب. وقال قوم آخرون إنها معرفة الجل الظاهرة للمواقيعة التالية لقَمَب الطَّبَب.

وَقَالُ تَأْسِلُسُ إِنَّها معركة الجل القرية من قَمَب الطَّبَب التي لبدها فيه ضرورة.

(٤٣) أصحاب الجارب وأصحاب الحبل يكرون النظر في الأرما الذي لا يظهر للحس ويسمَّونه "ألا أتُصَّب الجارب يفعلون ذاك على أنّه مهجول، وأصحاب الحبل على أنّه أمر لم ينفع. أصحاب الحبل يُفِّتحون لأصحاب الجارب في الحفظ وفي جهة الاستعانة مما لا يظهر للحس و الكواهته، وأصحاب القياس في الأرما ظاهر للحس ولهمها جماعة من جهة أخرى. وذاك "أنهم يجدون أشياء يعزون أنّه لا ينفع بها، وهي الأسباب والأسنان وأوقات النحس والبلدان والأعضاى الآلهة. ومع هذا أيضًا. فإنّ أصحاب الجارب وأصحاب القياس فتوقون." في العمل، وذاك "أنهم يداون بأشياء واحدة بعثي نه. وهم مختلفون في الوجه الذي به يستخرج معرفة الأشياء التي بها يداون ون من طريق " أصحاب الجارب يريدون أن يستخرجوا ما يستخرجه من ذلك بالرصد والحفظ، وأصحاب القياس بالاستدلال، ففِيّف متقون في العمل " لأنهم لا ينظرون في الأسباب ولا ينافسون الأركان ولا في الوجه الذي تُستخرج به معرفة الأشياء التي بها تكون المداواة لأنّهم يهربون من الأرما الذي لا يظهر للحس.
(43) The sect of Methodists cannot avoid a dilemma, for either they are correct in their claim and so do great good for the art of medicine when they omit what is extraneous and unprofitable, or else they are wrong in their claim and do great harm to the art of medicine by omitting what is truly necessary to the art.\textsuperscript{95}
ليس تخلوا فرقة أصحاب الحبل من أحد أمرٍ، إما أن تكون صادقة في دعواها. فتكون صناعة الطب تفتّغ بها منفعة عظيمة، إذ كانت تحذف منها ما هو فضل لا ينفع به. وإما أن تكون كاذبة في الدعوى. فتكون مضرّتها لصناعة الطب مضرّة عظيمة إذا كانت تحذف الأشياء التي لا بد منها في الصناعة ضرورةً.
Commentary on chapter 8\(^{96}\) of Galen’s book

*On the Medical Sects*\(^{97}\)

[Galen’s criticism of the Methodists]

(44) There are two ways to investigate entities and make judgments about them. That is because entities can be discovered and their truth known from their falsehood either by inference, if they are intelligible entities, or by sense, if they are sensible entities. In his controversy here with the adherents of this third sect, Galen uses the second of the two methods of investigation. That is because it is easier for beginners in the science of medicine and because the adherents of this sect also use it and prefer it.

(45) The adherents of the third sect fail to consider the matter of ages; fail to consider causes, whether antecedent causes, preceding causes, or cohesive causes; and fail to consider the seasons of the year, countries, or organs of the body. These last are diverse because some of them have to do with nerves, such as the stomach and womb; some of them are venous, such as the tongue; and some are arterial, such as the lungs and spleen. Thus, let us first consider the investigation of the causes. There are three causes: antecedent, preceding, and cohesive. The Rationalists seek to know all three, and so they investigate them. The Empiricists seek to know the antecedent causes insofar as they are manifest to sense. For this reason, Galen thought that he ought to frame the debate between the Empiricist and the Methodist as being first about antecedent causes, since neither of them investigates or seeks to know the preceding or cohesive causes—the Empiricists because they are not manifest to sense, and the Methodists because they are useless.

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96. K 1:83–87, H 15–18; G* 53–60; corresponding to chapter 7 of the modern Greek edition and the remainder of chapters 7 and 8 of the Arabic translation. Galen has the Methodist argue that consideration of antecedent and cohesive causes is unnecessary. The epitome is a summary of Galen’s text with some clarification of his examples.

97. Omitted in most MSS.
شرح الباب الثامن
من كتاب جالينوس في فرق الطب

[احتجاج جالينوس على أصابع الحيل]

(44) النظر في الأمور والحكم عليها تكون على ضيتي، وذلك أن الأمر يستحق
وتعرف حقيقة من باطلها. إنما القياس إن كانت من الأمور والمتقلة، إنما لا حسب إن كانت
من الأمور المحسومة. وجالينوس يستعمل في مناظرة أصابع هذه الفرقة الثالثة هنا
أولاً هذا الباب الثاني من باب ١٩ النظر، وذلك أن "١٩ أسهل على المخلص في علم الطب.
ولن أهل هذه الفرقة أيضاً يفسرونها ويؤثر وثبه.

(45) وأهل هذه الفرقة الثالثة يذكرون النظر في أمثال السنن والنظر في أمثال الأساب.
ماكان منها من الأساب البائدة وما كان منها من الأساب الساقية وما كان منها من
الأساب الواعدة، والنظر في أوقات السنة وفي البلاد وفي أعضاء البدن التي
مختلفة لأن بعضها عصيبة بنزلة المعدة والرحم، وبعضها عروقية بنزلة المسان. وبعضها
شيئية بنزلة الزرع والزمن. فليك النظر وراءه في أمثال الأساب، والأساب ثقة، البادية
والساقية والواعدة، وأصابع القياس يطلبون معرفة هذه الثالثة كلها، وينظرون فيها،
وأصابع القجار يطلبون معرفة الأساب البائدة من طريق أنها ظاهرة للحق، ولذلك
رأى أن يجعل المناظرة بين صاحب الجرح وصاحب الحيل أولًا في هذه الأساب البائدة،
فأما الأساب الساقية والأساب الواعدة فليس ينظرون فيها ولا يطلبون معرفتها.
أصابع القجار من طريق أنها تظهر للحق ولا أصابع الحيل من طريق أنها تقع.
Commentary on chapter 9 of Galen’s book
On the Medical Sects

[The Empiricists’ criticism of the Methodists]

(46) The antecedent cause may be a cause of one of the systemic diseases, as when hot winds are a cause of fever; it may be a cause of one of the organic diseases, in the way that a blow can be the cause of swelling; or it may be a cause of diuresis, in the way that a sword, spear, or animal bite may be the cause of a lesion. Because the case of diuresis is the clearest, and because it is obvious that it occurs from the antecedent cause, we will explain that, so long as this cause is not known, it is not possible to treat the diuresis occurring from it with a treatment that will lead to a cure. Thus, suppose that a man has received a bite from a rabid dog that wounds him somewhere on his body, and he recognizes that the dog was rabid from the signs indicating rabies. These are that the dog’s eyes protrude, his tongue hangs from his mouth, his tail is limp, and he is thirsty but does not drink water. Those who are bitten by rabid dogs are treated in the same way as those bitten by other poisonous animals: externally by hot, pungent drugs placed upon the wound to expand and open the head of the wound and draw up and expel the poison, and internally by things that destroy and dry the poison, such as theriac.
شرح الباب التاسع
من كتاب جالينوس في الطب

[اختلف جلباب الفقه على أصحاب التحليل]

(٤٣) النبض البادئ إذا كان يكون سبباً لمرض من الأمراض المشابهة الأجزاء
بمنزلة ما يكون النشأة سبباً للجهاز، وإذا أن يكون سبباً لمرض من الأمراض الآلة
بمنزلة ما تكون الضريرَى سبباً للجهاز. وإذا أن يكون سبباً لفرق الاتصال بمنزلة
ما يكون السيف أو السهم أو نهشة الحيوان سبباً للجهاز. ولأن الأمر في تفرق
الاتصال أبين وحدودته "عن النبض البادئ ظاهر"، فنحن نحن أنه لم يعرف
هذا النبض ما هو ولم يمكن أن يقاوَى تفرق الاتصال الحادث عنه مما وقعت به.
فأقول أن إنهما نهشة كبل كبل نهشة خرق بها موضع من بدنه وعرف أنه
كبل كبل من هذه الحالات الدالة عليه، وهي أن عينيه تكونان ناتتين unlike ولسانه
يكون خراجاً عينه وذنوبه يكون مسترخيًا وعطش ولا يشرب الماء، والذين ينشههم
كبل كبل وأي واحد أياً وسائرين نهشة حيوان من الحيوانات الأُخرذات
المتوفون إما من خارج، فالآدويَة الحارة الحادثة، التي توضع على الجرح مما توسع
وتفرج ورأس الجرح وتتذيب أسهم وتفرج، وأما من داخل، فالأشياء التي
and the like, since, if the dieresis occurs from the bite of a poisonous animal like a rabid dog or viper, it needs to be widened and opened, but if it occurs from a sword, fire, or spear that is not poisoned, it needs only to be closed and scarred over. The situation with dieresis being as we have described it, we know that it is useful to consider causes, for the treatment can change or vary in accordance with the cause. Treatment can change or vary in its quantity, its quality, or its entire genus, as we have described here, for we can treat one and the same disease differently if the efficient cause is different.

(47) It can also be shown that consideration of the patient’s age is beneficial, as I will explain. If we wish to draw blood from a vein, we will not do so from a small child, because the body of a small child is subject to rapid dissolution by reason of its heat and moisture, because most of his blood is used in growth and the increase of his body, and because he has little strength. We also do not draw blood from an old man, for he has less blood than before, his body has become cold and dry, and his strength has weakened. We draw blood only from someone in the prime of youth, since there are none of the contraindicants found in children and the old. He does not resemble the child in the rapid dissolution of the body, lack of strength, or the amount of blood used up in the growth of the body; nor is he like the old man with his lack of blood, predominance of coldness and dryness, and lack of strength.

(48) It can also be known in the following way that consideration of countries is beneficial. I say that some places are moderate in climate; in those that are, we draw blood when necessary. Some are northerly and very cold, such as the lands of the Slavs; in such places, we do not

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this manuscript is ‘staggering,’ in the sense of disturbed. Thus, the error is [the placement of] the tā’ in the dialect of the city, but the meaning is correct.” The author of the gloss is explaining why the epitomist has written that the dog’s eyes are nāʾitatayn (bulging), whereas a commentator has written ghāʾiratān (sunken). The gloss explains that the word is a dialectical misspelling of nāʾitatayn (staggering), which can be taken to mean disturbed. “The Sheikh” is presumably Abū al-Faraj ibn al-Ṭayyib (d. 435/1053), who wrote the only attested Arabic commentary on The Medical Sects. The passage referred to is found in MS Manisa 1772 f. 30a, which does indeed read “sunken,” though not “red and disturbed.”

103. K 1:89–92; H 19–22; G a 64–70: The epitome elaborates on Galen’s brief discussion of the relevance of age and country in determining whether to let blood. The original text also cites Hippocrates on the relevance of the time of year in prescribing drugs. The epitome modifies Galen’s treatments somewhat, probably to bring them into line with Islamicate medical practices.
في فراق الظلم

تَقَوَّلُوا"所示 وتجففه بمنزلة الريحاني وما أشبهه. لأن تفرق الاتصال إن كان حدوثه
عن نهشة حيوان ذي سم بمنزلة كجب أوراني، فهو يجعله إلى أن يوضع ويقع.
فإن كان حدوثه عن سيف أورا أو أسهم غير اسمور، فهو يجعله إلى أن يقفر ويديل
فقط. وإذا، كان الأمر في تفرق الاتصال على ما وصفته. فقد عي منه أن النظر
في أحواله السبب. "ما ينفع به إذ"، كانت المداواة مختلفة وتغيير بحسب السبب.
واختلاف المداواة وتغييرها تكون إنما في مقدارها وإنما في كيفيةها وإنما في جملة
جنسها على ما وصفناها. فإذا تداوي العلة الواحدة بعينها إذا اختفى السبب
الفاعل لها مداواة مختلفة.

(۴۷) وقد نعم أيضًا أن النظر في أحواله السبب مما ينفع به مما أصف. أقول إذا،
إذا أردنا أن ننقصد أعرًا لم نقصقه لسبي صغير لأن السبي الصغير بدنه ثقيلًا سريعا
بسبب حرارةه ورطوبته ولا أن أكثر الدم ينصير في خمائه وزيادة بدنه. ولا أن قوته
ضعيفة. ولا نقصد العرق أيضًا لشبق. فإن لا دم قد قدر وبدنه قد برد وفج قوته
قد ضعفت. وإنما نقصد العرق لم كان في عنوان سن الشباب فقط. لأن ۴۶ ليس
فيه من الموانع التي في الصبيان و في الشيوخ شيء إذا كان ليس هو مثل الصبي في سرعة
انحل البذن وضعف القوة وكثرة ما ينصير من الدم في ثناه بدنه. ولا مثل الشبع في
قلة الدم وقلة البرد ۴۷ والبرد وضعف القوة.

(۴۸) وأعلم أيضًا أن النظر في أحوال البلاد مما ينفع به من هذا الوجه. أقول إن
البلدان منها معتدل المراح، وما كان منها كذلك. فنحن نقصد فيه العرق في وقت
الحاجة. وبعضها شمالي كثير البرد بمنزلة بلاد الصتاوية. وما كان كذلك فلنسنا نقصد


لا يقع: DFY ۴۸۷ | والبرد: F ۴۸۲
draw blood. Some are southerly and burn like fire; in such places, we also do not draw blood due to the strong tendency of the air’s heat to cause the dissolution of the body, as happens in the country of Abyssinia.104

(49) In the following way, it can also be known that consideration of the organs of the body is necessary and beneficial.105 I say that a hematoma is treated by things that differ in accordance with the organ that is swollen. If the swelling is in the eye, it is treated with collyria.106 If it is in the ear, it is treated with wine vinegar and rose oil. If it is in the uvula, it is treated with mulberry pulp.107 If it is in the leg, it is treated with poultices.108 If it is in the stomach, it is treated with douches of oil and warm water. From the examples I have given of organic diseases, it is also clear that the investigation of causes is both necessary and useful. That is because a swelling may be of itself—that is, without an antecedent cause—or from an antecedent cause. If it is of itself, then it is from a preceding cause and is thus from a plethora in the body. A swelling that is of this sort does not need relaxing substances before one evacuates the body entirely. If it previously needed things to restrain and block it, or if it was from an antecedent cause such as what results from a blow or shock, it initially needs things to relax and dissolve it.

(50) What we have described can be investigated in two ways. First, what can be discovered from sensation suits the Empiricists, being in accord with their position. Thus, the words of the Empiricists can be used to criticize the Methodists.109 Second, what results from inference suits the Rationalists since it conforms with their position; so the Rationalist debates the Methodist here.

104. Galen’s examples are the Arctic (“under the Bears”) and Egypt.
105. K 1:90–92; H 21–22; G 67–70: The epitome continues to give systematic expositions of the examples that Galen gives in his polemic.
107. Galen’s remedy is the fruit of the Egyptian thorn, ἀκάνθης Αἰγυπτίας ὁ κάρπος. G reads al-shawkah al-Miṣrīyah, which the editor identifies as the sant tree, acacia nilotica. G also suggests fissile alum—al-shabb al-yamānī (Yemeni alum).
108. Galen’s remedy is lancing with a knife and soaking with olive oil.
109. Galen cast the latter half of The Medical Sects as a debate between the Methodists and their opponents. This paragraph summarizes the positions expounded by the Empiricists and Rationalists in chapters 9 and 10 of the epitome, corresponding to chapters 8 and 9 of the modern Greek editions.
في ظل البرية، ومنها جنوب غرب، وما كان ذلك أيضاً فليس نصف في ظهر كثرة ما يجلل الهواء من البدن بحرارة بمنزلة ما يعرض ذلك في بلاد الحرية.

(44) وجعل أيضاً أن النظر في أمراء عضاء البدن مما يحتاج إليه وينفع به من هذا الوجه، أقول أن الورم الدموي يدأوي وشبه الشيء مختلف يحسب العضو الورم. فإن كان ذلك الورم في العين فدواوه الأشكال، وإن كان في الأذن فدواوه خلل الحمر ودهن الورد. وإن كان في الخفقة، فدواوه ربط الثوت، وإن كان في الفم فدواوه العظام. وإن كان في النبض فدواوه التنين. وقد تبنى أيضاً أن النظر في أمراء الأسباب مما يحتاج إليه وينفع به، من هذا المثال الذي أمثله لك من الأعراض الآيلة. وذلك أن الورم يكون إما من قيل نفسه، أعني من غير سبب بديع، وإما من سبب بديع، وإذا كان من قيل نفسه، فهو من سبب سابق، وهو من امتلاء، يكون في البدن. وماكان من الورم كذلك. فليس يحتاج إلى الأشياء المرتبطة دون أن يستغرق البدن كله. فأما قبل ذلك فيحتاج إلى أشياء تقع وينفع، وأما إذا كان من سبب داء منزيلة ما يعرض من ضررة أو من صدمة، فهو يحتاج منذ أول أمر، إلى أشياء ترخي وتحلل.

(50) والنظر على ما وصفنا بابان، أحدهما من الحسن، وهو باب يشاك ويوافق أصحاب الجدارب. وقد نظر في هذه أصحاب الحبل عن لسان أصحاب الجدارب والآخرين من أقياس، وهو باب يوافق ويشاك أصحاب القياس. فأصحاب القياس ينظرون صاحب الحبل بهذه المناطرة. هذا.
Commentary on chapter 10\textsuperscript{110} of Galen’s book

On the Medical Sects\textsuperscript{111}

[The Rationalists’ criticism of the Methodists]

(51) One group of the Methodists says that the communities are in the bodily organs themselves, and another group of them says that they are in the humors contained by the organs of the body.\textsuperscript{112} The view of those who hold that the communities are in the organs themselves can be refuted by pointing out that, while they say that the communities are things that are manifest to sense, they also say that they are in the bodies of the organs themselves. Now, the organs are not all manifest to sense—only those that are near\textsuperscript{113} the exterior of the body. Those that are inside the body are concealed and so are not manifest to sense. If the organ is not manifest to sense, such of these communities as occur in it are not manifest to sense. As for those who say that the communities occur in the humors contained in those organs and who claim that diseases occur only when these humors are subject to excessive retention or evacuation, their theory can be refuted by pointing out that the quantity of evacuation is often immoderate\textsuperscript{114} and that this can be beneficial, not harmful—for example, in a crisis.

\textsuperscript{110} K 1:93–105, H 22–32; G\textsuperscript{a} 71–90; corresponding to chapter 9 of the modern Greek edition and chapter 10 of the Arabic text: Galen’s text contains the Rationalists’ (and Galen’s) refutation of the Methodists. His main arguments are that the Methodists themselves disagree about the nature of communities, which is their fundamental theoretical concept, and that their concepts of flux and costiveness are unclear, as shown by their treatment of swelling or inflammation.

\textsuperscript{111} Omitted in most MSS.

\textsuperscript{112} K 1:93–96; H 22–25; G\textsuperscript{a} 72–76. Galen describes these two views slightly differently: According to the Methodists, the communities are “the dispositions of the body themselves” (ἐν αὐταῖς τῶν σωμάτων ταῖς διαθέσεις, ḥālāt al-abdān), which, according to others, are “the natural secretions” (ταῖς κατὰ φύσιν ἐκκρίσσει, al-istifrāghāt al-ṭabīʿīyah).

\textsuperscript{113} Some MSS read “on” for “near.”

\textsuperscript{114} Gloss of IT: “There is a point to investigate here, for going beyond moderation—that is, the amount that ought to evacuated—is harmful. An opponent might object that so long as it is beneficial, it is not immoderate—that is, beyond
شرح الباب العاشر
من كتاب جالينوس في فوق الطب

إحتجاج أصحاب القياس على أصحاب الحيل

(51) فإن أصحاب الحيل منهم قوم يقولون إن هذه الجلود تكون في نفسها أعضاء
البدن، ومنهم قوم يقولون إنها تكون في الأخلطات التي يحتوي عليها أعضاء البدن.
فإن قال منهم إن هذه الجلود تكون في الأعضاء نفسها، قل لهم ينقض من أنه بعد ما
قال إن الجلود أشياء تظهر للمس، قال إنها موجودة في أجسام الأعضاء. تقوله.
وليس الأعضاء كلها ظاهرة للمس. بل إذا ما يظهر منها للمس ما كان يلي، في ظاهر
البدن. وأما ما كان في باطن البدن مستورًا، فليس هو باظه للمس. وإذا لم يكن
العضو ظاهرًا للمس، فلا يحدث فيه أيضًا من هذه الجلود باظه للمس. وإذا من قال
منهم بأن الجلود تحدث في الأخلطات التي تحتوي عليها الأعضاء، وكان يدمن أن
الأمر ينفي هو إفراط هذه الأخلط في الاحتفاس أو في الاستفراغ. قلوا
ينقض من أنه قد يعرض مرا لا كثيرة من الاستفراغ مقدار يجاو زواج
الإعتدال.
فلا يضر بِن يدع بمزالة ما يكون ذلك في الجلود.

٤٤
Some of the things that are evacuated from the body are unnatural in their quantity, such as feces, urine, sweat, and vomit when an excessive quantity of any one of these is expelled. Some evacuations are unnatural in their quality, such as feces that are excessively moist and burning hot, urine that is red or black, and sweat that is cold. Some of them are unnatural in every respect, such as hemorrhage, for blood is not naturally evacuated from the body. However, we do find quite often that when it is evacuated, it is a cause of health, not of disease.

The small intestines have three parts. The first is called the pylorus; and the second, the jejunum. After that comes the rest of the ileum, which is collectively called the small intestine. These are the bowels. Then there is the large intestine, which also has three parts: first, the caecum; second, the colon; and, third, the rectum.

If a patient has diarrhea, the Methodists will say that it is one of the flowing diseases—which is to say, a flux. One might then ask them: “Since it is possible for this fluent disease to occur in each of these intestines, not one of which is manifest to sense, how do you know which one this disease has occurred in?” That is because, if someone

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what rightly ought to be evacuated and what is the correct amount to evacuate. However, that is in comparison with what is evacuated during a time of health. This follows from the opponent’s position, so the argument against him is valid.”

A gloss of IT: “Perhaps vomit ought not to be included here because it is not natural to man. However, one might mention the vomit of nursing babies, so perhaps that could be given as an example here, since it is prevalent in them.”

Galen, arguing against those Methodists who hold that unnatural evacuation is a fluent disease, points out that unnatural evacuation is often helpful. This paragraph clarifies what unnatural evacuation is, distinguishing between unnatural quantity and unnatural quality, which Galen does not do.

This is Galen’s response to the Methodists who held that the communities are states in the organs. Galen sets up a dilemma: either they cannot know the evacuation that takes place within the body, especially in the various parts of the intestinal tract, or else they need to know the medical theory that would tell them the states of the inner organs.

Galen mentions the parts of the intestines in passing, but does not list them. In Arabic, names of the three parts of the small intestine are, literally, “the gatekeeper,” “the one that fasts,” and “circles” or “coils.” The parts of the large intestine are the “one-eyed,” “colon,” and “straight intestine.” Except for “colon,” which is a loanword from Greek, all the terms are calques of the Greek terms and are thus identical in root meaning with the modern scientific terms. A gloss by IT says of the ileum: “These coils are called fascial [pertaining to wrappings] and are the third part of the small intestine.”
في فرق الطبق

(52) الأشياء التي تستغرق من البطن منها ما هو خارج عن الظبيئة في مقداره بميزلة القلب والبول والعرق والتي إذا خرج من كل واحد منها مقدار مفرط، ومنها ما هو خارج عن الظبيئة في كميات ميزلة القلب الذي يكون كثير الأطروحة ومرطبًا، والبول إذا كان أحمراً أو أسود والعرق إذا كان باردًا، ومنها ما استمرّ خارج عن الظبيئة في جميع جهاته بميزلة الجهاز الدام لأن الدم ليس له في الطبق حد يستغرق به من البطن. وقد نجد موارد كبيرة يستغرق فلا يكون ذلك سببًا للمرض بل سببًا للشفاء.

(53) الأمعاء منها دقيق، وهي ثلثة: أحدها يقابل الباب، والآخر يقابل الصلالد، ومن بعد ذلك سائر الاستدارة، التي يقابل لها جملة أمعاء دقيق، وهي المصارين، ومنها غلاظة، وأيضاً ثلثة: أحدها الأعور والآخر القول والثالث المعاء المستقيم.

(54) فإذا حدث أن يتنفس خلفة، ثم قال أصحاب الجبل إذا ذاك علة من العلل الاسترسالية. أي الانبعاث. قيل لهم إذا كان قد ينكن هذه العلة الاسترسالية أن تحدث في كل واحد من هذه الأمعاء التي ليس منها ولا واحد يظهر للمع من أن يتعمرون في أي هذه حدث تلك العلة. وذلك أن من أراد أن

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wants to know the diseases of the inner organs, he must be knowledge-
able about the natures of the organs, the meaning of signs, the theory
of the elements according to the school of the physicists, anatomy, and
the science of logic. No one who knows logic will fall victim to fallacies
about names and attributes in the way that the Methodists do; but, rather,
he will oppose distended to soft, tender to hard, rarefied to
dense, and evacuation to the retention of what is to be evacuated.

(55) Someone who knows well the things that we have mentioned
will know this: if something that had been retained in some organ prior
to its evacuation is then evacuated, it will have been evacuated by one
of six causes. It might be because it became finer and subtler, as is the
case with the bleeding that happens to women. It might be because it
became larger in quantity, as happens with vomit in those who are
drunk. It might be because the vessels expanded, as happens in sexual
intercourse. It might be because something attracts it from inside or
from outside—from inside, as when some organ becomes warm; or
from outside, as is the case with hot air or hot medicine. It might be
because the repulsive power has strengthened, as is the case of a patient
who drinks cold water at the height of his fever, it then being quenched
from that hour. It might be because the retentive power weakens, as is
the case with the patient who loses consciousness when he passes feces.
We also know that the retention of what ought to be evacuated is due to

119. K 1:99–101; H 27–29; G 82–84: Galen contrasts the various causes of
evacuation and retention recognized by the ancient Hippocratics with the sim-
plistic Methodist theory of larger and smaller pores. The epitomist converts
Galen’s allusions to various causes of evacuations and retention into six clearly
defined categories and then adds examples.
في فرق الظاهرة

يتعرض على الأعضاء الباطنة، فإنه يحتاج أن يكون عالما ببعض الأعضاء وقوتها.

العلامات وبالنظر في أمير الإسطعاسات على مذهب "علم الطبع والتشخيص"، وعلم
المترف، فإن من هو عمل في المترف لا يفوت كله أصحابه الميل في الأسماء والصفات
لكنه يجعل بآراء الرحو المتقدد وإذاء الصلب بين وإذاء المظلل الكيف وإذاء

الاستفزاع امتناع ما يستفزغ.

(5) ومن كان عالما بالأشياء التي ذكرناها قبل علمًا جيدًا، فهو يعلم أن الشيء
الذي قد كان قبل استفزاغه محتسبًا في عوض من الأعضاء ثم استفزاغ، فإنما
استفزاغ واحد من سبعة أسباب، إما لأنه قد رق وطاف بمزحة ما يعرض للنساء
من الترف، وإما لأنه قد ذكر بمزحة ما يعرض للثيران، وإما لأن الغابر قد
استفسد بمزحة ما يعرض في الجاع، وإما أن نشريفاً يجة به من داخل أو من خارج
أما من داخل فمزحة واحد من الأعضاء إذا كان قد صدح. وأما من خارج فمزحة
الهواء الحائر والذويرة الحزل، وإما لأن القوة الدافعة قد قرعت بمزحة ما يعرض لمن
يشرب ما باردًا في منتهى جماعه. فغرق من ساعته، وإما لأن القوة الساكنة تضعف
بمزة ما يعرض لمن يغني عليه عندما! يخرج منه الفناظ، ونعلم أيضًا أن احتباس

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| S: 322 | DSY: 300 + أحماب: ADMY 329 |
| S: 323 | AM: 344 + أن التيف: DY: 322 |
| F: 326 | F: 326 |
six causes opposite to these: because it becomes either more or less gross, or because the vessels are compressed, or because there is nothing external or internal attracting it, or because the retentive power has weakened, or because the cohesive power has strengthened.

(56) Some of the organs are loose and spongy, so if some particular matter flows to one of them, the thinner matter will ooze from it, while the coarser matter will be retained.\textsuperscript{120} The Methodists think that this is a compound disease, as occurs in the eye, the nose, and the mouth. Other organs are dense and have no pores. If matter flows to them, they do not ooze, and nothing flows from them, as happens with the thigh, the arm, and the calf. The Methodists are mistaken when they say that a swelling with nothing oozing from it is a simple, noncomposite disease, while the swelling with something oozing from it is compound. They do not know that, when the swelling also occurs in a spongy organ like the eye, if its matter is fine, it oozes and some of the matter flows from the organ; but if the matter of the swelling is coarse, the organ does not ooze and nothing flows from it.

\textsuperscript{120} K 1:102–5; H 29–31; G\textsuperscript{a} 86–90: Galen is criticizing the Methodist account of “mixed communities”—diseases where there is both swelling, indicating costiveness; and discharge, indicating flux. One MS glosses \textit{mutakhalkhal} (“spongy” or “rarefied”) as “in Syriac, \textit{mukhalkhal}.” This is the Syriac \textit{mḥalḥal} (hollow or perforated). The note is probably because the word usually means “rarefied” in philosophical Arabic. Galen mentions wool and sponges as examples of materials that retain fluids despite having large pores. This undermines the Methodist use of hypothetical larger and smaller pores to explain evacuation and retention.
ما قد يكون من شأنه بدءة أسباب مختلفة لتلك إما لأنه قد غلظ وإما لأنه قد قدره. وإما لأن الريشة قد لاقت وفاة. وليست شيء يتجه من داخل ولا من خارج إما لأن القوة الدافعة قد ضعفت وإما لأن القوة الماسكة قد قويت.

(55) الأعضاء منها أو هوسممع لم يقبل، وما كان كذلك فهو إذا أنصب إليه شيء من الموالد إلى رشح معه الرقيق من تلك المادة واحتبس الغليظ وأصحاب الحبل يظنون أن هذا هو وحدة مكونة من ثلاثة ما يرضي ذلك في العين وفي الأذن وفي الفم. وهم ما هوكيج لا مسام له. وما كان كذلك فهو إذا أنصب إليه ماذة لم يرضي ولم يجربه شيء من رشح ما يرضي ذلك في النفس والعقل في النهاة. وأصحاب الحبل يطلبون وهم يرويون أن الورم الذي لا يرضي منه شيء هو وحدة بسيط مفردة والورم الذي يرضي منه شيء هو مركب. ولا يعلمون أن الورم إذا حدث في عضو مختلط أيضاً مة من مازة العين إن كانت ماذية رقيقة يشفع وجرى منه بعضها، وإن كانت غليظة لم يرضي ولم يجربه شيء منها.
This ends the Alexandrians’ epitomes of Galen’s book

On the Medical Sects

using the method of commentary and abridgment,

translated by Ḥunayn ibn Isḥāq

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121. The texts of the colophon vary somewhat among the manuscripts. An early MS adds the blessing: “Praise be to God, the Lord of the worlds, and may He be glorified forever and ever. May His mercy be upon us.” A late MS adds an Islamic blessing: “May God have mercy upon him [Ḥunayn], for he is worthy of it. Blessing be upon our Prophet Muḥammad and all his family. God is sufficient for us and a generous guardian.”

An earlier MS has the colophon: “Written by Sallām ibn Ṣāliḥ, the teacher in Shafarʿām, on Thursday, the 26th of April 6748 of Adam [1240 CE].” Shafarʿām is a village near Acre, in present-day Israel. The date is according to the Byzantine era of the world, so this scribe was presumably a Christian.

An early MS contains a gloss with two tables, formatted slightly differently, explaining the composition of the simple flavors. I have translated the first here and noted differences in brackets: “The qualities of simple flavors are compounded from subtle, dense, and intermediate and in their temperament from hot, cold, and intermediate. This is a diagram of their composition:

![Diagram of flavors](image_url)

The caption of the second form of the table of simple flavors reads: “The table explaining the temperaments of the foods compounded from the hot, cold, and moderate mixture, and from subtle, gross, and moderate substance. They are the simple foods, which are of nine species.”

An early MS has the gloss: “Whenever we add to impure bodies, we increase them in power [?], as Hippocrates said.” The same MS has a note in an official Ottoman hand written by one Aḥmad Shaykhzāda, the trustee of the endowments of Mecca and Medina, recording its donation by Sultan Maḥmūd I (r. 1730–59) as waqf, presumably when he established the Aya Sofya library.

An early MS adds: “It is followed by The Small Art.”
تمت جمعي الإسكندرانيين لكبّ جالينوس
في قرف الظنّ على الشّرح والقليلـ
ترجمة حنين بن إسماعيل

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<td>الكبّ: + Y: +</td>
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</table>

القليلـ، وحمل معانيه مشروحة في مقدمة وله الجهد.

- ترجمة: + إسماعيل: DY: + رحمه الله والكلام: جمعه. هو أمه بوضعيته، وصولاته على

تربة مجد وآله آجمعين. حسبنا الله ونعم الوكيل.

وكتبًا سلمان بن صالح الفضل بشرحه
في يوم الخمس سادس عشر من نيسان
سنة سّت ألف سبع مائة وثمان و أربعين

۲۳۳

علماً: على الشرح: + إسماعيل = يطبع كتب الصناعة الصغرى: S: المكاسب‭/‬ الأسماك الفيروقية كأساً
عددًا زدنا شركًا قام ببراءة. A: + والكلام: رحمة الله وإتمامه دارًا أبدًا. وعلى
رحمته أمين, A: مفردة الطصم ترتّب في كيّفها من لطيف ومثاب وفتوسط، وقُل فيها
من حار وبارد ومعتدل. وهذه صورة ترتّبها:

هذا الجدول في معرفة أمراض الطلوف المركبة من المراة ببارد والبارد والمعتدل. و من الجوهرة المطيف.

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| منجر | السمي | القابص | المالح
| منجر | معتدل | معتدل | معتدل
The Alexandrian Epitome of Galen’s Book
*The Small Art of Medicine*
In the Name of God, the Merciful, the Compassionate

The Alexandrian Epitome of Galen’s Book Known as

The Small Art [of Medicine]

Using the method of commentary and abridgment

Translated by [Abū Zayd] Ḥunayn ibn Ishāq [al-ʾIbādī]

[Introduction]

[Methods of instruction]³

1. Some MSS add: “God is the master of success” or “My trust is in God on high alone.”
2. Some MSS omit the author’s name, and only one gives it in full.
3. B i.1–5; K 1:305–7; G* 3–7: I have added the subheadings, which, with a few exceptions, are not part of the text and have no MS authority.
4. An early MS reads: “kinds of instruction and methods therein.” Galen begins the The Small Art of Medicine with an account of the three methods of instruction (διδασκαλία) and the methods he uses in his works—in this case, the dialysis of the definition of medicine. The account given here is much more elaborate and includes alternative accounts and many examples.
الصناعة الصّغيرة الطبيّة

على التّرجيع والتّفصّل

ترجمة حنين ابن إسحاق

مقدمة

ذكر المسالك في التّعلم

(1) أنّهاء المسالك في التّعلّم يحسب رأي بعض الناس خمسة. أحدها المساكل الذي يجري الأمر فيه على طريق التّحليل والمكتس، والثاني في المساكل الذي يكون على طريق التّركيب، والثالث في المسالك الذي يكون على طريق تحليل الحذ. والرابع في المسالك

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S: جوامع كاب
AM: + الله وَلِيّ التوفيق;
Y: + تّحقق بالله تعالى وحده

كتاب كاب | المعروف | الصّغيرة | الصغيرة: الّتي في الصناعة

في الصناعة: 

A: بـ DMY

F: + نقل أبي

Y: على

F: + نقل أبي

S: المعروفة بالصناعة الصغيرة

F: + التّوجيه

DSY: + العبادي

F: + مسالك

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٥٠
division; and, fifth, the method that proceeds by attributes and descriptions. Three of these five methods proceed in order: the analysis that is called conversion, synthesis, and dialysis of the definition.\(^5\) Two of them proceed without order: division and description.\(^6\) Division tends to proceed without order because the thing being divided can be subject to division in various ways: division of the genus into the species, as when animal is divided into man, horse, and ox; division of the species into individuals, as when man is divided into Plato, Asclepiades, and Socrates; division of the whole into parts, as when the body is divided into head, hands, and feet; division of the substance into accidents, as when man is divided into white, red, and black; division of accidents into substances, as when white is divided into snow, milk, and swan; or the division of the ambiguous word into the various meanings that it shares, as when the name “dog” is applied to the dogfish, the domestic dog, the dog star, and the philosopher of the school known as Cynics.\(^7\) The whole can be divided into parts in two ways: either into homoeomerous parts,\(^8\) as when nerve is divided into nerves or when vein is divided into veins; or into parts that are not homoeomerous, as when the body as a whole is divided into such parts as the head, the hands, the feet, and the chest. Description and attribution tend to proceed without order just because the one who assigns attributes to the thing and describes it may do so with respect to its quantity, its quality, or its relation to something else.

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5. These are Galen’s three methods: ἀνάλυσις, σύνθεσις, and ὅρου διάλυσις. The terms are rendered identically in the Arabic translation of The Small Art. Galen’s explanation is clearer: “There are three types of definition, each with its place in the order. First is that which derives from the notion of an end, by analysis. Second is that from the putting together of the analysis. Third is that from the decomposition of the definition.” (Trans. Singer with slight modifications.) Galen explains that in other works he had used the method of analysis of the goals of medicine. Other authors have attempted to proceed by synthesizing the results of medicine. This work will use the method of dialysis of the definition as being the easiest method for acquiring an overview of medicine, though it is scientifically inferior to analysis.

6. These are the unsystematic equivalents of analysis and dialysis of the definition. Division differs from analysis in that the distinctions made need not be essential. Description is definition that uses accidental rather than essential properties. The classic example is the definition of man as a featherless biped, which correctly identifies man but does not reveal his essence as a rational animal. Galen mentions but dismisses the fourth method.

7. Whose name means “of the dog.”

8. That is, parts of the same nature as what is being divided, such as the parts of a quantity of water, which are also water.
الذي يكون على طريق القسمة، والخمسة للملك الذي يكون على طريق الصفات والرسم، وهذه الخمسة المسألان منها ثلاثة تجري على ترتيب، وهي التشيل الذي يقال له المكس والتركيب وتحليل الحد، ومنها اثنان يجريان على غير ترتيب، وهما القسمة والرسم، أما القسمة فصارت تجري على غير ترتيب لأن المنفى الذي يقسم تقع عليه القسمة على وجه شتى، وإما على جهة قسمة الجنس إلى الأنواع بمنزلة الحيوان إلى الإنسان والقرود والثور وإما على جهة قسمة الدوّر إلى الأشياء بمنزلة الحيوان إلى الأجزاء بمنزلة: النافذة إلى الأقدام واليدن والرجلن، وإما على جهة قسمة المحور إلى الأعراض بمنزلة الإنسان إلى الأيض والأحم والأعد، وإما على جهة قسمة الأعراض إلى الجواهر بمنزلة: الأيض إلى الثل واللبن والحيوان المنسرق قسن، وإما على جهة قسمة الفتح المشتركة إلى المعاني المختلفة المشتركة، بمنزلة اسم الكلب الواقع على كتب الهجر وكلب البز والكوك للسيك كله والفلاستس الذي من حب الكليمين، وقسمة الكل إلى الأجزاء تكون على ضربين، إما إلى أجزاء مشابهة بمنزلة العصب إذا قمت أعصباً، والفرق إذا قمت عروعاً، وإما إلى أجزاء غير مشابهة بمنزلة جملة: الحيوان إذا قمت أجزاء منها الأقدام ومنها اليدن ومنها الرجلان ومنها الصدر، فأما النافذة والرسم فإما يصف النفي، ويرفعه إما من كيته وإما من كيته وامام من إضافته ونسبته إلى غيره.
(2) According to other people there are three kinds of instruction, for they say that all instruction must be either by way of conversion and analysis, by way of synthesis, or by way of dialysis of the definition. Each of these may be conducted either in order or without order. Analysis and conversion are ordered whenever they omit nothing in the middle, since it is a return from the last to the first. This is also the case in division, for division is included in analysis. In analysis, for example, we might say that the body is analyzed into the compound organs, the compound organs into the tissues, the tissues into the humors, the humors into the nutriments, and the nutriments into the elements, which are fire, air, water, and earth. The corresponding example of division is to say that the body is divided into the head, the arms, the trunk, and the legs. Each of these is divided into the parts from which it is compounded, as the head is divided into bone, brain, and sense organs. Then these, in turn, are divided into those things that they are compounded from until the division ends in the tissues, where it stops. Unordered analysis and division are when one omits something in the middle and alters their order and arrangement. In analysis, for example, you might say that the body is analyzed into the tissues, but you would have overlooked the compound organs. You might also say that the body is analyzed into the organs, the organs into the tissues, the tissues into the nutriments, and the nutriments into the humors, thus altering their order and arrangement. The corresponding

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9. These are the three methods mentioned by Galen. They correspond to the three ordered methods mentioned in the previous paragraph.

10. Literally, “the senses.” Two late MSS read “spinal cord.”

11. Some MSS read: “or.”
(٢) وأشهروا التدابير بحسب رأيك قوم آخر ثلاثة. وذلك أنهم قالوا إن كل
تقليل لا يكفي إلا أن يكون إما على جهة العكس والقليل وإما على جهة التركيب وإما
على جهة تقليل المك. وكل واحد من هذه تجربة إما على تركيب وإما على غير ترتيب،
والقليل واللمس يكونان "على ترتيب" عندما لا يبدع شيء ما في الوسط إذا هو
راجع من الأخر إلى الأول. وكذلك الأمر في القسمة لأن القسمة داخلة في القليل,
مثال ذلك في القليل أن تقول إن البند ينقل إلى الأعضاء المركبة والأعضاء المركبة
إلى الأعضاء المتشابهة: الأجزاء والأعضاء المتشابهة الأجزاء إلى الأخلط،
والأخلاط إلى الأغذية، والأغذية إلى الإسطبقات، وهي النار والهواء ولاء
الأرض. ونظير ذلك في القسمة أن تقول إن البند ينقسم إلى الرأس واليدين
والصدر، والجهن، وكل واحد من هذه ينقسم إلى الأجزاء التي هو منها مركب
بمنزلة الرأس إلى العظم والدماغ والحواس، ثم إن هذه أيضا تقسم إلى الأجزاء التي
هي مركبة منها إلى أن تنتهي القسمة إلى الأعضاء المتشابهة الأجزاء. فلعنها
وأما القليل والقسمة على غير تركيب فيكونا فإنما يدع الإنسان بعض ما في الوسط
وتقرير "تربية الأشياء ونظامها"، مثال ذلك في القليل أن تقول إن البند ينقل
إلى الأعضاء المتشابهة الأجزاء. فقد تركا الأعضاء المركبة، أو تقول إن البند
ينقل إلى الأعضاء المركبة والمركبة إلى المتشابهة الأجزاء والمتشابهة الأجزاء إلى
الأغذية والأغذية إلى الأخلاط. فتكون قد غيروا التنبيه والنظام. ونظير ذلك

F: ك defenses: في المكس يكون F: A^2DM^3Y M: A^2DM^3Y

F consistently uses this spelling, so it is not noted hereafter in the variants
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example of division is to say that substance is divided into body and what is not body, and body into rational and irrational, but you would have omitted breathing and living in the middle. You might also say that substance is divided into animate and inanimate, and animal into body and non-body, in which case you would have altered the order and arrangement.

(3) Synthesis is also sometimes conducted with order and arrangement. That occurs when you proceed from the first to the last without omitting anything or altering the arrangement. For example, you might say that plants come to be when the elements are combined and that humors come to be from plants, tissues from humors, organs from tissues, and the whole body from the organs. Synthesis is sometimes conducted without order, as when you omit or alter some things. For example, you might say that when the elements are combined, the humors arise from them, but you would have omitted the nutriments. You might also say that when the elements are combined, plants come to be from them and that humors come to be from plants, organs from the humors, and tissues from the organs, in which case you would have altered the order and arrangement.

(4) Dialysis of the definition may be conducted with arrangement and order. That is when you omit nothing and alter nothing. For example, you might say that medicine is the knowledge of healthy and diseased states and of states that are neither healthy nor diseased. Each of these three states can apply to three things: first, the body; second,
في القسمة أن تقول إن الجْهِر يُقَسِّم إلى جَسِم وَلَا جَسَم وَالْجَسِم``` إلى الناطق وَغَيْرِ الناطق```، فتكون قد تركت في الوَسْطِ المُتَنَفِّس والمُنتَفِّس، لأن تقول إن الجْهِر يُقَسِّم إلى الحَيْوَان وَغَيْرِ الحَيْوَان، والحيوان منه جَسَم وَمنهْ لا جَسَم، فتكون قد غَيْرَتْ التَّرْتِيب وَالنَّظَام.

(٣) وما بالتركيب فيه أيضًا ما يجري على التَّرْتِيب وَالنَّظَام، وذَلِكَ عِنْدَمَا تَسْلَك. من الأول إلى الأخير من غير أن تدع شِيْئَةٍ أو تَنَوي نَظَامًا: مثَل ذَلِكَ أن تقول إنَّ الإسْطِقَاسات إذا تركت حَدِثَتْ عنها النباتات، وَمَتَى أَن تَحْدَثَتْ النباتات الأَخَلاَق، وَعَنِ النباتات الأَجْزاء الأَعْضَاء المَرَكَّبة وَعَنِ المَرَكَّبة جَلْمَة الْبَدن، وَمَنِهِ ما يَجْرِي عَلَى غَيْرِ التَّرْتِيب، وذَلِكَ عِنْدَمَا تَدْعُ بِغْضِ الأَشِيَائِ أَو تَنَوي بَعْضَها. مثَل ذَلِكَ أن تقول إنَّ الإسْطِقَاسات إذا تركت حَدِثَتْ عنها الأَخَلاَق، فَكَانَ تَرْكَتْ الأَغْذِيَّة، وَأَن تَقُول إنَّ الأسْطِقَاسات إذا تركت حَدِثَتْ عنها النباتات وَعن النباتات الأَخَلاَق وَعن الأَخَلاَق الأَجْزاء الأَعْضَاء المَرَكَّبة، فَكَانَ تَرْكَتْ التَّرْتِيب وَالنَّظَام.

(٤) وَأَما تَحْلِيل الحَذَف فَهَٰذَا مَن يَجْرِي عَلَى نَظَام وَتَرْتِيب. وذَلِكَ عِنْدَمَا لا تَدْعُ شِيْئَةٍ وَلا تَنَوي شِيْئًا، مثَل ذَلِكَ أن تقول إنَّ الطَّبِّ هو مَعْرَفَة الأَمْوَر الصَّحيَّة والمَرْضِيَّة، وَالَّتِي لَيْسَت بِصَحِيَّة وَلَا مَرْضِيَّة، وَإِنَّ كُلًّا وَاحِدًا مِن هذَا الأُمُور الْثَلَاثَ يَقُفُّ عِلْى ثَلَاثَةٍ
the prophylactic and efficient cause; third, the sign that either indicates the present condition, informs about the past condition so that it can be recollected, or precedes a condition so as to give information about what will be. Each of these three signs either does so in the present time or does so constantly or does so usually. Dialysis of the definition also sometimes proceeds without order or arrangement, which is when you omit or alter some things. This occurs when it is not conducted according to the order we have mentioned and there is some alteration or omission in the middle.

(5) Analysis and division have in common the property that they both begin from one and end in many, but they differ in that analysis and conversion take as their starting point something that is actual and is sensibly one and end in many things that are potential and intelligible. For example, beginning from body, one ends up with the elements, whose existence in the body is intelligible and potential, not actual and sensible. Division, on the other hand, takes one thing that is one potentially and intelligibly and divides it into many things that are actual, such as the division of the genus into species and the species into individuals. It can also take something that is actually one and go from that to what is actually many, such as the division of the whole into parts, the substance into accidents, or the accident into substances.

(6) These are the three methods of instruction when studying: analysis, synthesis, and dialysis of the definition. Definitions, descriptions, and demonstrations are not methods of instruction but, rather,
الصناعة الصغرى الطبية

أشياء تحمل في اليد، والأخرى نسب الحافظ والفاعل والثالث العلامة التي تدل على "الحافظ والثاني" عن الماضي، وتذكرنا، والتي تقدم فتبيء عما سيكون. وكل واحدة من هذه العلامات الثلاثة إذا ما تفعل ذلك في الوقت الحاضر فإنما أن تفعل داماً وإما على الأكبر. ومنه ما يجعل على غير ترتيب ولا نظام، وذلك عندما تتع بعض الأشياء أو تخبر بعضها عن في الترتيب على ما ذكرنا وكأن فيه تغيرًا أو نقصانًا في الوسط.

(1) التحليل والمقسمة ينتمكان في أنها جمعًا يحدثان من واحد وينتهيان إلى كبري ويختلفان في أن التحليل والمقسمة إذا ما يأخذ شيئًا هو بالفعل والحاس واحد، وينتهين إلى أشياء كبيرة، هي بالقوة والمعقول. مثل ذلك أن ينتهي بالبن إلى الإستدقات التي إذا وجدت في البدن بالفعل والقوة لا بالفعل والحس. فأما القسمة فتأخذ واحدًا هو بالقوة والمعقول، واحد فقط إلى أشياء هي كبيرة بالفعل منزولة قسمة الجنس إلى الأنواع والزورو إلى الأشخاص. أو تأخذ شيئًا هو بالفعل واحد. تنصيرًا إلى أشياء هي بالفعل كبيرة منزولة قسمة الكل إلى الأجزاء أو قسمة الجوهر إلى الأعراض أو الضرر إلى الجراح.

(2) عند التحصيل يقال إن أنحاء التحاليم هي هذه الثلاثة التحليل، والتركيب وتحليل الحد، فأما الحدود والرسوم والإجازة فلا ليست من أنحاء التحاليم، لكثير علم.

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are logical sciences. The instruction that proceeds by means of dialysis of the definition is called by various names: dialysis of the definition, conversion of the definition, opening up of the definition, division of the definition, expansion of the definition, explanation of the definition, and summary of the definition.

(7) Three groups of physicians have sought to employ these three methods of instruction. Dialysis of the definition was employed by the followers of Herophilus and Heraclides the Erythrean. Synthesis was also employed by the followers of Herophilus and by Athenaeus, who was from Attaleia of Antioch. Analysis and conversion were used by Galen alone among the physicians. Both analysis and conversion and dialysis of the definition give their practitioner an advantage in some respect. Dialysis of the definition is superior to conversion in that it deals concisely with everything in the lesson and makes it easy for the students to remember what has been taught. Conversion is superior to dialysis of the definition in that it is of higher rank and in the rigor of its technical method.

(8) Some definitions are essential. These are the ones that are taken from the substance of the thing defined, as when man is defined as a mortal rational animal capable of reason and culture. Others are descriptive. These are the definitions taken from the accidents attaching to the things, as when man is defined as an animal with broad fingernails and erect posture whose body is covered with bare skin.

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18. The method used by Galen in The Small Art.
19. Following Galen’s Greek text, since the names are mangled in the Arabic. On these three physicians, see appendix 1.
20. Galen boasts that he was the first to use this method to expound medicine from its first principles; see B i.2; K 1:306; G* 4.
22. That is, analysis, which deduces the art of medicine from first principles.
23. Οὐσιώδης: That is, essential, revealing the essence of what is defined.
24. Ἐννοηματικοὶ: That is, descriptive definitions as mentioned on p. 54, n. 17, above.
الصناعة الصغيرة المطلبة

منطقية. والتعليم الذي يجري على طريق تحليل الحذف يمكن أسماء كبرى، وهي تحليل الحذف وعكس الحذف وتشتت "الحذف وقصمة الحذف ووسط الحذف وتفسير الحذف وقياس الحذف. 

وقد التم تعاوني؛ هذه التعاميل الثلاثة قوم من الأطباء. تماماً تحليل الحذف أصحاب إير وفليس. أيضاً أثيناوس المروف بأطلوس الأثرياني. أما التحليل والمكس فاينوس، دون سائر الأطباء، استعمال وكل واحد من التحليل والمكس وتحليل الحذف يعوض سابحه في شيء، أما تحليل الحذف ففوق المكس في أنه يأتي بكل شيء من التعليم باختصار وإيجاز وفي أنه يسهل حفظ ما يأتي به على التعليمين، وأما المكس فإنه يعوض في تحليل الحذف بجلالة السأر وفي لزم الطريق الصناعي.

والحدود منها جوهية وهي التي تؤخذ من جوه الحذف. المحدود بنزلة حد الإنسان أنه حيوان ناطق مائه قابل للعقل، والأدب، ومنها رسومية وهي الحدود التي تؤخذ من الأعراض التابعة للأشياء بنزلة ما يخذ الإنسان بأنه حيوان عرض الأظفار منتصب القامة، يعلوا بده جلد.

| DFY | 42 | استعمال بعضDFY | 42 | + أيضاً | F 41 |
| ADMM | 44 | قمعي | 44 | D | أثيناوس والقليدس الأثري;
| ADMY | 43 | أنتمي | 43 | D | إير وفليس وأثيناوس الأثري;
| S | 42 | في الفن المروف بأثرياس | 42 | D | إير وفليس;
| F | 41 | وأثيناوس المروف بأطلوس | 41 | F | أثيناوس فيAPA;
| S | 40 | وأثيناوس الأثرياني | 40 | F | فيAPA أثيناوس;
| F | 39 | + واحد | 39 | F | F 38 + الفن الأس.
| F | 38 | + المروف | 38 | F | F 37 + المروف.
| F | 37 | + المروف | 37 | F | F 36 + المروف.
| AM | 36 | لقن | 36 | F | F 35 + المروف.
| AM | 35 | لقن | 35 | F | F 34 + المروف.
| AM | 34 | لقن | 34 | F | F 33 + المروف.
| AM | 33 | لقن | 33 | F | F 32 + المروف.
| AM | 32 | لقن | 32 | F | F 31 + المروف.
| AM | 31 | لقن | 31 | F | F 30 + المروف.
| AM | 30 | Lقن | 30 | F | F 29 + المروف.
| AM | 29 | Lقن | 29 | F | F 28 + المروف.
| AM | 28 | Lقن | 28 | F | F 27 + المروف.
| AM | 27 | Lقن | 27 | F | F 26 + المروف.
| AM | 26 | Lقن | 26 | F | F 25 + المروف.
| AM | 25 | Lقن | 25 | F | F 24 + المروف.
| AM | 24 | Lقن | 24 | F | F 23 + المروف.
| AM | 23 | Lقن | 23 | F | F 22 + المروف.
| AM | 22 | Lقن | 22 | F | F 21 + المروف.
| AM | 21 | Lقن | 21 | F | F 20 + المروف.
| AM | 20 | Lقن | 20 | F | F 19 + المروف.
| AM | 19 | Lقن | 19 | F | F 18 + المروف.
| AM | 18 | Lقن | 18 | F | F 17 + المروف.
| AM | 17 | Lقن | 17 | F | F 16 + المروف.
| AM | 16 | Lقن | 16 | F | F 15 + المروف.
| AM | 15 | Lقن | 15 | F | F 14 + المروف.
| AM | 14 | Lقن | 14 | F | F 13 + المروف.
| AM | 13 | Lقن | 13 | F | F 12 + المروف.
| AM | 12 | Lقن | 12 | F | F 11 + المروف.
| AM | 11 | Lقن | 11 | F | F 10 + المروف.
| AM | 10 | Lقن | 10 | F | F 9 + المروف.
| AM | 9 | Lقن | 9 | F | F 8 + المروف.
| AM | 8 | Lقن | 8 | F | F 7 + المروف.
| AM | 7 | Lقن | 7 | F | F 6 + المروف.
| AM | 6 | Lقن | 6 | F | F 5 + المروف.
| AM | 5 | Lقن | 5 | F | F 4 + المروف.
| AM | 4 | Lقن | 4 | F | F 3 + المروف.
| AM | 3 | Lقن | 3 | F | F 2 + المروف.
| AM | 2 | Lقن | 2 | F | F 1 + المروف.
| AM | 1 | Lقن | 1 | F | F 0 + المروف.
| F | 53 | جلده | 53 | F | F 52 + المروف.
| F | 52 | المروف | 52 | F | F 51 + المروف.
| F | 51 | المروف | 51 | F | F 50 + المروف.
| F | 50 | المروف | 50 | F | F 49 + المروف.
| F | 49 | المروف | 49 | F | F 48 + المروف.
| F | 48 | المروف | 48 | F | F 47 + المروف.
| F | 47 | المروف | 47 | F | F 46 + المروف.
| F | 46 | المروف | 46 | F | F 45 + المروف.
| F | 45 | المروف | 45 | F | F 44 + المروف.
| F | 44 | المروف | 44 | F | F 43 + المروف.
| F | 43 | المروف | 43 | F | F 42 + المروف.
| F | 42 | المروف | 42 | F | F 41 + المروف.
| F | 41 | المروف | 41 | F | F 40 + المروف.
| F | 40 | المروف | 40 | F | F 39 + المروف.
| F | 39 | المروف | 39 | F | F 38 + المروف.
| F | 38 | المروف | 38 | F | F 37 + المروف.
| F | 37 | المروف | 37 | F | F 36 + المروف.
| F | 36 | المروف | 36 | F | F 35 + المروف.
| F | 35 | المروف | 35 | F | F 34 + المروف.
| F | 34 | المروف | 34 | F | F 33 + المروف.
| F | 33 | المروف | 33 | F | F 32 + المروف.
| F | 32 | المروف | 32 | F | F 31 + المروف.
| F | 31 | المروف | 31 | F | F 30 + المروف.
| F | 30 | المروف | 30 | F | F 29 + المروف.
| F | 29 | المروف | 29 | F | F 28 + المروف.
| F | 28 | المروف | 28 | F | F 27 + المروف.
| F | 27 | المروف | 27 | F | F 26 + المروف.
| F | 26 | المروف | 26 | F | F 25 + المروف.
| F | 25 | المروف | 25 | F | F 24 + المروف.
| F | 24 | المروف | 24 | F | F 23 + المروف.
| F | 23 | المروف | 23 | F | F 22 + المروف.
| F | 22 | المروف | 22 | F | F 21 + المروف.
| F | 21 | المروف | 21 | F | F 20 + المروف.
| F | 20 | المروف | 20 | F | F 19 + المروف.
(9) Galen employs each of these methods of instruction in various places in his books. He uses the method that proceeds by means of analysis and conversion in his books On Diseases and Symptoms, On the Method of Healing, and On Affected Parts. He uses synthesis in the books On the Natural Faculties, On the Elements [According to Hippocrates], and On the Temperament. He uses dialysis of the definition in the present book and in his book On the Affirmation of Medicine, since his goal in both books is to be brief and concise.

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25. Probably On the Constitution of the Art of Medicine, K 1:224–304, of which no Arabic translation is known but which does follow the same method as The Small Art.
وقد استعمل جالينوس كل واحد من هذه ال三项ية التالية في موضوع من كتبه. فاستعمل "التعليم" الذي يجري على طريق القليل والعكس في "كتاب العلامة والأعراض" و"كتاب المواضع الآلية" و"كتاب حيلة البر". واستعمل التركيب في "كتاب القوى الطبيعية" و"كتاب الإسطفاسات" و"كتاب المزاج". واستعمل تحليل الحذ في هذا الكتاب لخاضره وكتابه "في إثبات الطب" من طريق أنه قد فهمه إلى الاختصار والإيحاز.
[Chapter 1]

[The definition of medicine]

(10) Medicine is defined as being the knowledge of entities relating to health, entities relating to disease, and entities that are neither healthy nor diseased. In this definition, knowledge is mentioned where the genus of the thing would be mentioned; and where the differentia would be mentioned, entities relating to health, to disease, and to neither health nor disease are mentioned.

(11) Three things relate to health; first, the body receptive to health; second, the sign indicating health; and third, the cause effecting and preserving health. There are three things relating to disease: first, the body receptive to disease, which is the body called “diseased”; second, the sign indicating disease; and third, the cause that brings the disease into being or preserves it. There are three things relating neither to health nor to disease: first, the body that is receptive to a state

26. B 1.1; K 1:307; G* 7: Galen gives exactly this definition, though Hunayn renders it quite differently in G*. It originated with Herophilus; cf. Epitome of the Medical Sects, p. 54, paragraph 5 and p. 55, n. 23, above; see B 396–98 and von Staden, Herophilus, 89–114, for detailed discussions of the history of this definition. Von Staden believes that the third category of neutrals has a connection with Stoic thought.

27. B 1.2–3; K 1:307; G* 8–9: Galen notes that “healthy” and “diseased” are used somewhat ambiguously as applying to the body, the cause, and the sign. Hereafter, I will omit the awkward “entities”—which are not in the Greek anyway—and render the terms as seems natural in English in each context.

One MS contains the gloss: “Hunayn said, ‘He means by what he says here that knowledge [or science] is the genus of the different kinds of knowledge. That is because it includes the sciences of medicine, astronomy, logic, and geometry. Knowledge includes these sciences and so, in this respect, is their genus. Mention of the healthy states, the diseased states, and the states that are neither healthy nor diseased takes the place of reference to the differentia. That is because health is part of the science of medicine, but knowledge of disease is one of the sciences of medicine. Thus, they are specifically mentioned among the sciences. This takes the place of reference to the differentia.’” On the other hand, Galen says (B 1b.1; K 1:307; G* 8), “The term ‘knowledge’ is to be understood in its common, not its technical, sense.” His point is probably that medicine is not a science in the sense of a formal demonstrative system like geometry. The point made by Galen and Hunayn is that this is not a proper, essential definition.


29. A gloss in one MS reads: “That is, the body that is called healthy.”
الفصل الأول

ذكر هذه الطب:

(10) الطب يحدث بأنه العلم بالأمور الطبخية والمرضية التي ليست بحصية ولا مرضية. والذكر الطب في هذا الحادّ يقوم مقام ذكر جنس الله، وذكر الأمور الطبخية والمرضية والتي ليست بحصية ولا مرضية تقوم مقام ذكر الفصول.

(11) والأمور الطبخية ثلاثة، أحدثها البدين القابل للضحى، والثاني في العلامة الدالة على الحادّة، والثالث النسب الفاعل والحافظ للضحى، والأمور المرتبطة ثلاثة. أحدثها البدين القابل للمرض، وهو البدين الذي يсутى مريضاً، والثاني في العلامة الدالة على المرض، والثالث النسب الذي يحدث للمرض أو يحفظه، والأمور التي ليست بحصية ولا مرضية ثلاثة، أحدثها البدين القابل للحال التي ليست بحصية ولا مرض.

٥٦

٦٦
relating neither to health nor to disease;\textsuperscript{30} second, the sign that indicates this state; and, third, the cause that effects this state or that preserves it.\textsuperscript{31} If these are combined, nine combinations result, as follows:\textsuperscript{32}

<table>
<thead>
<tr>
<th>healthy body</th>
<th>diseased body</th>
<th>body neither healthy nor diseased</th>
</tr>
</thead>
<tbody>
<tr>
<td>sign of health</td>
<td>sign of disease</td>
<td>sign of neither health nor disease</td>
</tr>
<tr>
<td>cause of health</td>
<td>cause of disease</td>
<td>cause of neither health nor disease</td>
</tr>
</tbody>
</table>

(12) Each of these—body, sign, and cause, whether healthy, diseased, or neither healthy nor diseased—is said to be so in two senses: first, being so at the present moment and, second, being so absolutely—that is, not\textsuperscript{33} at the present moment.\textsuperscript{34} If each of these three \textsuperscript{35} is combined with each of these three states \textsuperscript{36} and with these two times, eighteen combinations result in the following manner:

<table>
<thead>
<tr>
<th>&lt;1&gt; a healthy body at the present moment</th>
<th>&lt;2&gt; a sign of health at the present moment</th>
<th>&lt;3&gt; a cause of health at the present moment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4&gt; a healthy body absolutely</td>
<td>&lt;5&gt; a sign of health absolutely</td>
<td>&lt;6&gt; a cause of health absolutely</td>
</tr>
</tbody>
</table>

\textsuperscript{30} A gloss in one MS reads: “That is, the body that is called neither healthy nor diseased.”

\textsuperscript{31} B 1b.5–6; K 1:307–8; G\textsuperscript{4} 10: Galen mentions these nine categories, but his point is different; medicine, he explains, is primarily about causes—in the first instance, causes of health, and then causes of diseases—and only secondarily about bodies. In the practice of medicine, however, diagnosis of the body comes first, which is done by signs; and only then can the cause be determined.

\textsuperscript{32} Here and in the other tables in this text, the MSS differ in format, with some presenting the items as simple lists, some as tables, and some as numbered lists. Two of the earliest MSS consistently use the table format, and only the youngest MSS consistently number the items.

\textsuperscript{33} An old MS adds: “only.”

\textsuperscript{34} B 1.7; K 1:308–9; G\textsuperscript{4} 9–10.

\textsuperscript{35} A gloss in one MS.

\textsuperscript{36} A gloss in one MS.
الصناعة الصغيرة الطبية

والثاني في العلامة التي تدل على هذه الحال، والثالث السبب الذي يفعل هذه الحال أو يحفظها. وإذا ألغت هذه تولد منها تسعة تراكيب على هذه الصفة:

<table>
<thead>
<tr>
<th>دون مرضي</th>
<th>دون مرضي، ولا مرضي</th>
<th>دون مرضي</th>
</tr>
</thead>
<tbody>
<tr>
<td>علامة مرضية، ولا مرضية</td>
<td>علامة صحيحة، ولا مرضية</td>
<td>علامة صحيحة</td>
</tr>
<tr>
<td>سبب مرضي</td>
<td>سبب مرضي، ولا مرضي</td>
<td>سبب صحيٍ</td>
</tr>
</tbody>
</table>

(12) وكلٍّ واحد من البذن والعلامة والسبب الصحي منها والمرضي الذي ليس صحيحا ولا مرضي يقال على ضربٍ، أذهبهما أن يكون كذلك في الوقت الحاضر، والآخر أن يكون كذلك مطلقاً، أي ليس في الوقت الحاضر، وإذا ألغت كل واحدة من هذه الثلاثة الحالات مع كل واحد من هذه الصفات:

<table>
<thead>
<tr>
<th>دون مرضي</th>
<th>دون مرضي، ولا مرضي</th>
<th>دون مرضي</th>
</tr>
</thead>
<tbody>
<tr>
<td>علامة صحيحة</td>
<td>علامة صحيحة، ولا مرضية</td>
<td>علامة صحيحة</td>
</tr>
<tr>
<td>سبب صحيٍ</td>
<td>سبب صحيٍ، ولا مرضي</td>
<td>سبب صحيٍ</td>
</tr>
</tbody>
</table>

هذه الوظيفة تولد من ذلك ثمانية عشر تركياً على هذه الصفة.

---

AM: arranged as plain text; DY: arranged as an abjad-numbered list

Fَكَلْ مَثْلَه، أَيَّ الْبَذِنِّ وَالسَّبَبِ مُرَجِعًا لِسَبْعَةٍ، يُوَارَى مِنْهَا أَثْنَاءَ عَشْرٍ رَكْمَةً عَلَى هَذَهُ الصَّفْهُ. | ADMY: Arranged as an abjad-numbered list

Fَكَلْ مَثْلَه، أَيَّ الْبَذِنِّ وَالسَّبَبِ مُرَجِعًا لِسَبْعَةٍ، يُوَارَى مِنْهَا أَثْنَاءَ عَشْرٍ رَكْمَةً عَلَى هَذَهُ الصَّفْهُ. | ADMY: Arranged as an abjad-numbered list

Fَكَلْ مَثْلَه، أَيَّ الْبَذِنِّ وَالسَّبَبِ مُرَجِعًا لِسَبْعَةٍ، يُوَارَى مِنْهَا أَثْنَاءَ عَشْرٍ رَكْمَةً عَلَى هَذَهُ الصَّفْهُ. | ADMY: Arranged as an abjad-numbered list

Fَكَلْ مَثْلَه، أَيَّ الْبَذِنِّ وَالسَّبَبِ مُرَجِعًا لِسَبْعَةٍ، يُوَارَى مِنْهَا أَثْنَاءَ عَشْرٍ رَكْمَةً عَلَى هَذَهُ الصَّفْهُ. | ADMY: Arranged as an abjad-numbered list

٢٧ | S ١٠ | \[٢١ \]

<table>
<thead>
<tr>
<th>دون مرضي</th>
<th>دون مرضي، ولا مرضي</th>
<th>دون مرضي</th>
</tr>
</thead>
<tbody>
<tr>
<td>علامة مرضية، ولا مرضية</td>
<td>علامة صحيحة، ولا مرضية</td>
<td>علامة صحيحة</td>
</tr>
<tr>
<td>سبب مرضي</td>
<td>سبب مرضي، ولا مرضي</td>
<td>سبب صحيٍ</td>
</tr>
</tbody>
</table>
(13) The absolute—that which is not in the present moment—is divided into two classes: first, the chronic and, second, the usual. If these are combined, twenty-seven combinations result, as follows:

<table>
<thead>
<tr>
<th>1</th>
<th>a healthy body at the present time</th>
<th>2</th>
<th>a sign of health at the present time</th>
<th>3</th>
<th>a cause of health at the present time</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>a chronically healthy body</td>
<td>5</td>
<td>a chronic sign of health</td>
<td>6</td>
<td>a chronic cause of health</td>
</tr>
<tr>
<td>7</td>
<td>a usually healthy body</td>
<td>8</td>
<td>a usual sign of health</td>
<td>9</td>
<td>a usual cause of health</td>
</tr>
<tr>
<td>10</td>
<td>a diseased body at the present time</td>
<td>11</td>
<td>a sign of disease at the present time</td>
<td>12</td>
<td>a cause of disease at the present time</td>
</tr>
<tr>
<td>13</td>
<td>a chronically diseased body</td>
<td>14</td>
<td>a chronic sign of disease</td>
<td>15</td>
<td>a chronic cause of disease</td>
</tr>
<tr>
<td>16</td>
<td>a usually diseased body</td>
<td>17</td>
<td>a usual sign of disease</td>
<td>18</td>
<td>a usual cause of disease</td>
</tr>
</tbody>
</table>

37. Or “continual.”
38. B 1.7; K 1.308; G* 11.
<table>
<thead>
<tr>
<th>١٠٨</th>
<th>ب: بـ بـ بصيغة دايمة في آخر الأمر</th>
<th>د: بـ بـ بصيغة صحيحة في آخر الأمر</th>
<th>ر: بـ بـ بصيغة دايمة في آخر الأمر</th>
</tr>
</thead>
</table>
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(14) That which is neither healthy nor diseased—whether it is a body, a sign, or a cause—is said to be so in three respects.⁴⁹ First, it may have neither health in the extreme nor disease in the extreme; but, rather, it may be in between, as is the case with the diseases affecting the bodies of the old and convalescents. Second, they may both apply but in different organs, as is the case with someone whose foot or hand is chronically ill but the rest of whose body is healthy.⁴⁰ Third, they may both apply but at different times, as is the case with someone who is healthy in winter but diseased in summer. Thus, if these are combined with the first pattern, twenty-seven combinations result, as follows:⁴¹

<table>
<thead>
<tr>
<th>&lt;19&gt; a body neither healthy nor diseased at the present time</th>
<th>&lt;20&gt; a sign of neither health nor disease at the present time</th>
<th>&lt;21&gt; a cause of neither health nor disease at the present time</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;22&gt; a body chronically neither healthy nor diseased</td>
<td>&lt;23&gt; a chronic sign of neither health nor disease</td>
<td>&lt;24&gt; a chronic cause of neither health nor disease</td>
</tr>
<tr>
<td>&lt;25&gt; a body usually neither healthy nor diseased</td>
<td>&lt;26&gt; a usual sign of neither health nor disease</td>
<td>&lt;27&gt; a usual cause of neither health nor disease</td>
</tr>
</tbody>
</table>

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⁴⁹. B 1.8; K 1:308; G⁺ 11–12. The explanation in the epitome is clearer and narrower in scope than Galen’s.

⁴⁰. This differs from Galen’s definition of the second class: “participating in both.”

⁴¹. A gloss in two MSS reads: “That is, these nine combined with ‘at the present time,’ ‘chronically,’ and ‘usually’ result in twenty-seven combinations.” The examples given in angle brackets in some of the following entries are not in most MSS—a fact noted in a gloss to the older MS that contains them.
الصناعة الصغيرة الطبية

<table>
<thead>
<tr>
<th>كا، سبب لا صحي ولا مرضي في الوقت الحاضر</th>
<th>بوط: بدن لا صحي ولا مرضي في الوقت الحاضر</th>
</tr>
</thead>
<tbody>
<tr>
<td>كا، علامة لا صحي ولا مرضي في الوقت الحاضر</td>
<td>كا، علامة لا صحي ولا مرضي دائمًا</td>
</tr>
<tr>
<td>كا، سبب لا صحي ولا مرضي دائمًا</td>
<td>كا، بدن لا صحي ولا مرضي دائمًا</td>
</tr>
<tr>
<td>كا، علامة لا صحي ولا مرضي في أكثر الأماكن</td>
<td>كا، بدن لا صحي ولا مرضي في أكثر الأماكن</td>
</tr>
</tbody>
</table>

(14) والذي ليس بصحي ولا مرضي بدك، كأن أعلامه أو صفة، يقال على ثلاثة أنواع، أحدها أن يكون ليس له صحيحة في الغاية ولا مرض في الغاية، لكنه في الوسط بمزمنة أيده أو يده جمعًا للأمريكين في أعضاء مختلفة بمزمنة من تكون رجله أو يده زمنة، وكون سائر بدها صحيحة. والثاني أن يكون جامعًا للأمريكيات في أوقات مختلفة بمزمنة إن كان في الشتاء صحيحة، وصحيحة في الصيف مريضة، فإذا ألقت هذه تولدها في التأليف الأول، وعة Ethics، تركت عليه هذه الصفة: 

ADMY 85 | ADSY 5
---|---
ADMY 88 | على الأكثر
ADMY 87 | على الأكثر
ADMY 86 | على الأكثر

<table>
<thead>
<tr>
<th>حاشية له: أي الذي ليس بصحي ولا مرضي، بدد: A'M'Y' S</th>
<th>بد: DFY 85</th>
<th>على الأكثر</th>
</tr>
</thead>
<tbody>
<tr>
<td>AM: M: M1: 20</td>
<td>DY: F: 96</td>
<td>S: S: S:</td>
</tr>
<tr>
<td>إذا: D: 95</td>
<td>DY: M: 23</td>
<td>A: 2</td>
</tr>
</tbody>
</table>
| A: 2 | تأليف: 94 | M: 23 | A'
| A: 2 | A: 4 | SY: 96 |

ADMY: Arranged as an abjad-numbered list  م. 97
<table>
<thead>
<tr>
<th>1</th>
<th>A body that, at the present moment, is neither healthy nor diseased to either extreme, for example, the convalescent, since the convalescent is neither healthy in the extreme nor diseased in the extreme.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>A body that is chronically neither healthy nor diseased to either extreme, such as the blind man, who is neither healthy in the extreme nor diseased in the extreme.</td>
</tr>
<tr>
<td>3</td>
<td>A body that is usually neither healthy nor diseased to either extreme, such as someone who is diseased for six months of the year and healthy the rest of it.</td>
</tr>
<tr>
<td>4</td>
<td>A body that, at the present moment, is neither healthy nor diseased, since it is in both conditions but in different organs.</td>
</tr>
<tr>
<td>5</td>
<td>A body that is chronically neither healthy nor diseased, since it is in both conditions but in different organs, such as the blind man, since the eyes of the blind man are chronically diseased but his body is healthy.</td>
</tr>
<tr>
<td>6</td>
<td>A body that is neither healthy nor diseased, since it is usually in both conditions but in different organs.</td>
</tr>
<tr>
<td>7</td>
<td>A body that, at the present moment, is neither healthy nor diseased, since it is in both conditions but at different times.</td>
</tr>
<tr>
<td>8</td>
<td>A body that is chronically neither healthy nor diseased, since it is in both conditions but at different times.</td>
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<tr>
<td>9</td>
<td>A body that is usually neither healthy nor diseased, since it is in both conditions but at different times.</td>
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<tr>
<td>10</td>
<td>A sign of neither health nor disease to either extreme at the present moment.</td>
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<tr>
<td>11</td>
<td>A sign always indicating neither health nor disease to either extreme.</td>
</tr>
<tr>
<td>12</td>
<td>A sign usually indicating neither health nor disease to either extreme.</td>
</tr>
<tr>
<td>13</td>
<td>A sign of neither health nor disease, since it indicates both conditions at the present moment but in different organs.</td>
</tr>
<tr>
<td>14</td>
<td>A sign of neither health nor disease, since it always indicates both conditions but in different organs.</td>
</tr>
<tr>
<td>15</td>
<td>A sign of neither health nor disease, since it usually indicates both conditions but in different organs.</td>
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</table>
The body, sign, or cause that is neither healthy nor diseased and that is in various organs is said to be so in two ways: first, equally and, second, unequally. The following eighteen combinations are generated from this second of the aspects implied by what is neither healthy nor diseased.

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42. B 1.8; K 1:308–9; G* 11–12: A gloss in an old MS reads: “To have equal disease in the body is when half the body is diseased and half is healthy.”

43. The second sense is when some organs are healthy and others diseased. A gloss in several MSS reads: “That is, if it is taken at the present time, chronically, and usually.”
الصناعة الصغيرة الطبية

(١٥) وما ليس بصحيٍ ولا مرضٍ، مما يكون كذلك في أعضاء مختلفة. بناءً على علامة أو "سبب"، فهو يقال على ضريح، أحدهما على المساواة، والآخر على غير المساواة، فينسلف من ذلك الوجه الثاني من الوجوه التي يبدل عليها ما ليس بصحيٍ ولا مرضٍ. تأليفٌ في ثمانية عشر تركيبة على هذه الصفة.

ADMY: Arranged as an eighteen-item abjad-numbered list
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>&lt;1&gt;</strong> A body that, at the present moment, is neither healthy nor diseased, since it is in both conditions but in different organs equally</td>
<td><strong>&lt;2&gt;</strong> A body that is chronically neither healthy nor diseased, since it is in both conditions but in different organs equally</td>
<td><strong>&lt;3&gt;</strong> A body that is usually neither healthy nor diseased, since it is in both conditions but in different organs equally</td>
</tr>
<tr>
<td><strong>&lt;4&gt;</strong> A body that, at the present moment, is neither healthy nor diseased, since it is in both conditions but in different organs unequally</td>
<td><strong>&lt;5&gt;</strong> A body that is chronically neither healthy nor diseased, since it is in both conditions but in different organs unequally</td>
<td><strong>&lt;6&gt;</strong> A body that is usually neither healthy nor diseased, since it is in both conditions but in different organs unequally</td>
</tr>
<tr>
<td><strong>&lt;7&gt;</strong> A sign of neither health nor disease, since it indicates both conditions at the present moment but in different organs equally</td>
<td><strong>&lt;8&gt;</strong> A sign of neither health nor disease, since it indicates both conditions chronically but in different organs equally</td>
<td><strong>&lt;9&gt;</strong> A sign of neither health nor disease, since it usually indicates both conditions but in different organs equally</td>
</tr>
<tr>
<td><strong>&lt;10&gt;</strong> A sign of neither health nor disease, since it indicates both conditions at the present moment in different organs unequally</td>
<td><strong>&lt;11&gt;</strong> A sign of neither health nor disease, since it indicates both conditions chronically but in different organs unequally</td>
<td><strong>&lt;12&gt;</strong> A sign of neither health nor disease, since it usually indicates both conditions but in different organs unequally</td>
</tr>
<tr>
<td>في أثر الأفراد</td>
<td>في أثر الأفراد</td>
<td>في أثر الأفراد</td>
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<tr>
<td>رج: بدن لا صحي ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي دائمًا</td>
<td>ببدن لا صحي ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي دائمًا</td>
<td>الوضع الرازي ببدن لا صحي ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي دائمًا</td>
</tr>
<tr>
<td>ط: علامات لا صحية ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي في أثار الأفراد</td>
<td>علامات لا صحية ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي في أثار الأفراد</td>
<td>الوضع الرازي علامات لا صحية ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي في أثار الأفراد</td>
</tr>
<tr>
<td>ب: علامات لا صحية ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي في أثار الأفراد</td>
<td>علامات لا صحية ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي في أثار الأفراد</td>
<td>الوضع الرازي علامات لا صحية ولا منضمة جمع للأفراد في أعضاء مختلفة على التساوي في أثار الأفراد</td>
</tr>
</tbody>
</table>
(16) Medicine is the knowledge of matters relating to health, to disease, and to neither health nor disease. 44 This statement of ours does not imply knowledge of all cases, since that is impossible and cannot be completely attained; nor does it imply knowing some of them, since that does not resemble the path of the art. Rather, it means which [of the three categories] each is from. People have differed about how this point is to be explained. Some say that the meaning of “whichever of them each is from” is the knowledge [of the varying conditions] of the majority of people; but this is absurd because it is impossible for someone to know all the people in a single city, let alone know a majority of those in the entire world. Moreover, this statement also implies that medicine is the individual knowledge of these matters [case by case], and Galen rejected and refuted this view. 45 Some people say that, by

44. B 1.9; K 1:309; G 12–13, directly quoting the definition given by Galen at B 1.1; K 1:307; G 7 and p. 57, paragraph 10, above: Galen points out the ambiguity of the definition: It can refer to all things relating to health, disease, and the neutral; to some things; or to the kind of things (τὸ ὁποίων, a variant of the usual word for quality; G ʿay Shayʾin ʾiltamisat maʿrifatuṭu minhā). Galen rejects the first as impossible and the second as deficient and unscientific (ο伢 τέχνικόν; literally, “not of the art”). The third, though, is both scientific and sufficient for all parts of the art of medicine. “The knowledge of what kind of things fall into each category is both scientific and sufficient for all the individual parts of the art” (trans. Singer). The point is that the art of medicine does not consist in knowing all particular cases, nor in knowing only some particulars, but, rather, in knowing how to categorize the various matters relating to health and disease. The last point seems to have been obscure both to the epitomist and the translator, since it is explained at length in the text yet is still vague in the Arabic.

45. In his attacks on the Empiricists; see pp. 33–34, paragraph 33, above.
الطب هو معرفة الأمور الطبية والمرضية والتي ليست بصحى ولا مرضية.

وقولنا هذا ليس بدلًا على الجمع لأن ذلك مما لا يكمل ولا يوجده ولا يدل أيضًا على البعض لأن ذلك لا يشبه الطريق الضاد. لكنك يدل على أي شيء كان منها. وقد اختلف الناس في تفسير هذا المعنى فقال بعضهم إن معنى قولنا "أي شيء كان منها إما هو معرفة جل الناس. وهذا سنجّع" لأن الإنسان لا يقدر أن يعرف جل من المدينة واحدة فضلًا. أن يعرف جل من في العالم كله. على أنه يجب الربح هذا القول أيضًا لأن يكون الطب إما هو معرفة البعض من هذه الأمور وجالوس قد هرب من هذا ودفه. وقال بعض الناس "إن قولنا أي شيء كان

الصناعة الصغيرة الطبية

| مريض جامع للأمرين في أعضاء مختلفة على المستواوي في أكثر الأمرين | مريض جامع للأمرين في أعضاء مختلفة على المستواوي دائمًا في الوقت الماضي |
| مريض جامع للأمرين في أعضاء مختلفة على غير المستواوي في أكثر الأمرين | مريض جامع للأمرين في أعضاء مختلفة على غير المستواوي دائمًا في الوقت الماضي |

(١٦)
“whichever of them each is from,” he means whoever comes to the physician; but this statement also implies knowledge of the individual. Another group says that, when he said “whichever of them each is from,” he means the [patient’s] impaired functions; but this is clearly false, since it cannot ever be said that the functions of healthy people are impaired. The most accurate thing that can be said about the meaning of his statement “whichever of them each is from” is this: that this statement of his implies that the physician possesses knowledge of the methods and means universally and generically, and that, by means of these universal generic methods, he grasps individual particular matters and thereby knows them.
منها إنما أراد به من يأتي الطبيب، وهذا القول أيضًا يوجب معرفة البعض. وقال قوم آخرون: "إن معناه في قوله أي شيء كان منها إنما هو من أفعاله ضرورًا. وهذا كتب صراح لَأنَّ الأحاديث بسُرُح لا يجوز أن يكون أفعالهم ضرورًا، وأصدق الأقوال في معنى قوله أي شيء كان منها هو أن قوله هذا يدل على أنه يكون عند الطبيب" علم بالطرق والمذاهب الكليّة الجنسية. فيقول بهذه الطرق الكليّة الجنسية على الأشياء المفردة الجنسية. فيعرفها بهاً.
(17) The body that is healthy at the present time is the one that, at the present time, has a moderate temperament and symmetrical structure. “Moderate” and “symmetrical” are used in two ways: first, when there are equal parts of the things by which the temperament is moderate and of the things by whose symmetry the symmetrical parts are symmetrical; and, second, when the things in it are of unequal quantities but the quantities correspond to what is needed <by the body.>\textsuperscript{48} The body that is chronically healthy is the one that has a moderate temperament and symmetrical structure in all years. The body that is usually healthy is the one that falls short of the optimal states of health,\textsuperscript{49} but only falls short by a small quantity.\textsuperscript{50} Likewise, the diseased body is diseased either at the present time, or chronically, or for the most part. The bad temperament may be in all the tissues, as happens in the case of fever; in one, as happens in gout; or in the best and highest ranking of them, as happens in melancholia.\textsuperscript{51} In addition, the asymmetry and lack of moderation in the composite organs may also

\textsuperscript{46} B 2.1; K 1:309–10; G\textsuperscript{a} 15. One early MS begins this paragraph with “The healthy body is either always so, or is so at the present time, or is so for the most part. The body . . . ”

\textsuperscript{47} B 4.3; K 1:314–15; G\textsuperscript{a} 25–26.

\textsuperscript{48} Added in one early MS.

\textsuperscript{49} One MS adds the gloss: “Which are chronic.”

\textsuperscript{50} B 2.1–7; K 1:310–13; G\textsuperscript{a} 15–21.

\textsuperscript{51} One MS has the gloss: “Both examples—gout and melancholia—involve a single organ.”
الفصل الثاني

ذكر الأبدان

البُدن الصغير في الوقت الحاضر، الذي يكون في ذلك الوقت الحاضر معتدل للدراج مستوي التركيب، والمعتدل، والمستوي تتمثل على ضرور، أخذًا ما أن يكون فيه من الأشياء التي يمتنعها الفرحة، والأشياء التي باستواتها مستويين، أجزاء متوازية. والآخر أن يكون فيه من تلك الأشياء مقادير غير متوازية إلا أن تلك المقدار مكونة لا يحتاج إليها. أما البُدن الصغير دائمًا فهو الذي يكون معتدل للدراج مستوي التركيب في جميع الأقسام. وَأَمَّا البُدن الصغير على الأكثر فيما يكون ناقصًا عن أفضل حالات الصحّة إلا أن مقدار رقصانه مقدار ر. يسير، وذلك البُدن المريض لا يخلو من أن يكون إما في الوقت الحاضر وإما دائمًا وإما على الأكثر، وسوء الدراج، إما أن يكون في جميع الأقسام، دائمًا، وإما أن يكون في بعضها م별ه ما يرض في القلب، وإما أن يكون في أشرافها وأجلها قدرًا مننذن ما يرض في الوسوس السوداوي٥٩، وخروج الأعضاء المركبة عن الاستواء والأعتدال في التركيب
exist either in all the organs, as was the case with Thersites; in one of them, as is the case with a long, narrow head; or in the best and highest ranking of them. The best and highest ranking, in this sense, may be either with respect to what is needed for the continuance of life, as is the case with one who has constricted blood vessels in the liver; or with respect to the good quality of life, as with someone whose fingers are joined together. The body that is neither healthy nor sick in that it combines both—that is, extreme health and extreme sickness—either exhibits both but in different organs, as is the case with the head and feet, or exhibits both in a single organ. If it exhibits both in a single organ, then either the structure of that organ is symmetrical but its temperament is not moderate, as when the head is well formed, but it is hotter or colder than it ought to be; or it is the opposite of that, so that its temperament is moderate but its structure is asymmetrical, as is the case when the head has a moderate temperament but is extremely protruberant to the front or back; or its structure is symmetrical, but its temperament is simultaneously moderate in some qualities and immoderate in others, as is the case in what is moderate in heat and coldness but immoderate in moisture and dryness or vice versa; or else the

52. This is the Thersites of the Iliad, trans. Fagels, B:216–19:

Here was the ugliest man who ever came to Troy.
Bandy-legged he was, with one foot clubbed,
both shoulders humped together, curving over
his caved-in chest, and bobbing above them
his skull warped to a point,
sprouting clumps of scraggly, woolly hair.

The MSS have something like “Eustes.” A gloss in several MSS reads, with minor variations: “Eustes [Thersites] was a man mentioned by the poet Homer. He was in the army and was hunched in his breast and back and had a long head that resembled a boat. His hair was thin, and his legs were crooked and lame.” This reference is evidence that the epitomes were composed in Greek. Thersites is not mentioned in the corresponding text of The Small Art, though he does appear in three other works of Galen (K 3.469, 5.15, 18a.253, 289). The gloss probably goes back to a gloss in the Greek text, since it is closely based on Homer, who lists the same four deformities. The corruption of the name must also be very early in the Arabic textual tradition, but it is easily explained in Arabic—a thāʾ-rāʾ read as yāʾ-wāw. A recent article identifies his condition as cleidocranial dysplasia, a genetic bone deformity; Simms, “Missing Bones, 33–40. BNP 14 col. 556. See appendix 1, sv. “Thersites.”
إِذَا أن يكون أيضاً في جميع الأعضاء مبزَنة ما كان ذلك في ترسطس، وإِذا في بعضها مبزَنة ما يكون في السفط الرأس، وإِذا في أَنْسِهذا وأَلْهَا قَدْرًا. وَشَفَرَ هذِهُ وَجَلَالَة قُدُرُهَا إِذَا أن يكون فِيُها مَجتَاج إِلَى لَقَوامِ "الحياة مَبَنِزةً من يكون عَرُوق كِبْدِه ضَيْقًة. وإِذا فِيُها مَجتَاج إِلَى مَّن "جُودَة" "الحياة مَبَنِزةً من يُتْمَق أَصَابِهُ بعضًّا. بِعْضَ، وَالْبَدنِّ الَّذِي لِيِسُ بِصِحْعِ وَلَا سَقَمَ "الجالِم للآمون، أعْيِن الصَّعْي" "في الغَلَاء والسَّمَق" "في الغَلَاء إِذا أن يكون جاَمِعًا للآمون في أَعْضاَا خَلَطَت مَبَنِزة الرأس والرجلين، وإِذا في عَضوٍ وَاحِد. والجالِم لِهِما في عَضوٍ وَاحِد إِذا أن يكون تركِب ذَلِك العضو مُشَتَوَّى، وَمَراجِعُ غَرِب مَعْتَدَل بَنِزة ما يكون الرأس حسْن الشَكِل إِلَى أَحُزَّه" "أَبْرَدُ مَا يُنَقِّي، وإِذا أن يكون عَلَى خَلَاف ذَلِك. فِي كُون مَراجِع مَعْتَدَلاً وَتَرِكِب غَرِب مَعْتَدَل بَنِزة ما يكون الرأس مَعْتَدَل للرَّاج إِلَى أَحُزَّه" "أَبْرَدُ إِلَى قَدَّام وإِذا إلَى خَلَاف وإِذا أن يكون تركِب غَرِب مَعْتَدَل "وَمَراجِعُ مَعْتَدَلاً وَغَرِب مَعْتَدَل مَعَ في كُتِبَات خَلَطَت مَبَنِزة ما يكون مَعْتَدَل "في الحَرَاءِ والبَرَّ وَدَة غَرِب مَعْتَدَل في الزَّوْطِيَّة وَالبِين" "أَوَّل خَلَاف ذَلِك. إِذا أن يكون مِخْلَف هَذَا.

opposite of the previous state, so that it is moderate with respect to its temperament and both symmetrical and asymmetrical in structure in different respects, as is the case with that which is symmetrical in form but asymmetrical in position, size, or number, or the opposite.

(18) The active primary qualities are those that have an effect, and the passive primary qualities are those in which the effect occurs. These are four in all. Two of them are active, which are those in which activity is greater; these are heat and coldness. Two are passive, which are those in which it is more usual to receive an effect; these are dryness and moisture. There are two kinds of opposition among primary qualities. The first is called the opposition of the predominantly active qualities, which are heat and coldness. The second is called the opposition of the predominantly passive qualities, those that are more likely to have effects occur in them. These are dryness and moisture.

(19) The term “now”—that is, the present moment—is used in two senses: first, the durationless point of time; and second, a duration of time, as when we say, “It is summer now.”

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53. B 2.5; K 1:312–13; G* 19–20: Galen mentions the active and passive qualities but does not identify them.

54. B 2.6; K 1:313; G* 21: Galen mentions without explanation that “now” has two meanings. The Arabic translation of The Small Art adds in some MSS: “The first having no parts and the second having parts”; cf. B, p. 281, n. 1, which cites this passage of the epitome and the commentary of ʿAlī ibn Ridiwān.
فيكون في جملة مراجعة معتمدة "وً يكون في تركيبه معتمدة" وغير مستوعباً في أخرى مختلفة بمنشأة ما يكون مستوعباً، في خلافة غير مستوعبة في الوضع أو في المقدار أو في العدد أو على خلاف ذلك، هـ (٥٨)

التوصيات الأولى الفاعلة التي تفعل والمتفعلة التي يقع بها الفعل هي أربع، اثنتان منها تفاعلان موقعهما الفعل أكثر، وهما الحرارة والبرودة، اثنتان منفصلتان موقعهما الفعل أكثر، وهما البس والرطوبة.

(٥٩) معنى الآن وهو الوقت الحاضر يقع على أمرين، أحدهما النقطة التي لا عرض لها من الزمان، والآخر الوقت الذي له عرض بمثابة ما يقول إن الآن صيف.
[Chapter 3]

[Signs]

(20) Some signs are of health and some of disease. In each class, some are diagnostic of the present state, some are prognostic of the future, and some are mnemonic of what is past. Some of the signs that are of neither health nor disease are diagnostic of a body that combines extremes of health and disease; some are diagnostic of a body that does not have extremes of either health or disease; and some are diagnostic of a body that is healthy at one moment and diseased at another. Each of these three kinds of sign is either diagnostic of the present, prognostic of the future, or mnemonic of what is past. If these signs are combined, the following fifteen combinations result.

<table>
<thead>
<tr>
<th>&lt;1&gt; A sign diagnostic of health</th>
<th>&lt;2&gt; A sign prognostic of health</th>
<th>&lt;3&gt; A sign mnemonic of health</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;4&gt; A sign diagnostic of disease</td>
<td>&lt;5&gt; A sign prognostic of disease</td>
<td>&lt;6&gt; A sign mnemonic of disease</td>
</tr>
<tr>
<td>&lt;7&gt; A sign diagnostic of a body that is neither healthy nor diseased in the extreme</td>
<td>&lt;8&gt; A sign prognostic of a state that is neither healthy nor diseased in the extreme</td>
<td>&lt;9&gt; A sign mnemonic of a state that is neither healthy nor diseased in the extreme</td>
</tr>
<tr>
<td>&lt;10&gt; A sign diagnostic of a body combining both conditions</td>
<td>&lt;11&gt; A sign prognostic of a state combining both conditions</td>
<td>&lt;12&gt; A sign mnemonic of a state combining both conditions</td>
</tr>
<tr>
<td>&lt;13&gt; A sign diagnostic of a body that is healthy at one moment and diseased at another</td>
<td>&lt;14&gt; A sign prognostic of a state that is healthy at one moment and diseased at another</td>
<td>&lt;15&gt; A sign mnemonic of a state that is healthy at one moment and diseased at another</td>
</tr>
</tbody>
</table>

55. B 3.1–3; K 1:313; G* 22–24: This passage follows Galen’s text closely.
56. Other MSS give a numbered list rather than a table.
الفصل الثالث

ذكر العلامات

العلامات منها صحية ومنها مرضية. وكل واحد من هذين الصفنتين منهما مهدّل على الأمر الحاضر، ومنه ما هو منذر بما يستأنف. ومنه مذرّ به قد مضى وآما العلامات التي ليست صحية ولا مرضية. فبعضها يدل على البعد الجامع للغايتين من الصحة والمرض، وبعضها يدل على البعد الذي لا صحة له في الامة ولا مرض في الغاية. وبعضها يدل على البعد الذي يكون في وقت من الأوقات صحية وفي وقت آخر مرضياً. وكل واحد من هذه الثلاثة الأصناف من العلامات إذا أن يدل على الحاضر فإنّا أن ينصّب المستأنف بإما أن يذكر بالملف، وإذا أَلفت هذه العلامات صار منها خمسة عشر تركيباً على هذه الصفة:

| رقم | علامة تدل على الصحة | علامة تدل على المرض | علامة تدل على بدأ جمعة للأمر
|-----|---------------------|---------------------|-------------------------------|
| ١   | علامة تذكر بالصحة   | علامة تذكر بالمرض   | علامة تذكر بحال جمعة للأمر
| ٢   | علامة تذكر بالصحة   | علامة تذكر بالمرض   | علامة تذكر بحال جمعة للأمر
| ٣   | علامة تذكر بالصحة   | علامة تذكر بالمرض   | علامة تذكر بحال جمعة للأمر
| ٤   | علامة تذكر بالصحة   | علامة تذكر بالمرض   | علامة تذكر بحال جمعة للأمر
| ٥   | علامة تذكر بالصحة   | علامة تذكر بالمرض   | علامة تذكر بحال جمعة للأمر

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AM ١٩٨ | DF ١٩٧ | ADMY ١٩٧
+ في أعضاء مختلفة | إِذاً أَكَلَ | Fh
F™ ٢٠٠ | S ٢٠٠ | إذاً أَكَلَ | ٢٠٠
ADMY: Presented as a fifteen-item abjad-numbered list | قَد مَضَى | DSY ٢٠١
ADMY: Presented as a fifteen-item abjad-numbered list
(21) Some signs—those diagnostic of the present state of affairs—are things that are beneficial only to the patient. Other signs—those mnemonic of what has already happened—are beneficial only to the physician, since these may be beneficial in garnering praise for the physician and manifesting his skill and acuity to men. Still others—those prognostic of what will be—are of use to both patient and physician. Signs may be analyzed in another way in that the benefit of those of them that are diagnostic of the present redounds, in the first place, to the patient in the form of the treatment he needs but accrues accidentally to the physician in that his treatment is successful. The benefit of those that are mnemonic of what has already happened redounds primarily to the physician in that he needs to acquire praise and reputation but also redounds accidentally to the patient in that, if he has confidence in the skill and acuity of the physician, he will follow his instruction and trust what he says, thus making it more likely that the treatment will have a good outcome. The benefit of the signs prognostic of the future redounds to both of them, both primarily and accidentally.

57. B 3.4; K 1:314; Gª 24: Galen’s text lacks this intrusion of marketing considerations and simply observes that mnemonic signs are less useful than the diagnostic and prognostic.
العلامة منها أشياء ينفع بها المرض فقط، وهي العلامات الدالة على ما هو حاضر. ومنها أشياء ينفع بها الطبيب فقط، وهي العلامات الدالة على ما قد سلف لآن هذه إنما ينفع بها في أن يمدح الطبيب ويظهر للناس حظه وفرائه ومنها ما ينفع بها المريض والطبيب معًا، وهي العلامات التي تذكر بما سيكون للعلامات تصريف آخر. وهو أن ما هو منها دال على الحاضر، ففعه أولاً يعود على المريض فيما يحتاج إليه من المداواة ومن طريق العرض يعود نفعها على الطبيب في أن يفجع عمله، وما هو منها مذكراً بما قد سلف. ففعه يعود أولاً على الطبيب فيما يحتاج إليه من أكساب الحد والدح ويعود نفعه من طريق العرض على المريض أيضًا في أنه إذا وثق بحد الطبيب وجودة نظره استسلم إليه وركز إلى قوله وذلك مما يتبه حسن العاقبة في المداواة. وما هو منها مندراً بما يستنفف. ففعه يعود عليهما جميعاً أولاً والمرض.
(22) The body that is in the most excellent state of health combines moderation in the temperament of the tissues, symmetry in the structure of the functional organs, and a laudable state of continuity in the entire body.\textsuperscript{58} Some of the signs indicating moderation of temperament in the tissues are essential, such as moderation of the primary qualities of heat, coldness, dryness, and moisture. Others are accidental. Some such accidental signs are palpable, such as moderate hardness and moderate softness. Some are visible, such as moderate pallor and moderate ruddiness. Some are both palpable and visible, such as the hair and its varieties—shaggy, thin, curly, lank, and so forth. The excellent body is moderate in all these respects. Another sign is completeness, as in unimpaired functions. Likewise, some of the signs indicating ideal states in the structure of functional organs are essential; these are construction, dimensions, number, and position. The five aspects of structure are apertures, concavity, shape, roughness, and smoothness. Position includes two things: erect position and contiguity. If the structure of the functional organs is in these ideal states, then the body is moderate with respect to

\textsuperscript{58} B 4.3–5; K 1:314–15; G*a 25–26: Continuity refers to the absence of physical damage and lesions in the tissues and organs; see paragraphs 23, 61, 81, pp. 72–73, 108, 125, below.
الفصل الرابع

ذكر أفضل الحالات في الصحة

(22) مكان من الأبدان على أفضل الحالات في الصحة، فهو جامع للإعادة في مراح الأعضاء المشابهة الأجزاء. واستواهاً في تركيب الأعضاء الآلية، وللحال للحومه في اتصال "جميلة البند"، العلامات الدالة على إعادة مراح الأعضاء المشابهة الأجزاء. منها ما هو جوهرٌ بمزنة الإعتدال في الكهف. الأولى، وهي الحرارة والبرودة والطروبة والبيوضة. ومنها ما هو عرضي، وهذه العرضية منها ملحوسة، وهي الصلاة المعتدلة والمليّن للمعتدل، ومنها مصورة، وهي البياض المعتدل والحمراء المعتدلة، ومنها ملحوسة ومصورة مع مزنة الشعر وتواها، وهي الأزور والازعج والمسبط وما أشبه ذلك، فإن البدن الفاعل يكون معتدلاً في هذه الأحوال كله، ومنها تماهيّة بمزنة تمام الأعمال. وكذلك أيضاً العلامات الدالة على أفضل الحالات في تركيب الأعضاء الآلية. منها ما هي جوهرة، وهي الخلق والخصائص والمقدّر والوضع، والخليفة تجمع خمسة أشياء، وهي التغيير، والتكوين والشكل والحشوة والفروعة والملبس. والوضع تجمع خمسة أشياء. منها الوضع "المستقيم" والمشاركة، والبدن الذي حاله أفضل الحالات في تركيب

الصحة الصغيرة الطبية

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each of them. Some states are accidental, such as comeliness and beauty; and some have to do with completeness, such as unimpaired functions. The defect in a usually healthy body by reason of which it is not always healthy is either in the tissues or in the functional organs. That which is in the tissues is either in one quality or in two. That which is in the functional organs is either in one species or in two.

(23) Of the things by which the tissues and organs acquire excellence in their forms, two are, as it were, the genera.\textsuperscript{59} One of them is the temperament and the other the size. Others are like the species. There are also two of these: first, moderation in temperament and,
الإعجاب الآلهية هو معتدل في هذه كلها. ومنها عرضية بنزلة الحسن، والجبل ومنها تمامية بنزلة تمام الألم. والآلهة في الأبدان الطيبة على أثرب الأموات، بسببها صارت ليست بدائمة النحية، إما أن تكون في الأعضاء المشابهة الأجزاء، وإما أن تكون في الأعضاء الآلهية، والذي في الأعضاء المشابهة الأجزاء، إما في خيانة واحدة وإما في خيانة. وفي الأعضاء الآلهية إما في نوع واحد وإما في نوعين.

(٢٢٢) الأشياء التي بها تمّ الفضيلة في هيئة الأعضاء المشابهة الأجزاء، وفي هيئة الأعضاء الآلهية، بعضها يجري جرى الجنس، وهو شيطان، أحدهما

فهبت أمرها [Ga: أُمّرها].

second, moderation in quantity.60 There are also two genera of the things by which defects occur in the tissues and organs: first, the temperament and, second, the size.61 There are also two things that are species: first, deviation from moderation in the temperament and, second, deviation from symmetry in the structure. Moreover, the organs need to admit of continuity in order to have an excellent form. By this I mean both the tissues, such as nerves, arteries, and veins; and the compound organs, such as the head, arm, and leg.

(24) The difference between the sickly and the diseased person is that the functions of the sickly person are not perceptibly impaired, whereas the impairment of the functions of the diseased person is perceptible.62 The difference between the sickly person and the person who is usually healthy is that the sickly person is predisposed to fall victim to the causes of disease and his functions are usually impaired, whereas

60. Some MSS read “form.” A gloss appears in two MSS: “This passage, which has been inscribed in the margin from another manuscript of the epito-

61. Some MSS read “form.”

62. B 4.7–12; K 1:316–18; G* 27–31: Galen is trying to establish criteria to
distinguish degrees of health and disease while avoiding conflating fragile health
الماء والآخر للقدر، وبعضها يجري مجرى النوع، وتسمى " takeaway". أحدثها
الاعتدال في الماء والآخر الاعتدال في القدر، والأشياء أيضا التي من
قبلها تدخل الآفة على الأعضاء المتشابهة الأجزاء، والآلة... منها ما هي
أجسام، وما شابه أن حدها الماء، والآخر للقدر، ومثلها ما هي أنواع، وما
أحدها شابنه أن حدها الماء، والآخر الاعتدال عن استواء
التركب، والأعضاء أيضا تحتاج إلى أن يسلم لها اتصالها أتّمكن هيئة الهيئة
الراضفة. أعني المتشابهة الأجزاء منها، وهي العصب والعروق الضوّارب وغير
الضوبار وما أشبه ذلك، والمركة، وهي الرأس واليد والرجل وما أشبه ذلك.
(24) الفرق بين المبرم والمرض أن المبرم ليس ما بفعله من المضايّح محسوسً
والمرض مضايّح المحسوس، والفرق بين المبرم والمرض وهو محسوس على الأكثر أن
المبرم مريض وليته من... الأسباب المرضية، وأفعاله... ضروره أكبر،
والذي هو محسوس على الأكثر ليس هو مريض وليته الأسباب المرضية، وأفعاله...
the one who is usually healthy is not predisposed to fall victim to the causes of disease and his functions are less impaired. The degrees between the most excellent degree of health and the extreme degree of disease are the following:

<table>
<thead>
<tr>
<th>&lt;First&gt;</th>
<th>&lt;Second&gt;</th>
<th>&lt;Third&gt;</th>
<th>&lt;Fourth&gt;</th>
<th>&lt;Fifth&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>One of the extremes, health that is in the extreme of excellence</td>
<td>After that, the lower levels of health</td>
<td>Then intermediate health, being the state of the one who is neither healthy nor diseased</td>
<td>Then the degrees of sickliness, which are the states of the healthy when he is in health but sickly, which is bad</td>
<td>The other extreme, established disease, which is the worst of all</td>
</tr>
</tbody>
</table>

(25) The bodies in whose functions some defect occurs can have that happen to them either by the entire loss of the function—as when organs lose sensation and motion—or by a deficiency in the function. If the deficiency is small in quantity, it is very difficult to diagnose; but if it is considerable, then it is easy to diagnose. The function may also be improper, in which case the diagnosis is easy, as with organs in which pain or convulsions occur. Impairments occurring in the body are of

with actual disease. In particular, he wishes to avoid the doctrine of ἀειπάθεια, the theory that we are constantly diseased to some greater or lesser degree. While this may be true in some sense, it is of no practical value to the practicing physician; cf. On the Temperament 3, K 1:676–77. Either the epitomist or the translator has introduced a terminological distinction that does not exist in the corresponding passage of Galen’s text between “diseased” (νοσώδης, marīḍ) and “sickly” (misqām). In place of “sickly,” Galen has “neither” (οὐδέτερος, laysa . . . wa-lā), which is not a very satisfactory term to describe bodies prone to disease. Galen does, however, mention that “diseased” (νοσώδης) has two senses (B 4.7; K1:316; G* 27).

63. Two MSS have the gloss: “Another gloss by him. If what is in the text is corrected, then its interpretation is that the most excellent class of health is part of the excellence, and the most excellent class of sickness is from the excess—that is, the superfluity.” The problem is that some MSS read, literally: “the most excellent level of disease.” The author of the gloss points out that the root $F$-$D$-$L$ means both “excellence” and “excess.” The table reflects Galen’s categories at B 4.10–12; K 1:317–18; G* 30–31.
مضروبة أقر، وفيما بين أفضل، طبقات الصحة وأقصى" طبّبات للمرض مراقب

على هذا المثال: "ثم ālamīn المتبقي الشديد مع القول المثالي وكمية وذلك

<table>
<thead>
<tr>
<th>الحاسة</th>
<th>الزعيم</th>
<th>الثالث</th>
<th>التاني</th>
<th>الأول</th>
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</thead>
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<tr>
<td>والطرف الآخر</td>
<td>مراتب المتم</td>
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<td>الرضي المكسك</td>
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<td>أرضاً للجميع</td>
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<td>ردية</td>
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<td></td>
<td></td>
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</tr>
</tbody>
</table>

(25) الأبدان التي يحدث بها في أفعالها: آفة لا تخلى عن أن يكون ذلك يعرض

لها إما عند ذهاب الفعل جملة "بمنزلة الأعضاء التي يملك حسنها وحركها" وإما

عندما ينقطع الفعل، وقصصاته إن كان يسير المقدا دفعه يكون عسرًا شاقًا. وإن

كان كبيراً فهو يكون سهل، وإما عند ما يجري الفعل مجرد رديًا منكرة، وتعرف

ذلك يكون سهلاً، "بمنزلة الأعضاء التي يحدث بها وفع أو شاق. المضار الحادة


A^M^: حاشية له: الجيد أن يكون في الثالث


two kinds. First, the impairment may be concealed from the senses and exist by nature. In that case, the body is not said to be diseased. Second, the impairment may be perceptible. In this case, the body is said to be of intermediate health if the impairment is slight—that is, the body is neither healthy nor diseased. If it is greater than that, the body is said to be in a sickly state of health. If the impairment is even greater than that, the body is said to be diseased.

(26) Some bodies that fall short of the most excellent state do so only slightly, others more so, others yet more, and still others by a great deal. Likewise, some signs also fall slightly short of indicating the optimal form, others more so, others yet more, and still others fall short by a great deal. The combination of the levels of these states results in the following.

<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>First, the state of healthy bodies in the most excellent health</td>
</tr>
<tr>
<td>Second, the state of healthy bodies whose health is less than excellent</td>
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<tr>
<td>Third, the state of bodies that are neither healthy nor diseased</td>
</tr>
<tr>
<td>Fourth, the state of the sickly body</td>
</tr>
<tr>
<td>Fifth, the state of the mildly diseased body</td>
</tr>
<tr>
<td>Sixth, the state of the body in the extreme of disease</td>
</tr>
</tbody>
</table>

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64. Some MSS include the gloss: “A gloss of his: The addition of the digression about signs is not acceptable—not because it is not true, but, rather, because the discussion here is confined to bodies.” But the author of the gloss is wrong, since Galen discusses both subjects; see B 4.7–5.1; K 1:316–18; G 27–32.
في البذن ضراً. أخذت أن تكون المرضة تحت عن الحسن وتوجد في الطبع، وإذا كان كذلك لم يżycz إن البذن مريض، والآخر أن تكون المرضة موجودة حيناً، وإذا كانت كذلك فإنها إن كانت مرضة يسير قبل أن ذلك البذن صحي وسطاً. أي ليس هو صحي ولا مريض وإن كانت أكثر من ذلك. قبل أن البذن صحي وسطاً، وإن كانت أكثر من ذلك أيضاً قبل إنه مريض.

وبعضها قصصتهما أكثر، وعضاها أكثر من ذلك أيضاً، وعضاها قصصتهما أكبر بكثير، وكذلك أيضاً العلامات بعضها تنقص عن الدلالات على الهيأة الفاضلة مقداراً يسير، وعضاها قصصتهما عن ذلك أكبر، وعضاها أكثر من ذلك، وعضاها كثير القصان

него،

وأولها حال الأبدان suisée. 

الثاني حال البذن الذي ليست بصيحة ولا مرضة.

الثالث حال البذن الذي ليست بصيحة ولا مرضة.

والثاني حال الأبدان qui n'est pas de la meilleure.

الثالث حال البذن الذي ليست بصيحة ولا مرضة.

السابع حال البذن الذي ليست بصيحة ولا مرضة.

الثامن حال البذن الذي ليست بصيحة ولا مرضة.

السادس حال من هو في غاية المرض.

السابع حال البذن الذي ليست بصيحة ولا مرضة.

الثامن حال البذن الذي ليست بصيحة ولا مرضة.

السابع حال الأبدان qui n'est pas de la meilleure.

الثامن حال الأبدان qui n'est pas de la meilleure.

السادس حال من هو في غاية المرض.

السابع حال الأبدان qui n'est pas de la meilleure.

الثامن حال الأبدان qui n'est pas de la meilleure.

السابع حال البذن الذي ليست بصيحة ولا مرضة.

الثامن حال البذن الذي ليست بصيحة ولا مرضة.

السادس حال من هو في غاية المرض.

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الثامن حال البذن الذي ليست بصيحة ولا مرضة.

السادس حال من هو في غاية المرض.

السابع حال الأبدان qui n'est pas de la meilleure.

الثامن حال الأبدان qui n'est pas de la meilleure.
We have already described in a general way how to diagnose sickly bodies, but now we will describe in detail how to diagnose each of the organs individually. The sickly body may be sickly absolutely, which is what we mention here; or it may be sickly at the present moment, which we will mention later.65

65. Perhaps p. 118, paragraph 73, below.
وتحمل الأمر في تعرف الأبدان المستقامة 77 قد وصفناها فيما تقدم، فأما على التفصيل
أعني 77 تعرف كل واحد من الأعضاء على الأفراد، فنحن نصفه هاهنا. فالبدن المستقامة لا يختلف من أن يكون مستقماً مطلقاً 77، وهو هذا الذي نذكره في هذا الموضوع أو مستقاًماً 77 في الوقت الحاضر، وهو الذي نذكره في آخر الأمر.
[Chapter 5] 66

[The genera of the organs]

(27) There are four genera of organs in the body. First, there are the principal organs, which are the brain, liver, heart, and testicles. Then there are the organs subordinate to the principal organs. These are the nerves, which are subordinate to the brain; the arteries, which are subordinate to the heart; the veins, which are subordinate to the liver; and the sperm ducts, which are subordinate to the testicles. There are also the organs that have, of themselves, innate faculties. These are the bones, cartilage, ligaments, soft flesh, and so forth. Finally, there are organs that have both innate faculties and faculties reaching them from other organs, such as the arms, legs, trunk, and the like.

66. B 5.2–3; K 1:319–20; Gα 32–35: This chapter is an introduction to the main part of the book, which deals with the diagnosis and treatment of the diseases of the major organs.

67. Literally, “dependents and servants of.”
الفصل الخامس

ذكر أجزاء الأعضاء

(27) أجزاء ما في البدن من الأعضاء أربعة. وذلك أنَّ منها رئيسةً، وهي الدُماغ والقلب والكبد" والأنثيان"، ومنها خُل وخدمة للزُروساة، وهي العصب، وهي" خُل وخدمة للدُماغ، والمروق الضوارب، وهي خُل وخدمة للقلب، والمروق الغير الضوارب"، وهي خل وخدمة للكبد، وأوعية العين، وهي خٓل خُلما للأنثيَن، ومنها ما لها في أنفسها قوى غزية، وهي العظام والعضاريف، والنباتات وفم الزُنوج وما أشبه ذلك، ومنها ما لها قوى غزية وقوى تجري إليها من غيرها، وهي اليدين والرجلان والصدر وما أشبه ذلك.
[Chapter 6]

[The diagnosis of the brain]

(28) There are five genera of signs indicating the states of the brain essentially. There are also accidental signs, such as the speed—or lack thereof—with which injury caused by external causes occurs. The first of the five essential genera is the condition of the head; the second is the condition of the sensory functions; the third is the condition of the motor functions; the fourth is the state of the deliberative—that is, the governing—functions; and the fifth is the state of the natural functions. The condition of the head embraces three things: first, its size; second, its shape; and, third, its hair. In size, the head may be either large or small. Its shape may be either well formed or badly formed. The hair has three aspects: first, its size; second, its shape; and, third, its color. The size of hair may be either coarse or fine in texture. Its shape may be curly or straight. Its color may be fire-colored, red, blond, white, or black. There are five sensory functions: vision, hearing, smell, taste, and touch. The motor functions are those brought to completion by the muscles.

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68. B 6.1; K 1:319–20; G* 35–36: A close summary of Galen’s text, except that Galen mentions “change coming about as a result of external influences,” instead of accidental signs. The epitomist’s reference to accidental signs probably comes from B 6.11; K 1:323; G* 41, where Galen mentions that “if the brain is well balanced in respect to the four qualities, it . . . will be very little harmed by any external influence—things which heat, cool, dry, or moisten.”
الفصل السادس

الاستدلال على الدماغ

(28) العلامات الدالة على حالات الدماغ بعضها جوهري، وهي خمسة أُجناس، وبعضها عرضية متزامنة مما يُعقب له أن يكون تسرع إلية لفضفاضة من الأسباب التي تحدث من خارج أو لا تسرع إليةٌ، فأما الخمسة الجوهرية، فأُدُعيت Hall الأُس والثاني حال الأفعال الحساسة والثالث حال الأفعال الحركة والرابع حال الأفعال السياسية، والخامس حال الأفعال التعليمية، وحال الأُس تجمع ثلاثة أشياء، أُدُعيت المقدار والثاني شكله والثالث شعره، أما مقدار الأُس فإنه، إما أن يكون كبيرًا وإما أن يكون صغيرًا، وأما شكله فإنه، إما أن يكون حس الشكل وإما أن يكون ردي الشكل، وأما شعره فإنه، إما مقداره والأُس ثالث أشياء، أُدُعيت المقدار والثاني شكله والثالث لونه، أما مقدار الشعر فإنه، لا يُلخّل من أن يكون إما عليظه الطاقة وإما دقيق الطاقة، وأما شكله فإنه، لا يُلخّل من أن يكون إما جعدًا وإما سبطًا، وأما لونه فإنه، يكون إما بُلون النار وإما أحمر وإما أسود وإما أبيض وإما أسود، وأما تهيئة الأفعال الحساسة، فهي خمسة: البصر والسمع والشم والذ각 والمس، وأما الأفعال الحركة، فهي الأفعال الحركة، وأما الأفعال التعليمية،
The deliberative—that is, the managing—functions are imagination, thought, and memory. The natural functions are the absorption of nutrient, its retention, its coction, and the expulsion of what remains of it.

(29) The head may be either large or small. Under all conditions, a small head indicates that the structure and form of the brain are poor. A large head caused by abundant matter and a weak faculty indicates that the structure and form of the brain are poor. When its size is caused by the amount of matter and a healthy faculty, then a large head indicates that the structure and form of the brain are excellent. A large head has signs and indications by which its condition can be diagnosed. Did it occur due to the quantity of matter combined with weakness of the faculty, or was it because of the quantity of matter combined with a healthy faculty? These signs and indications are in the things that grow from it and from its shape. In the case of things growing from it, if the nerves, spinal cord, and neck are extremely thick, then the cause of its size is that there is a great deal of matter and a strong faculty. If the parts we mentioned are thin and weak, the cause of that is the quantity of matter combined with a weakness of the faculty.

(30) As for the indication given by the shape of the head, if the head is well formed, its large size is caused by the large quantity of matter and the strength of the faculty. If it is badly shaped, the cause is the quantity of matter combined with a weakness in the faculty. The head whose large size indicates that the structure and form of the brain are excellent can be identified by the things that originate from it and from its shape—from the things that originate from it if the neck is strong,

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الصناعة الصغيرة الطبية

أيّة المدبرة: فهي التَّفَّيل والفَكر"، والذكر، وأما الأعمال الطبيعية. فهي جذب الغذاء وإمساكه وإضافته ودفع ما بقي منه.

(20) والرأس يكون إذا كبيرًا و إذا صغيرًا، والصغير يدل على كل حال أن بنية الدماغ: وهيئة، رديئة. وأما الكبير فإنه إن كان الشب في كبر كرزة المادّة وضعف القوة، فهو يدل على أن الدماغ رديّة البنية والهيئة. فإنّ كثر الشب في ذلك كرزة المادّة وضعف القوة. فهو يدل على أن بنية الدماغ وهيئة جيدة فاضلة.

وأين الرأس الكبير علامات ودلاً ل يتعرّف بها أمره. هل عرض له ذلك بسبب كرزة المادّة مع ضعف من: القوة أو. بسبب كرزة المادّة مع صحة من القوة، وهذهعلامات والدلاً ل تكون في: الأشياء التي نبت منه ومن شكله. أما من الأشياء التي نبت منه فإنّ فإنّ كان العصب والقفا والخف غليظًا قوية، فالشب في كبره أن المادّة كانت كثيرة والقوة قوية. وإن كان ما بينها دقيقًا ضعيفًا. فالشب في ذلك كرزة المادّة مع ضعف من: القوة.

(20) وأما الدلالات من شكل الرأس فإنه إن كان الرأس حسن الشكل، فالشب في كبره أن المادّة كانت كثيرة والقوة قوية. وإن كان رديك الشكل، فالشب في ذلك كرزة المادّة مع ضعف من القوة. والرأس الكبير الذي يدل على أن الدماغ فاضل البنية والهيئة تعرف من الأشياء التي منشأها منه ومن شكله. أما من الأشياء
the arms and legs perfectly shaped, and all of the genera of nerves thick and strong; and from its shape if it is well shaped. The head has two protrusions. The one in the front is because the sensory nerve grows from the front of the brain. The other, which is in the back, results from the motor nerve and spinal cord growing from the back of the brain. Each of these two protrusions can be deficient or excessive. If it is deficient and small, that is due either to a deficiency in the matter, in which case the deficiency is less serious than otherwise, or it is due to a weakness of the faculty, which is more harmful. They are both diagnosed from things whose origin is in the brain. The excess is when the head is narrow, which is either because of an abundance of matter combined with a weakness of the faculty, which is harmful, or because of an abundance of matter combined with a healthy faculty, which is excellent.

(31) There are five seams, or sutures, in the head.\textsuperscript{71} Three of them are true sutures, and two of them are not. One of the three true sutures is the coronal suture, which runs from the front of the brain to where it reaches the crown of the head.\textsuperscript{72} The second is the skewerlike suture, which is the one that bisects the head vertically in a straight line from front to back.\textsuperscript{73} The third [the lambdoid suture] resembles the Greek letter lambda and is the suture that is in back, in this shape: λ. The two that are not true sutures are on the sides of the head and are called the

\textsuperscript{71} B 6.6–7; K 1: 321–22; G* 38–40; cf. pseudo-Galen, \textit{Introduction to Medicine}, K 14:720: Galen alludes to the lambdoid suture while discussing the relation of the brain and the spinal cord.

\textsuperscript{72} It runs from the temples, slanting slightly backwards over the top of the skull, and defines the frontal bone.

\textsuperscript{73} Several MSS have the gloss: “A gloss of his: They give the name ‘skewerlike’ to the combination of the sagittal [arrowlike] and lambdoid sutures, but the one that divides the head vertically into two halves is the sagittal suture.” Our name “sagittal” comes from the Latin word for arrow.
الصناعة الصغيرة الطبية

التي منشأها منه"، فإن " يكون العنق قوياً، واليدان والرجلان بأفضل هيئة، ويجمع أنواع العصب غلظة قوية، وأما من شكته، فإن يكون حسن الشكل، والرأس نموذج أحوذها من قدم، وذلك لأن العصب الحمسي ينبر من مقدمة الدماغ، والآخر من خلف، وذلك لأن العصب الحرك واللقاح ينبر من معقود الدماغ. وكل واحد من هذين النموذجين ينقص ويزيد" إلا أن نقصانه و长途ه تكون إما من قليل القصان في المادة. وهذا القصان أقل رداء من غيره، وإما من قليل ضعف من القوة، وهذا أعظم شراً. وجميعًا يتعزى من الأشياء التي منشأها من الدماغ، وأما" الزيادة، فهي " أن يصير" الرأس مستقفاً. فتكون إما بسبب كررة المادة مع ضعف من القوة، وذلك ردي، وإما بسبب كررة المادة مع حصة من القوة، وذلك أفضل.

(31) شؤون الرأس، وهي دروزة خمسة، ثلثة منها هي دروزة بالحقيقة، واثنتان ليسا دروزة بالحقيقة، أما الثلثة الحقيقية، فإحد منها الذرة الإكليلي، وهو من مقدمة الدماغ حيث يوضع الإكليل من الرأس، والآخر الشفوي، وهو الذي يقطع الرأس في طوله، وصفيح بين الاستقامة من قدم إلى خلف، والثالث الشبيه باللام في حروف اليونانية، وهذا" الذرة الذي من خلف على هذا المثال ٨٧ "، وأما" الثلاثان اللذاان ليسا بحقيقين، فهما على" جنبي الرأس، ويقال لهما

٨١٣

٧١٣، والدهر ٣٢٧.

٤١٣

٢١٣

٢٢٣، والدهر ٣٠٢.
two squamous sutures because they connect bone to bone, one on the right side and the other on the left.\(^74\) This is a diagram of the five sutures. The brain is divided into two parts in accordance with the suture resembling a lambda. The front part of it is called the anterior of the brain, and the back part is called the posterior of the brain.

(32) Nerves are either motor or sensory.\(^75\) The motor nerves must originate in the posterior of the brain, for many motor nerves grow from there, but few sensory nerves. The sensory nerves must originate in the anterior of the brain, since many sensory nerves grow from there, but few motor nerves.

(33) There are three deliberative—that is, managing—functions: imagination, thought, and memory.\(^76\) Each of these three has a desirable excellence and an undesirable defect. Thus, imagination’s excellence is accepting knowledge quickly. This is one of the indications that the anterior part of the brain is receptive and quick to be imprinted,

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74. They separate the temporal bones around the ear and get their name from the fact that they resemble scales.
76. B 6.9–10; K 1:322; G* 40–41: Galen describes intellectual virtues and vices, but less systematically and without specific references to imagination and thought.
الذر الزئبقي القشري لانهما التراقيا
عظم بعضهما من جانب الأمين، والآخر من
الجانب الأيسر. وهذا مثال لحصة الذربوزة:

الذر الزئبقي القشري
الشئ
الذكر الزئبقي النفوذي
الذكر الزئبقي النسمني
الذكر الزئبقي القشري
الذكر الزئبقي النسمني
الذكر الزئبقي النفوذي
الذكر الزئبقي القشري

الدماغ مقسم بجزيئتين حيث الذرب الزئبقي بالذئب والجزء المقدم منه يقال له
مقدمة الدماغ، والجزء الخلف منه يقال له مؤخر الدماغ.

(3) العصب منه محرك ومنشأه من مؤخر الدماغ لأن هذا الجزء يثبت منه
عصب محرك كبير وعصب حساس يسير. ومنه حساس ومنشأه من مقدمة الدماغ.
لأن هذا الجزء يثبت منه عصب حساس كبير وعصب محرك يسير.

(3) الأعمال السياسية، أي المدبرة. ثلاثة، وهي العقيلة والفلك والذكر. وكل
واحدة من هذه الثلاثة فضيلة تقدم وآتى تقدم، ففضيلة الفقيهة سيرة بقول العلم.

وهذا مما يدل على أن الجزء المقدم من أجزاء الدماغ سبيع الانطباع والقول لآن

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since imagination is in this particular part of the brain. The most suitable temperament for that is the moderately moist temperament, since it is impossible for something that is dry and hard to be imprinted quickly and easily receive the form, nor is it possible for this to happen with something that is extremely moist. What is moderate and between these two extremes is best. The defect of imagination—its bad state—is difficulty in receiving instruction. This is one of the things that indicates that the anterior part of the brain is hard and is imprinted and receives the form only with difficulty. Hardness is a consequence of one of two things, either dryness or coldness. It is most likely, in this context, to be associated with dryness. The excellence and perfection of thought is subtlety of mind and quick-wittedness. These are among the things that indicate the subtlety of the psychic spirit. The subtlety of the psychic spirit depends upon attaining complete coction. The attainment of complete coction is a result of moderate heat and limited moisture. The defect of thought—its bad state—is the backwardness and slowness of understanding. These indicate coarseness of the psychic spirit. Coarseness of the psychic spirit results from one of two things: either excessive moisture or coldness. The excellence of memory is ease of recollection, which indicates that the posterior part of the brain is dry. That is where memory is, and memory requires something that has stability and permanence, attributes of the dry thing. The defect of memory—its bad state—is forgetfulness, which indicates that the posterior portion of the brain is moister than it ought to be. Something that is moist runs and flows, having neither rest nor permanence.
النقيب إذا ما يكون بهذا الجزء من أجزاء الدماغ، وأوقت الأرجاء لذكى المرجع المتعدد الرطوبة إذا كان ليس يمكن سرعة الانطباع وسهولة قبول الصورة في الشيء اليابس الصلب، ولا في الشيء الكثير الرطوبة. بل في الشيء المتعدد فيما ينتبهما. وأيضاً النقيب وسواء حاله عمار التقليل للتعليم، وذلك مما يدل على أن الجزء المقدم "من أجزاء الدماغ عسراً لانطباع والقبول للصورة لأنه صلب، والصلاة" تابعة لأحدى أمرٍ: "إما لميس، وإما للبرد"، والأولى "بها في هذا الموضع أن تكون تابعة لميس، وأما الفكف ضمته وكالة لطافته الذهن وسرعة الفهم، وذلك مما يدل على لطافته الزوح النفسي، و"لطاقة النزوع النفسي" تابعة لبلوغ الغاية في النضج، وبلوغ الغاية في التوضيح. وفجأة الحفظ، وذلك يدل على فضيلة الناحية، وأما الذكر ففضيلة: "في نافذة الجزء المؤخر من أجزاء الدماغ لأن الذكر إذا ما يكون هناك، والحفظ يحتاج إلى شيء له شبات ووقت. والبابس هو على هذه الصفة. وأيضاً: "الذكر وسواء حاله النساني، وذلك يدل على أن الجزء المؤخر من أجزاء الدماغ أطراب مما ينبغي، وإذا كان الشيء رطبًا فهمه سيال جارٍ لا لبس له ولا بقاء.

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[Chapter 7][77]

[The moderate temperament of the brain]

(34) Rapid changes of opinions and lack of stability in resolution are among the things that indicate that the temperament of the brain is hot. The proof of this is the condition of children. Stability of resolution indicates that the temperament of the brain is cold, as is proven by the condition of the old. If the temperament of the brain is moderate, then its states are moderate, whether in the sensory functions of vision, hearing, smell, taste, and touch; in the voluntary functions, which are all the motions; in the deliberative or governing functions, which are imagination, thought, and memory; or in the natural functions, which are known by the superfluities evacuated through the nose, the two apertures in the palate, and the ears. It is not quickly harmed by external things that it encounters, such as the things that heat, cool, moisten, or dry. Moreover, if a person’s brain is moderate in temperament, his hair will be inclined to be the color of fire when he is a baby, light red when he is a child, and when he is an adult, reddish-blond78 midway between straight and curly—providing that he lives in a country with a moderate climate. Hair is black and curly due to either the heat of the brain, the heat of the country, or the heat of the humors and their dominance by bile, the result of the liver’s heat.

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77. B 6.11–7.6; K 1:323–26; G* 41–52.

78. B 6.12; K 1:323; G* 42: A gloss in several MSS reads, “[Galen’s] original text says, ‘When they reach maturity, their hair is blond inclining to red.’ Many MSS of the epitomes read ‘reddish-blond’”—which all of ours do. Galen’s Greek is υπόξανθος—“yellowish or lightish brown,” according to Liddell-Scott-Jones.
(35) If the brain ceases to have a moderate temperament, its temperament will either diverge slightly from the natural temperament or diverge greatly from it. The sign of a slight divergence is weak and hidden; but if the divergence is large, its sign is strong and obvious. The brain can have eight kinds of bad temperaments, just as is the case for the kinds of bad temperament in the other organs. There are four singular, simple kinds and four compound kinds. The singular, simple kinds are the hot, the cold, the moist, and the dry. The compound kinds are the hot and dry, the hot and moist, the cold and dry, and the cold and moist. The divergence of each of these kinds from the natural state may be slight, in which case their signs are not obvious; or their divergence may be great, in which case their signs are obvious.
الفصل الثامن

ذكر أمراض الدماغ الغير المعتمدة

(30) وإذا كان الدماغ زائعاً عن المرير المعتدل، فليس يخلو مراجه الزائدة من أن يكون إنما زال عن المرير الطبيعي وآل يسير أو يكون قد رحل عنه زوال كبير، فإن كان زواله يسير، كانت علاماته ضعيفة خفية، وإن كان زواله كبير، كانت علاماته قوية بينة. وأصناف المرير الزيدي من ٢١ مرير الدماغ ثمانية، كل منها أصناف مفردة بسيطة. ومنها أربعة مركبة، أما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة، أما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. أما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. وأما البسيطة المفردة في الحال الأعضاء، منها أربعة أصناف مفردة بسيطة، ومنها أربعة مركبة. 

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[Chapter 9][80]

[The temperament of the eye]

(36) It is possible to tell whether the temperament of the eye is hot or cold by its motions, the condition of the blood vessels in it, and the way that the eye feels to the touch. It is possible to tell whether the temperament of the eye is moist or dry by the fact that, if the temperament is moist, the eye will be soft to the touch and will be filled with moisture. If its temperament is dry, the eye will be hard and will be dry and dull. There is a general sign for the eye by which it is possible to tell whether some quality is in excess in it, just as it is possible to tell this about any other organ. This is that things similar to the quality, if in excess, harm the eye; and the things contrary to the quality help it. The condition of the size of the eye can be known from its structure and its functioning. A large eye with good structure indicates that the matter from which it is composed is abundant and of moderate temperament. If it is large but its structure is not good, that indicates that the matter is abundant but that it is not moderate. As for its functioning, if it functions perfectly well, that indicates that the matter from which it is composed is excellent. A deficiency in its function indicates that there is something wrong with its temperament. The condition of a small eye can also be discovered from its structure and its functioning. As for its structure, if it is small and its shape is good, that is an indication that the matter from which it is composed is slight in quantity but that it is excellent and of moderate temperament. If it is small and its shape is not good, that indicates that the matter is slight in quantity and its

[80] B 9.1–3; K 1:329–30; G a 52–53: The epitome skips over several pages in which Galen discusses how to diagnose the eight deficient temperaments of the brain, but the epitomist's account of the eye is much more elaborate than Galen's; see appendix 2, pp. 203–8, below.
الفصل التاسع

ذكر مراج العين

(36) الذي يستدل به على مراج العين أحازهوم ام برد حال العين في حركاتها وحال العروق التي فيها وحال ما يتبع للمس منها، والذي يستدل به على مراجها أرطب هو أم يابس، أن المراج الزطب تكون معه العين لينة للمس وتكون مملوءة رطوبة. وإلا يكون معه العين صلبة وتكون بابسة جافة. ولعين علامية عامة يستدل بها على كيفية تفرط عليها كل ما يستدل به على عضوة آخر. أي عضو كان، وهي أن الأشياء المشهية للكيفية المفرطة عليها تضرها، والأشياء المخلقة لها تفعها. الحال في كبر العين تعرف من خلقتها ومن فعلها. أما من خلقتها فإنها إن كانت كبيرة وكانت خلقتها حسنة دل ذلك على أن المادة التي منها خلقت كانت كبيرة معتدلة المراج، وإن كانت كبيرة ولم تكون خلقتها حسنة دل ذلك على أن المادة كانت كبيرة إلا أنها لم يكن معتدلة. وأما من فعلها فإنه إن كانت تفعل فعلها على التمائم حسبا دل ذلك على أن المادة التي منها خلقت كانت جيدة. وإن كان في فعلها تقدير دل ذلك على سوء مراجها. وكذلك الحال أيضا في صغر العين تعرف من خلقتها ومن فعلها. أما من خلقتها فإنه إن كانت صغيرة وكان شكلها حسنا كان ذلك دليلا على أن المادة التي منها خلقت كانت قصيرة إلا أنها كانت معتدلة المراج الجيدة. فأما إن كانت صغيرة ولم يكن شكلها حسنا، فذالك منها يدل على أن المادة

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[芳語文字]}
temperature bad. As for its functioning, if it functions well, that is an indication that the matter of which it is composed is excellent. If it does not function well, that indicates that its temperament is bad.

(37) Blue eyes are due to a lack of the aqueous humor found in the eyes, this humor’s clarity and purity, the luminosity or large size of the lens, or the eye being protuberant. Blackness in the eye is due to the quantity of the aqueous humor or its coarseness and turbidity, or to the lens not being luminous, its being too small, or its being sunken.

(38) This topic can be divided in another way, as follows: The eye is blue or black by reason of either the aqueous humor or the lens. If it is the aqueous humor, it is because of either its quantity or its quality. If its quantity is small, the eye becomes blue; and if it is large, the eye becomes black. If it is due to its quality, then if it is clear, the eye becomes blue; and if it is coarse and turbid, the eye becomes black. When the cause is the lens, that is due to either its quantity, its quality, or its position. If the cause is its quality, then if it is luminous, the eye will for that reason be blue; but if not, the eye will for that reason be black. If the cause is its quantity, the eye will become blue if it is abundant; but if it is little, the eye will be something other than blue, <which is to say, black.> If the cause is its position, then, if the eye is protuberant, it will be blue; but if

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81. B 9.4–5; K 1:330–31; G a 53–55: Two MSS have the gloss: “A gloss of his: One ought to know that the primary cause for blueness and blackness is the color of the uvea [the iris and ciliary body] and that the rest of what he mentions are factors increasing the blueness or blackness.”

82. Inserted in some MSS.
كانت سيرة ومراجعاً وكيف يمكن ردًا، وأنا من فعلها فإنها إن كانت تفعل فعلها حسناً، وذلك على أن المادة التي منها خلقت كانت جيدة. وإن كانت لا تفعل فعلها حسناً، وذلك على أن مراجعها ردًا.

(37) الزرة تكون في العين إنما بسبب نقصان الرطوبة الشبيهة بياض البيض التي في العين، وإنما بسبب صافيتها ونقيتها. وإنما بسبب ضعف الرطوبة الشبيهة بالجلد. وإنما بسبب كرمتها. وإنما بسبب أنها موضوعة ما يلي خارج الكهكية. تكون في العين إنما بسبب كرة الرطوبة الشبيهة بياض البيض. وإنما بسبب غلظها وكدورتها. وإنما بسبب أن الرطوبة الجليدية ليست مثبتة. وإنما بسبب أنها صغيرة. وإنما بسبب أنها موضوعة ممالي داخل.

(38) وقد يقسم هذا المفعول بمعنى أخرى على هذه الحكائية. العين تكون زرقاء أو كحلاً. إنما بسبب الرطوبة الشبيهة بياض البيض. وإنما بسبب الرطوبة الشبيهة بالجلد. ومن أجل الرطوبة الشبيهة بياض البيض إنما كفيفاً وإنما كفيفاً. إنما بسبب كفيفاً فإنها إن كانت يسيرت ضارة في العين بها زرقاء. وإن كانت كثيرة صارت العين بها حكلاً. وإنما بسبب كفيفاً فإنها إن كانت صافية ضارة في العين بها حكلاً، وإن كانت غليظة كررة ضارة في العين بها حكلاً. وإنما بسبب الرطوبة الجليدية فيكون ذلك إنما كفيفاً وإنما كفيفاً. وإنما وصفها. إنما بسبب كفيفاً فإنها إن كانت

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it is sunken, it will be black. The finer the aqueous humor and the greater its quantity, the more moist the eye is. The coarser it is and the less its quantity, the drier the eye will be. This is also the case with the lens, which can differ and change either with respect to temperament or with respect to texture. If the difference and change so alters the temperament as to make it dry, the eye will become dry. If they make the temperament moister, then the eye will become moist. If the difference and change so alters the texture that it becomes finer than it ought to be, the eye will then become moist. If they alter the texture so that it becomes coarser than it ought to be, the eye will become dry.

(39) This same topic can be divided in yet another way, as follows: The eye is moist or dry by reason of the aqueous humor or by reason of the lens. This can be caused by the quantity of the aqueous humor or by its quality—that is, its texture. If the quantity is large, the eye will thereby become moist; but if it is small in quantity, the eye will thereby become dry. If the quality and texture are fine, the eye will thereby become moist;

83. B 9.6; K 1:331; G α 55.
مضينة تصير١٠ العين بها زراقاً، وإن لم تكن مضينة تصير العين بها كلاً، وأما بـسبب كتبتها فإنها: "إن كانت كبيرة تصير العين" زراقاً، وإن كانت صغيرة تصير العين" غير زراقاً، وأما بـسبب وضعها فإنها إن كانت موضوعة تمثل خارج صارت العين زراقاً، وإن كانت موضوعة مما يلي داخل صارت العين كلاً. كما كانت الزرطة الشبيهة بياض البيض أرق وأكثر ما ينبغي كانت العين أرطب، وكما كانت أغاظ وأقل كات العين أليس، وكذلك الزرطة الشبيهة بالجلد. وقد تختلف وتغيّر، إما من طريق مراحتها وإما من طريق قوامها. واحتفاظها وتغيرة من طريق المرارة إن كان ميلها إلى البيس تصير العين" ببسة. أو ميلها إلى الزرطقة تصير العين" رطبة"، وأما اختلافها وتغيرة من طريق القوام فإن إن كان ميلها إلى الرقية بأكثر: "ما ينبغي تصير" العين بها"، رطبة. وميلها إلى الفغظ بأكثر: ما ينبغي تصير" العين" ببسة.

(39) وقد يقسم هذا السؤال بناء بقسمة أخرى على هذه "الحكاية: العين تكون رطبة أو ببسة. إذا بـسبب الزرطقة الشبيهة بياض البيض وإما بـسبب الزرطة الجليدية. أما بـسبب الزرطقة الشبيهة بيضا البيض، إذا كتبتها وما كتبهنها. أعني

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1: E010/E011/E1A2/E340/E018
2: E024/E205/E022/E0E4/E010/E011
3: E3C2/E00F/E0E2/E3CE
4: E3C1/E01A/E023/E010/E011/E3C1/E1C4/E1C0/E1C1
5: E069
6: E3C1/E003/E3C2/E076/E077/E1A2/E1A0/E04F/E241/E240/E012/E3C2/E001/E3C1/E047/E046/E010/E011/E206/E204/E205/E203
7: E010/E011/E1A2/E360/E3C1/E051/E052
8: E3C1/E003/E3C2/E076/E077/E1A2/E1A0/E04F/E241/E240/E012
9: E301/E011/E010/E240/E3C1/E01A/E023/E012/E019/E0E3/E054/E220/E202/E221/E3C2/E041/E3C1/E01A
10: E3C1/E004/E141/E240/E140/E26E/E266/E260/E3C1/E182/E180
11: E10A
13: E266/E260/E3C2/E068/E3C1/E0D0/E0A4/E3C2/E04B/E3CE/E274/E266/E260/E206/E204/E205/E203
14: E023/E012
but if they are coarse, the eye will thereby become dry. If it is caused by the lens, then it is due to either its temperament or its texture. If the temperament is dry, the eye will thereby become dry; and if it is moist, the eye will become moist. If its texture is coarse, that is the cause of the eye becoming dry; but if the texture is fine, the eye thereby becomes moist.

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84. Galen’s text does not have an account of the anatomy of the eye. In the previous paragraphs, I have rendered these terms using standard anatomical terms rather than the descriptive terms that I have translated literally here. “Fluids” are ṭuṭūbāt, meaning “moistures” or “humors,” and are not to be confused with ḥālāṭ, indicating the four humors. “Layers” are ṭabaqāt, meaning “cloaks” in older terminology. See appendix 2, pp. 203–8, for a detailed account of the confusing terminology used here for the anatomy of the eye.

The structure of the eye

(40) The eye is composed of three fluids and two layers. The first of the three fluids resembles liquid glass [the vitreous humor], the second resembles ice [the crystalline humor], and the third resembles egg white [the aqueous humor]. The first of the two layers originates from the solid covering [dura mater] of the brain, and the second from the delicate covering [pia mater]. The portion of the layer that originates
قرماً، ونَّهَا إلاّ من طريق كُنَّها، فإنّها إنّ كانت كبيرة المقدار صارت العين بها رطبة، وإن كانت نسرة المقدار صارت العين بها؛ بابس، وأمّا من طريق كُنَّها، وقُوامها، فإنّها إنّ كانت رقيقة صارت العين بها رطبة، وإن كانت غليظة صارت العين بها بابس، ونَّهَا إلاّ من طريق قوامها. وإن كانت رطبة صارت العين بها رطبة، وأمّا من طريق قوامها فإنّها إنّ كانت غليظة صارت العينً بابس.

ذكّر تركيب العين

(٢) العين مركبة من ثلاث رطوبات وطبقتين، إمّا الثالثة الرطوبات، فإنّها
منهض شبيهة بالرجل الذَّائب، والأخيرة شبيهة بالجلَّيد، والثالثة شبيهة
بِبياض البيض°، وأمّا الطبقتان، فأحدهما منشأه من الغشاء الصحّل من
غشاء الدماغ، والأخرى من الغشاء الرقيق°، والطبقة، التي منشأه من الغشاء

ADM Y4١١ ١٩٠٩ | AM: أعني قوامها | DSY: بِها | F: ٤٠٨

DFY: ٤١٤ ١٩٠١ | AM: لينة | S: بِها... بِها | F: ٤١٥

بطروابات: فُواحة | AM: F: ٤١٦ | S: F: ٤١٧

الشبيهة: إلى الدماغ بِبلج

DFY: ٤١٨ | ADMY: الشبيهة | S: ٤٢٠ | إلى القدام بِبلج


فلها، ماهما | AM: ٤٢٤ | دقيق

A٤١٨ | A٤١٩ | M: ٤٢٥

وذلك عساها A٤١٨، لأنها أخذ من شرِّ القص، والماهِ | A٤٢٧

فيه | A٤٢٨ | الشبيهة | A٤٢٩

هامش هو A٤٣٠، ليس في كِب حِين الطبقة الصحّل، ولفظ الشبكة في كِب حِين

A٤٣٠ | Y٤٣١

الطَّبَّقة... حِين | A٤٣٢ | A٤٣٣ | A٤٣٤ | A٤٣٥

F: ٤١٩

٢٧ | الفضة | A٤٣٦

العصرية إذا أشعت | Y٤٣٦ | ابتغى

جاج العين واحتوت على نصف الجليدية من خلف احتوا الشبكة: A٤٣٧ | الشبيهة على الصيد.
from the solid membrane that is behind the lens is called the layer resembling a net [retina, but actually the sclera] because that part of it contains all that is in the eye, like a net.\textsuperscript{85} That which is in front of the lens is called the layer resembling horn [cornea] because of the fineness and clarity of this part. The part of the layer growing from the fine membrane that is behind the lens is called the layer resembling the placenta [choroids] due to the large number of arteries and veins in this part. The portion of it that is in front of the lens is called the layer resembling a grape [uvea, which is the combination of the iris and the ciliary body] because this part of it is similar to a single grape. The covering connected to the layer resembling horn, which is the one that originates from the covering above the skull, is a sort of protection and mantle for these things that are behind it. In Greek, it is called ἐπιπεφυκώς [the conjunctiva].

\textsuperscript{85} Several MSS have the gloss: “A gloss of his: The layers here are not in Galen’s underlying text, but [the epitomist] might have taken them from commentaries on the text. What is here called the retina is called ‘the hard layer’ [sclera] in Hunayn’s book. The word ‘retina’ in Hunayn’s book is used for the hollow optic nerve, since it spreads out around the ball of the eye and contains half of the crystalline moisture from behind, embracing it like a net on its prey.” See appendix 3, pp. 209–11.
الصلب يسمى "ها هو منها و راء الرطوبة الجليدية الطبقة الشبيهة بالشبكة لأن ذلك الجزء منها يحتوي على جميع ما في العين بمنزلة الشبكة. وأما ما هو منها من قذام الجليدية. فسمى الطبقة الشبيهة بالقرن"، وذلك لرقة هذا الجير وصفاته. فأما الطبقة التي "ها هو منها و راء الرطوبة الجليدية الطبقة الشبيهة بالمشيدة"، وذلك لكثرتها ما في هذا الجزء من العروق الضوارب وغير الضوارب. وأما ما هو منها من قذام الجليدية. فسمى الطبقة الشبيهة بالقرن"، لأن هذا الجزء منها شبيه بحبة العنب، وأما "ها هو منها و راء الرطوبة الجليدية الطبقة الشبيهة بالقرن. وهو الذي منشأه من الفضاء الذي فوق الخف. فإما هو منزلة الوقاية"، والباس لهذه الأشياء التي وراءه. ويقال "هابلية أفيافوس".
(41) The heart has eight species of bad temperament, just like the species of bad temperament in the rest of the organs. Four of these eight are simple and singular, and four compound. The simple species are heat, coldness, dryness, and moisture. The compound species are heat and dryness, heat and moisture, coldness and dryness, and coldness and moisture.

(42) There are three species of signs indicating that the bad temperament of the heart is hot: first, the species of signs peculiar to this temperament and inseparable from it; second, the species of signs not peculiar to this temperament and not inseparable from it; and, third, the species of the signs intermediate between these two. The signs peculiar to and inseparable from the hot temperament are a large volume of breath and a rapid and continuous pulse. The signs that are not peculiar to this temperament and are separable from it are irascibility and a broad chest; for the philosophical dispositions can alter

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86. B 10.1–11.7; K 1:331–37; G a 56–64: Galen begins by reminding the reader that, when we speak of a greater heat, coldness, dryness, or moisture of a part, these terms are relative to that part, not to some other object. Thus, if a heart is comparatively cold by nature, its mixture will still be much hotter than that of the hottest brain. Galen then discusses these eight temperaments in turn. The epitome follows him closely. The chapter title is found in only one of the old MSS.

87. B 10.1–6; K 1:332–33; G a 56–59: Galen mentions only the first of these three categories, contrasting it to signs indicating heat in the body as a whole. The following gloss found in two MSS explains the intermediate category not mentioned as such by Galen, though he does mention the examples: "A gloss by him: He thinks it best to place intermediate signs between the signs that are peculiar to this temperament and inseparable from it and those that are not peculiar to it but are still inseparable from it. These are the association of the entire body with the heart and the quantity of hair on the chest. These two signs are correlates of their cause—which is the temperament of the heart—in the same way that the first class of signs are, except that they are not continuously apparent, since it is possible that the temperament of the liver interferes, counteracting the temperament of the heart with respect to these two signs, thereby concealing what they indicate in a way similar to the signs that are not peculiar to this temperament and which may be separated from it. Due to the existence
الصناعة الصغيرة الطبيعية

الفصل العاشر

ذكر مرارة القلب

(41) أنواع سوء مزاج القلب ثمانية كمثل ما يكون على أنواع سوء مزاج كل
واحد من ساعات الأعضاء. ومن هذه الثمانية أربعة مفردة بسيطة وأربعة مرّة، أما
البسيطة المرّة الفحارة والبردة واليوسفة والطروبة، وأيضاً المركبة الفحارة
واليوسفة والحارة والطروبة والبردة واليوسفة والبرودة والطروبة.

والعلامات الذاتية على سوء مزاج القلب الحاز ثماني أنواع. أحياناً نوع
العلامات الحاضنة بهذا المزاج الحاز التي لا يزابه. والثاني: نوع العلامات التي
ليست بخاضنة لهذا المزاج ولا غير مفارة له. والثالث نوع العلامات المتوسطة بين
هذين. أما العلامات: الحاضنة التي لا يزابه المزاج الحاز. فعمود النفق وسرعة
النضج وتوارثه. واما العلامات التي ليست بخاضنة لهذا المزاج ولا غير مفارة
له. فالغضب وسعة الصدر. أما الغضب فإنه ينطلق ويتجنّب. كما يوجبه هذا المزاج

العلامات التي ليست بخاضنة ولا غير مفارة علامات متوسطة بينهما. وهي مشابهة البين كله
للقلب وكرة الشم. في الصدر لأن هذين العلامتين يزابان سببهما. أعني مزاج القلب لزمى القسم
الأول من العلامات إلا أن ظهورهما لا يدوم بسبب إمكان معاوضة مزاج الكبد للخافف مزاج
القلب لهما ففيما ما بدأز على البيضان التباثان العلامات غير الحاضنة التي قد يراق ولوجود محلومهما.
وهو المرّة القلبية وابهاهما له كثبان العلامات الحاضنة التي لا تزال خلا أن هذه المتوسطة
إلا أن تزال ففيزابه ظهورهما بسبب اعتراض خلاف المزاج من بنية الآخرين. أعني الكبد.

AM 442:  يتجنّب ويتجنّب.
irascibility and change what this temperament would normally necessitate, and the size of the brain can affect the breadth of the chest and change it from what this temperament would ordinarily necessitate.\textsuperscript{88} The intermediate signs that are between these two species of signs are the association in this temperament of the entire body with the heart and a hairy chest. That is because these two signs are changed by coldness and moisture in the liver. When we say that the breadth of the chest is altered by the size of the brain, we mean that, if the brain is large in size, there is the correlate effect that the spinal cord is also large, since it originates in the brain. A large spinal cord requires the vertebrae that contain it to be large; and if the vertebrae are large, the ribs linked with them are necessarily large. If the ribs are large, the chest that is composed from them must be large and broad. A broad chest is thus a consequence of one of three things: either the heat of the heart, the large size of the brain, or both together. The signs indicating that the temperament of the heart is cold are a weak pulse, a narrow chest, extreme timidity, a hairless chest, and coldness in the entire body.\textsuperscript{89} The signs indicating that the temperament of the heart is dry are a hard pulse, a brutish character,\textsuperscript{90} and dryness of the entire body.\textsuperscript{91} The signs indicating that the temperament of the heart is moist are a soft pulse, anger that is easily roused and quickly placated, and moisture in the entire body, provided that it is not counteracted by the liver.\textsuperscript{92}
بالأخلاق الفضفاضة، وآيما سعة الصدر فإنه تطور...، وتختلف ما يوجه هذا المراج بمقدار الدماغ. وآيما العلامات المتنوعة فيما بين ذينك المزمن. فمشاهدة...، البطن كله للقلب في هذا المراج وكرة الشبع في الصدر. وذلك أن...، هاذي العلامات تغيران بسرعة، الكبد وطروحتها. وقولنا إن سعة الصدر تغير بسبب مقدار الدماغ إليها نريد أن الدماغ إذا كان أعمق...، المقدار لزم من ذلك ووجب عنه أن يكون القاع أيضاً أعمق للقدر إذكان منشأه منه. وإذا كان القاع عظيباً ووجب أن يكون الفترات، المحورية عليه...، كبار، وإذا كانت الفقار كبار وجب أن يكون الأضلاع الناشئة منها، كبار، وإذا كانت الأضلاع كبار وجب أن يكون الصدر للمؤلف منها كبار واسعا. وسعة الصدر تابعة لأحدث ثلاثة أشياء، إما لحارة القلب وإما لمقدار الدماغ وإما لهما جميعاً، والعلامات الدالة على مراج القلب الباهز صفاراً البطن وضيق الصدر وإواط...، لذن وقفة الشبع في...، الصدر ورد، جميع البدن. والعلامات الدالة على مراج القلب الباهز صلابة البطن وسمنية...، اللقم وببس جميع البدن. والعلامات الدالة على مراج القلب الباهز لمن البطن وسعة الغضب وسهولة سكونه وطروحه البدن وإن لم يقاومه...، الكبد.
(43) The signs indicating that the temperament of the heart is hot and dry are a large and hard pulse, a large volume of breath, a large chest, and a daring and violent character,\(^94\) quick anger,\(^95\) and implacability. If they have this character, they are insolent. They also have a large quantity of coarse hair on their chests and are hot and dry in their entire bodies. The signs indicating that the temperament of the heart is hot and moist\(^96\) are a large and soft pulse, irascibility that is quickly placated, a large chest, a large volume of breath, frequent putrid diseases if the moisture is excessive, and a strong heat in the entire body. If this temperament is not counteracted by the liver, the body is moist as well as hot. The signs indicating that the temperament of the heart is cold and moist\(^97\) are a soft, small pulse, excessive timidity, sluggishness, placidity, lack of hair on the chest, and coldness in the entire body. If this temperament is not counteracted by the liver, the body is moist as well as cold. The signs indicating that the temperament of the heart is cold and dry are a small and hard pulse, a small and narrow chest with little hair, shallow respiration, and coldness and dryness in the entire body.\(^98\)
الصل الحادي عشر

[ذكر الأجزاء المركبة للقلب]

(49) والعلامات الدالة على مراحة القلب الحار الباذ عظم النبض وصلابته
وعظم النفس وعجة الصدر والجزء و 혼ة "الاجربة" وسرعة الحركة "أ،" إلى
الغضب وإبطاء "سكونه،" وإذا كان الحلق كذلك، فهو من أخلاء المتعة وكحة
الشمع وتكاثفه في الصدر وحرارة جميع البذن ويسه. والعلامات الدالة على
أن مراحة القلب حار رطب عظم النبض "وينة،" وسهولة ابعاث "الغضب جدًا
وسهولة سكونه،" وكبر الصدر وعظم النفس وكحة الأعراض العفوية "إ،" إن أقفلت
الطوية ووقعة "حرارة جميع البذن، وإنا لم يخالف "الكبدكان البذن مع حرارة
البذن "و" طبًا أيضاً.") والعلامات الدالة على أن مراحة القلب بارد رطب خاطئ النبض وضغه
والأطراف الجبهة والكلل وقحة الغضب ووقعة الشعر في الصدر ورد "حرارة جميع البذن.
إنا لم يخالفنا الكبد كان البذن مع مره رطب، وعامة الأعراض الدالة على أن مراحة
القلب بارد إيبس صغر النبض وصلابته وصغر الصدر ورضي وقحة الشعر في الصدر
وصغر النفس "و"رد جميع البذن ويسه.

A'M: الحرة وحدة | D: F 262 | والجزاء وحدة في: S 8 ووحدة: DY 88 | والجزاء والجهدة في: 1
الجزاء والجزاء: M: Y، D: R | يزيد أن الامبور يبخه عسر الاتعال [A]،
ويخضع أيضًا إذا افعل بعد العصر فعال الغضب عسر زوال الغضب [A،] - الغضب: D،
entity: F 3، "لا الحرة إذا غلب سهلة الحركة
AM: F 246 | سعة عسر | AM: S 246 | لأجل الجودية: ADMY 474
الأخلاق: F 246 | تحرره | AM: S 246 | للزوجة: DY 473
AM: F 246 | جموه | AM: S 473 | الرطوبة ووقعة: F 246 | ومقد: S 246 | الحعرض إلى: DY
AM: F 473 | ورودة | AM: S 474 | أيضًا رطب،
وضع النفس: D: F 477 | وصغر النفس: S 477 | لصغر الصدر
[Chapter 12]\(^99\)

*<The temperament of the liver>*

(44) The signs indicating that the temperament of the liver is hot are thick blood vessels, abundant yellow bile and, at the end of youth, also abundant black bile,\(^{100}\) hairiness on the soft parts of the belly, and heat throughout the body if it is not counteracted by the heart. The signs indicating that the temperament of the liver is cold are narrow blood vessels, excess phlegm in the blood, lack of hair on the soft parts of the belly, and coldness throughout the body if it is not counteracted by the heart. The signs indicating that the temperament of the liver is moist are softness of the blood vessels, moisture of the blood, and moisture throughout the body. The signs indicating that the temperament of the liver is dry are hardness of the blood vessels, coarseness of the blood, and dryness throughout the body.\(^{101}\) The signs indicating that the temperament of the liver is hot and dry are thick, coarse hair on the soft parts of the belly,\(^{102}\) broad and hard blood vessels, scanty and coarse blood, and dryness and heat throughout the body if it is not counteracted by the heart.

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99. B 12.1–5; K 1:337–38; G\(^a\) 64–66: A slightly abridged translation of Galen’s text. One old MS contains the gloss: “You ought to know that the pains of the liver can be used to indicate whether the humors are in excess or deficiency. That is because the liver is the source where the humors are generated.”

100. One old MS contains the gloss: “Because the more heat corrupts, the more it inflames the humors.”

101. One MS adds the gloss: “Because dryness is such as to destroy, transform, and coarsen moisture.”

102. One MS adds the gloss: “Because of the vapor generated.”
الفصل الثاني عشر

ذكر مراج الكبد

(44) والعلامات الدالة على أن مراج الكبد حارزةً، سمعة العروق وكثرة المرة الصفراء، وفي منتهى الشباب، الزاد في السواد، وكثرة الشعر في مراق البطن وحارة جمع البدن إن لم يختلفها القلب. والعلامات الدالة على أن مراج الكبد با ردضي العروق وإفراط البلغم في الدم وقلة الشعر في مراق البطن ورد، البدن إن لم يختلفها القلب. والعلامات الدالة على أن مراج الكبد رطب إن العروق وروطية الدم ووطئة جمع البدن. والعلامات الدالة على أن مراج الكبد حارز باسب كثرة الشعر، وكفته في مراق البطن وسعة العروق وصلاقتها وقلة الدم وفلطه ويس جمع البدن وحارةه إن لم يحتلفها القلب.
(45) The way in which the heart and the liver counteract and oppose each other’s temperaments is this: The heat of the heart strongly overcomes the coldness of the liver, and the coldness of the heart overcomes the heat of the liver more weakly. The moisture of the heart does not overcome the dryness of the liver at all, and the heart’s dryness overcomes the moisture of the liver only weakly. The heat of the liver overcomes the coldness of the heart weakly, and the moisture of the liver strongly overcomes the dryness of the heart; but the liver’s coldness is less powerful in overcoming the heat of the heart. The liver’s dryness always overcomes the moisture of the heart.

(46) The signs indicating that the temperament of the liver is hot and moist are the large size of the blood vessels, abundant hair in the soft parts of the belly (though less than is the case with the hot and dry temperament), frequent putrid diseases, and moisture and heat throughout the body. The signs indicating that the temperament of the liver is cold and dry are narrow blood vessels, paucity of blood, scantly hair on the soft parts of the belly, and dryness throughout the body. The signs indicating that the temperament of the liver is cold and moist are narrow blood vessels, extremely scantly hair on the soft parts of the belly, an excess of phlegm in the blood, and moisture throughout the body.

103. B 12.6–7; K 1:338; G* 66–67: Following Galen’s text closely. One old MS has the following table and gloss:

<table>
<thead>
<tr>
<th>The heart’s</th>
<th>heat counteracts the coldness of the liver.</th>
<th>moisture does not counteract the dryness of</th>
<th>dryness slightly counteracts the moisture of</th>
</tr>
</thead>
<tbody>
<tr>
<td>coldness slightly counteracts the heat of</td>
<td>heat weakly counteracts the coldness of</td>
<td>moisture counteracts to an intermediate degree the dryness of</td>
<td>dryness always counteracts the moisture of</td>
</tr>
<tr>
<td>heat weakly counteracts the coldness of</td>
<td>coldness counteracts the heat of</td>
<td>heat weakly counteracts the coldness of</td>
<td>heat weakly counteracts the coldness of</td>
</tr>
</tbody>
</table>

105. One MS adds the gloss: “Due to the heat, since the heat that occurs with moisture has less effect.”
الصناعة الصغيرة الطبية

(45) والحال في خلافة كل واحد من القلب والكبد مرايا الآخرين ومقاؤونه إنها أن حرارة القلب تقلب "برودة الكبد غلة قوية" وروده ذهاب "قوة في غلة حرارتها. ورودتها لا تقلب "يسها أصلها، ويسها يقلب" رطوبتها غلة ضعيفة، وحرارة الكبد تقلب "برودة القلب غلة ضعيفة" ورطوبتها تقلب "يسها غلة قوية". ورودتها تقلب "قوة في غلة حرارته. ويسها ينال دائمًا غاملاً رطوبته.

(46) والعلامات الدالة على أن مرايا الكبد حار رطب عظم متداعى المرق وكراء الشعر في مراق البطن إلا أنه على حال أقل منه في المرق المارد، الباقي وكزة الأمراض العفوية ورطوبة جميع البدن وحرارته. والعلامات الدالة على أن مرايا الكبد برد لما يسبق العروق ورطبة الدهم وقولة الشعر في مراق البطن ويبس جميع البدن، والعلامات الدالة على أن مرايا الكبد برد رطب مضيق العروق وغالية قلة الشعر في المراق وإفراغ البلغم في الدم ورطوبة جميع البدن.

| ADMY ٤٨٨ | • يقلب: غلة قوية = قريب قوي |
| ADMY ٤٨٧ | • تقلب: تقترح |
| ADMY ٤٩٠ | • تقترح: تقلب |
| ADMY ٤٩٢ | • تقترح: تقترح |
| ADMY ٤٩٦ | • تقترح: تقترح |
| ADMY ٤٩٤ | • تقترح: تقترح |
| ADMY ٤٩٨ | • تقترح: تقترح |
| ADMY ٤٩٩ | • تقترح: تقترح |
| ADMY ٤٩٩ | • تقلب: تقلب |
| ADMY ٥٠٠ | • تقلب: تقلب |
| AMY ٥٠١ | • تقلب: تقلب |
| ADMY ٥٠٠ | • تقلب: تقلب |

<table>
<thead>
<tr>
<th>الكبد</th>
<th>القلب</th>
</tr>
</thead>
<tbody>
<tr>
<td>الحرارة تسمى البرودة ضعيفة</td>
<td>الحرارة تسمى البرودة ضعيفة</td>
</tr>
<tr>
<td>البرودة تسمى الحرارة أقل</td>
<td>البرودة تسمى الحرارة أقل</td>
</tr>
<tr>
<td>الزئب تسمى البرودة لا تسمى</td>
<td>الزئب تسمى البرودة لا تسمى</td>
</tr>
<tr>
<td>مقاسة متوسطة</td>
<td>مقاسة متوسطة</td>
</tr>
<tr>
<td>الزئب تسمى البرودة دائمًا</td>
<td>الزئب تسمى البرودة دائمًا</td>
</tr>
</tbody>
</table>

FM ٥٠٣ – أن: S ٤٤: لأجل الحرارة لأن الحرارة التي تكون مع رطوبة يكون فعلاً أقل.
[Chapter 13]^{106}

*<The temperament of the testicles>*

(47) The signs indicating that the temperament of the testicles is hot are frequent sexual intercourse, the procreation of males, the emission of fertile sperm,\(^{107}\) and abundance of pubic hair. The signs indicating that the temperament of the testicles is cold are the opposite of those things—that is, slowness to engage in sexual intercourse, scanty emissions,\(^{108}\) procreating females, emitting infertile sperm, and a paucity of pubic hair.\(^{109}\) The signs indicating that the temperament of the testicles is moist are the abundance and moisture of semen. The signs indicating that the temperament of the testicles is dry are a small quantity of thick semen. The signs indicating that the temperament of the testicles is hot and dry are the occurrence of a desire for sexual intercourse before a suitable age,\(^{110}\) the thickness and paucity of semen, an abundance of pubic hair, a rapid climax and emission during sexual intercourse, and frequent procreation.\(^{111}\) The signs indicating that the temperament of the testicles is hot and moist are the occurrence of desire for sexual intercourse before the arrival of the appointed time, the emission of sperm that seldom results in procreation, the abundance and moisture of semen, and harm caused by abstention from

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106. B 12.1–8; K 1:339–41; G\(^*\) 70–73.
107. Two MSS include the gloss: “That is, when he has sexual intercourse, the matter is suitable for procreation.”
108. A gloss in one MS adds: “Due to a small quantity of semen.”
109. One MS has the gloss: “Due to a lack of vapor.”
110. A gloss in three MSS reads: “That is, before the proper time for puberty in the moderate temperament.”
111. A MS has the gloss: “Due to the coarseness and ripeness of the semen and its lack of dampness.”
الفصل الثالث عشر

"ذكرمراجع الأثنيين".

(27) والعلامات الدالة على أن مراج الأثنيين حاركزة الجاع، وتوليد الذكرية وإزال الظاهرة للولادة وكترة الشعر في الأعضاء التي حوله. وعامة، والعلامات الدالة على أن مراج الأثنيين حاركزة الجاع في الحركة إلى الجاع" وفترة الانتشار وتوليد الأنثى وإزال الظاهرة للحالة التي لا يكون منها ولد وقترة الشعر في العنانة. والعلامات الدالة على أن مراج الأثنيين رطب كترة المنى وروتوبه. والعلامات الدالة على أن مراج الأثنيين ياسب قلة المنى وغلظه. والعلامات الدالة على أن مراج الأثنيين حازِباسب مسابقة الشهوة للجاع" قبل الوتمك الحجبة وغلظ المنى وقطرة الشعر في العنانة وسرعة الفراغ والإزال عند الجاع وكترة تويل الأولاد. والعلامات الدالة على أن مراج الأثنيين حاز رطب مسابقة الشهوة للجاع قبل وحوب" الوقت" وإزال الظاهرة التي قليلما يكون منها والد" وكترة المنى وروتوبه وأن يكون ذلك الإنسان إذا لم يبايعه..."
sexual intercourse. The signs indicating that the temperament of the testicles is cold and moist are that the person is slow to be roused in his desire for sexual intercourse,\textsuperscript{112} that his pubic hair is scanty, and that his sperm is runny, like water. The signs indicating that the temperament of the testicles is cold and dry are that the person has sexual intercourse early, that his pubic hair is scanty, and that his sperm is thick and earthy.

\textsuperscript{112} Three MSS contain the gloss: “It is as though he means the opposite of the signs indicating the hot and moist temperament, which he says are a desire for sexual intercourse before its appointed time. Galen’s text [B 13.7–8; K 1:340–41; G\textsuperscript{a} 72–73] says in connection with the signs of the cold and moist temperament, ‘Its possessor is slow to begin first engaging in sexual intercourse.’ Then he says about the possessor of the cold and dry temperament that ‘his other states are like those of the one before, except that his semen is coarser and smaller in quantity.’” These are signs mentioned by Galen but, for some reason, omitted by the epitomist.
عبارة الصغيرة الظليبة
ضررٌ. والعلامات الدالة على أن مزاج الأشخاص بارد رطب أن يكون الإنسان بطيء، ما يهض شهوة الجعة، وإن يكون الشعرarti، في عانه قليلًا. وإن تكون نطفته رقيقة شبيهة بالماء. والعلامات الدالة على أن مزاج الأشخاص بارد ياسب أن لا يسرع الإنسان في الجاع وكون الشعر في عانه قليلًا. ونطعته غليظة أرضية.
[Chapter 14]113

(The temperament of the entire body—that is, the flesh)

(48) The signs indicating that the temperament of the entire body—that is, the temperament of the flesh in the entire body—is moderate are that the color of the body is mixed, being composed of red and white,114 that the hair is intermediate between being curly and lank and blond,115 that the body is intermediate to the touch in the various palpable qualities of heat and coldness, fatness and leanness, and softness and hardness.

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113. B 14.1–16.8; K 1:341–46; Ga 73–80: Galen’s discussion is less systematic but more nuanced.
114. One MS adds the gloss: “Since neither of the two qualities of heat and coldness is dominant.”
115. One MS adds the gloss: “Due to its moderation.”
الفصل الرابع عشر

ذكر مراح البدن: يعني اللّهُ

والعلامات الدّالة على أن مراح جميع البدن معتدل. يعني مراح اللّه في
جميع البدن. أن يكون لون البدن مختلاًً» مركّب من حمرة وياض»، وأن يكون
شعره متوسطًا فيما بين الجعد والسبط أشرتً، وأن يكون ملمسه معتدلاً فيما بين
الكييات المامسة. وهي الحرارة والبرودة والحشيم والفضاعة واللّين والصلابة.
(49) The signs indicating that the temperament of the flesh is hot are that the body is hot to the touch and hairy, the complexion is ruddy,\textsuperscript{116} and there is little fat. The signs indicating that the temperament of the flesh is cold are that the body is cold to the touch, the hair is scanty, the complexion is very pale, and there is abundant fat. The signs indicating that the temperament of the flesh is dry are that the body is lean and the skin is hard.\textsuperscript{117} The signs indicating that the temperament of the flesh is moist are that the body is thick, yet is nonetheless soft.

\textsuperscript{116} One MS adds the gloss: “Because the heat causes the blood to rise to the surface.”

\textsuperscript{117} One MS adds the gloss: “Due to the predominance of dryness.”
الفصل الخامس عشر

ذكر أمرجته البسيطة

(٤٩) والعلامات الدالة على أن مزاج اللحم حاز أن يكون البدن حاز الملمس كثير

الشعر الغالب على لونه الحمراء٥٣ قليل المشم. والعلامات الدالة على أن مزاج اللحم بارد

أن يكون الشعلة على البدن في ملمسه البرد٥٣. ويسمر شعره قليلًا. وياضته٥٣. وجمه

كبيرًا. والعلامات الدالة على أن مزاج اللحم بارد أن يكون البدن قليلاً والجلد منه

صلب٥٣. والعلامات الدالة على أن مزاج اللحم بارد أن يكون البدن غليظًا ويكون

مع غلظته لينًا٥٣.
[Chapter 16]

[Its compound temperaments]

(50) The signs indicating that the temperament of the flesh is hot and dry are that the body is hot to the touch, the skin is hard, the hair is thick and curly, and the body is lean. The signs indicating that the temperament of the flesh is hot and moist are that the flesh is abundant, the body is soft and hot to the touch, and the hair is moderate. The signs indicating that the temperament of the flesh is cold and dry are hard skin, scanty hair, a pale complexion, and fat dispersed in the flesh. The signs indicating that the temperament of the flesh is cold and moist are ample flesh and fat, a pale complexion, and scanty hair.

(51) Coldness reaches an organ quickly either because there is a coldness in the organ peculiar to it or because the organ is porous. The organ receives coldness with difficulty either because it is hot or because it is dense. The organ appears dense either because of the quantity of the substance of flesh that is there or because of the thinness of the bones that are under the flesh. The organ appears thin either because there is little muscle in it or because of the thinness of its bones.

118. Several MSS include the gloss: “By ‘ample flesh and fat,’ he would seem to mean the plumpness that is a sign of moisture. Coldness is associated with fat. [Galen’s] text says [B 16.6; K 1:345; G+ 79], ‘In the case of the cold and moist temperament, if these two qualities do not diverge too greatly from moderation, then the body will have scanty hair and a pale complexion and be plump and fat. If there is a great divergence of these two qualities from moderation, then the other signs will be stronger in proportion to the increase of these qualities.’”

119. B 16.9; K 1:346; G+ 80: A MS has the gloss: “So that the cold necessarily reaches it.”

120. B 16.10–11; K 1: 346–47; G+ 80–81: Galen is making a slightly different point than the epitome, that the apparent size of a part of the body may not be the result merely of the amount of flesh but also of the size of the bones beneath. Several MSS contain the gloss: “In two places—that is, in the flesh of muscle, not in pure flesh—that is, soft flesh.”
الفصل السادس عشر

ذكر أمره المريك

(50) والعلامات الدالة على أن مراح اللّه حاز بأس أن يكون البدن حاز الممس صلب الجلد ويكون شعره كثيراً جدًا؟، ويكون بدنه قضيقة. والعلامات الدالة على أن مراح اللّه حاز رطب كرزة اللّه ولين البدن وحيرة الممس وأعتدل الشعر.

والعلامات الدالة على أن مراح اللّه بارد بارد صلابة الجلد وقلة الشعر وياض اللون وتبدد الحم في اللّه. والعلامات الدالة على أن مراح اللّه بارد رطب كرزة اللّه وكرزة المسم، وياض اللون وقلة الشعر.

(51) إسراع البرودة إلى العضو يكون إما لأنّ في العضو بروءة خاصة، وإما لا لأنه معلقل، وعصر تجلع العضو؟ الرودة، وإما لأنه حاز، وإما لأنه كيّف، ويعود العضو في منظره غليظًا. إما لكرزة ما فيه من جوه اللّه، وإما لغلظ العظام التي تحت اللّه، ويعود العضو في منظره غليظًا. إما لأنّ ما فيه من العضو. قليل. وإما لدقة ما فيه من العظام.

٩٩
(52) There are four natural moistures in the organs of the body:\textsuperscript{121} first, the moisture in the veins and arteries, which is blood; second, the moisture that is sprinkled through the organs like dew; third, the moisture that is in the moist organs recently coagulated and solidified, such as fat and flesh; and, fourth, the moisture that entered the organs at the time of the deposit of the sperm.

\textsuperscript{121} B 16.12–13; K 1:347; G\textsuperscript{a} 81–82: The epitome systematizes a passage in which Galen discusses the clinical aspects of the different ways that moisture can be present in the organs.
(52) الرطوبات الظلية" في أعضاء البذن أربع، إحداهن الرطوبة التي في العروق. وهي الدم، والثانية الرطوبة المشونة في الأعضاء بنزلة الرذاذ"، والثالثة الرطوبة التي في الأعضاء الظلية، القريبة الاصطدام، وبالجملة وهي منجم وملم. والرابعة الرطوبة المداخلة، للأعضاء، منذ أول وقوع النطفة.
(53) The signs indicating that the stomach is dry are a strong thirst sated by a small quantity of drink, the occurrence of surfeit from a larger quantity, and an appetite for food in which dryness is predominant. The signs indicating that the stomach is moist are a small thirst, the ability to drink a large quantity without surfeit, and an appetite for foods in which moisture is predominant. The signs indicating that the stomach is hot are that it digests strong foods but destroys foods that are quickly transformed and that it has an appetite for foods that are extremely hot. The signs indicating that the stomach is cold are that the appetite is good but that it digests only easily digestible foods, digesting even these only with difficulty. The belch is sour, due to its coldness, and the phlegm flows down to it from the head, provided that the brain is cold. This can be known by signs.

122. B 17.1–4; K 1:348–49; Ga 83–85: Several MSS contain the gloss: “A gloss of his in a manuscript: So long as their functions operate, all organs are preserved by things similar to them, even if they have diverged a little. Likewise, as long as the stomach is dry and its functions operate, it is preserved by what is similar to it.” Galen adds that, when the stomach is diseased, it desires opposites, not foods similar to its temperament, as is the case in times of health.

123. Two MSS have the marginal correction: “It is not due to its coldness.”
الفصل السادس عشر

ذكر مراجعة المدة

(53) والعلامات الدائرة على أن المدة إبسة، كثرة العطش والأكفاء بالقمح والشراب.

قيل: فيקש في حكيم من الشرب وحوت الکتلة من المقدار الكبير وحسن القبول للأطعمة التي فيนอกจาก، وحسن القبول للأطعمة التي الزاوية عليها أغلب، والعلامات الدائرة على أن المدة حارقة أن تكون المدة تهضم الأطعمة القوية وتقدم فيها الأطعمة السريعة الظهور، وتسكن حساسة القبول لما ك간 من الأطعمة أشد حرارة.

والعلامات الدائرة على أن المدة باردة أن تكون الشهوة جيدة، وتكون المدة تهضم الأشياء السريعة النضمام فقط، ولا تهضم هذه الأشياء إلا أكيرا، ويكون الجلود حامض، إذاً لتردها، والبسم ينصب إليها من الرأس، وذلك إذا كان الدماغ باردًا. وعرف بعلامات.
[Chapter 18][124]

[The temperament of the lungs]

(54) The signs that the lungs are hot are that the patient can quench thirst by inhaling cold air without drinking anything, that he feels a burning in his chest, that he breathes out strongly and breathes in a great deal of air, and that his voice is also loud. The signs that the lungs are cold are that they are quickly harmed by cold air, that they have a great deal of excess phlegm,[125] and that the voice is soft. The signs that the lungs are dry are that they do not generate many excretions and that the voice is like that of cranes. The signs that the lungs are

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124. B 18.1–6; K 1:350–51; G* 87–88: Galen mostly discusses the causes of the types of voices. Two MSS include the gloss: “A gloss of his: That is, it is not by drink only, like thirst of the stomach. That is because cold drink is partly drunk toward the lung, which is thereby necessarily cooled, thus somewhat quenching the thirst. If his thirst is not quenched by air alone, it will continue. It says in Galen’s text [B 17.7–10; K 1:349–50; G* 86–87], ‘Someone whose thirst in these organs—that is, the heart and lung—is due to heat will be more likely to have his thirst quenched by air through expelling air by long and deep breathing. He feels a strong heat in his chest—not in his upper abdomen, as is perceived in the one who is thirsty due to heat. Moreover, if he drinks, his thirst is not quenched immediately. Drinking cold water will quench his thirst more, whereas a very hot drink will not quench it. Cold air will also quench the thirst of such a one if he takes deep breaths, but this will not quench the thirst of someone whose thirst is due to heat in his stomach.’

125. A MS has the gloss: “Due to the coldness that traps the excretions in the windpipe and prevents air going out into it.”
الفصل التاسع عشر

ذكر مراج الزئفة

(54) والعلامات الدالة على أنّ الزئفة حارة؟ أن يكون العطش يسكن باستنشاق الهواء البارد لا بالشراب؟. ويكون ذلك الأنسان يحس في صدره بالتهاب ويكون ما تراه التخية عظيمة؟. ويستنثق هواء كبير، ويكون صوته أيضاً عظيم. والعلامات الدالة على أنّ الزئفة باردة؟ أن يكون يسرع إليها الضرر من الهواء البارد. ويكثر فيها الفضول البهعمي؟. ويكون الصوت صغير. والعلامات الدالة على أنّ الزئفة باردة: أن يكون ما يتوالد فيها من الفضول يسير؟. ويكون الصوت شبيهاً بصوت الكراكي. والعلامات الدالة على أنّ الزئفة رطبة: كثرة...
moist are that a great many excretions are generated and the voice is hoarse. The causes of the voice [quality] can be supposed to differ in accordance with the differences in the voice. A loud voice is due to heat, a soft voice to coldness, a voice like a crane’s to dryness, a hoarse voice to moisture, and a smooth voice to a moderate temperament. Likewise, a rough voice is due to dryness, a high-pitched voice to coldness, and a deep voice to heat.

(55) The temperament of each of the organs may be deduced from what each acquires from the things that it receives from outside the body and from its natural functions.\textsuperscript{126} With respect to what it receives from outside, if the organ is warmed quickly, then heat is dominant in it. If it is cooled quickly, then coldness is dominant in it. With respect to the organ’s natural functions,\textsuperscript{127} if many excretions are generated in it, then it is colder, while if only a few excretions are generated in it, it is hotter.

\textsuperscript{126} B 18.8; K 1:351–52; G* 89: A clarification by examples of Galen’s comment that there are only faint external indications of the temperaments of the other internal organs, but that physicians should “attempt their diagnosis by observation both of the influences that benefit or damage them and of the actions of the natural faculties.”

\textsuperscript{127} One MS contains the gloss: “These natural functions are taken in three respects; they are either nullified or reduced, or they operate in an undesirable way.”
ما يتولّد فيها من الفضول، ومجّة الصوت، أسباب الصوت تختلف بحسب اختلافه، فالصوت العظيم يكون من قبل الحرارة والصغير من قبل البرودة والشيء بصوت الكاكي من قبل البيس، والأخ من قبل السطوة، والأملس من قبل اعتدال المزاج، والخشن من قبل البيس وكذلك أيضاً الصوت الحاد يكون من قبل البرودة، والخيل من قبل الحرارة.

(5) وقد يستدّل على مراجِ كل واحد من الأعضاء بما يناله من الأشياء التي تلقاه من خارج، وما تكون من أفعال الطبيعة، أما من الأشياء التي تلقاه من خارج، فإنه إن كان يحتفّي سريعاً فالغالب عليه الحرارة، وإن كان يبرد سريعاً فالغالب عليه البرودة، وأما من أفعاله الطبيعية، فإنه إن كان يتولّد فيه فضل كبير، فهواً برع وإن كان يتولّد فيه فضل يسير نضج، فهو أسحَن.
[Chapter 19]

[Disorders]

(56) Some of the disorders occurring in the compound organs are perceptible to the senses and some are not. Examples of those perceptible to the senses are a long and narrow, fractured [?], large, small, or moderate head; a large, small, or moderate chest; or legs that are straight or bowed outward or inward. Some of those not perceptible to the senses are diagnosed quickly, such as the disorders occurring in the stomach and bladder, while others are difficult to diagnose, such as the disorders occurring in the liver and bile ducts; and some cannot be diagnosed at all, such as the disorders occurring in the intestines and urinary ducts. Diseases occur in all of the organs that have been mentioned.

128. B 19.1–2; K 1:352–53; G 90–91: At this point, Galen and the epitome move from discussing temperaments to discussing disease, beginning with a discussion of anatomical defects.

129. Two MSS include the gloss: “A gloss of his: It was not good to mention the moderate-sized head and trunk, since the section began by referring to disorders. It is not written in some of the manuscripts. When he says ‘the legs being straight,’ this is not equivalent to saying ‘moderate,’ because straightness in the legs—that is, in the two bones—is a defect; and being straight in shape, as Galen and others say, is when the upper part is like an animal’s and the lower part inclines to the human. Therefore, it is permissible to mention straightness along with being bowed inward or outward among the examples of disorders; but it is not permissible to mention moderation in the sizes of the head and trunk among the examples of their defects.”
الفصل التاسع عشر

ذكر الآفات

(56) الآفات الحادة في الأعضاء المركبة. بعضها يدرك حنًا و بعضها لا يدرك حنًا، أما الذي يدرك منها حنًا فمنزلة الرأس لمسقط، واللطي "والكبير " " الصغيراو والمعدل "، ومنزلة الصدر الكبير أو الصغير أو المعدل "، ومنزلة المناقش إذا كانا لعلى الانتقاء " أو كانا " مقوستين إلى خارج أو إلى داخل، وأما الذي لا يدرك منها حنًا. فبعضه يترفع " سريعا من منزلة الآفات الحادة في المعدة وفي المثانة. و بعضه يرفع مثله " الآفات الحادة في الكبد. و في جاري المرء وبعضه لا يعرف أصلا من منزلة الآفات الحادة في الأمعاء وفي جاري البول. وكل واحد من هذه الأعضاء التي جرى ذكرها تحدث فيها أمراض.

الصناعة الصغيرة الطبية

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[DSY M1 F1]
(57) Three diseases occur in the stomach. The first involves size, since we find that sometimes it is smaller than it ought to be. The second involves structure, since we sometimes find that it is firm and round. Third, there is the position, since we find that sometimes and in some people it bulges outward. Two diseases occur in the bladder: The first involves size, for sometimes we find that it is smaller than it ought to be. The second involves position, for sometimes we find it bulging outward. Three diseases occur in the liver: The first involves the structure, for we sometimes find it restricting the blood vessels and ducts. The second involves the position, for we sometimes find it outside of its natural position. The third involves the size, for sometimes we find that it is too small.
(٥٨) وأمّا المعدة التي يحدث فيها أمراض، أدهما في المقدار، وذلك أدا نجدها في بعض الأوقات، وأصغرها:🤤، ونادي:🤤 في الحيلة، وذلك أدا نجدها في بعض الأوقات، ومستمتعها: سابقة، والثالث في الوضع، وذلك أدا نجدها في بعض الأوقات، وذلك أدا نجدها في بعض الناس، وأصغرها:🤤، ونادي:🤤 في الوضع، وذلك أدا نجدها في بعض الناس، وذلك أدا نجدها في مكان، وذلك أدا نجدها في مكان، وذلك أدا نجدها في بعض الأوقات، وذلك أدا نجدها في بعض الأوقات، وذلك أدا نجدها في مكان، وذلك أدا نجدها في مكان.
[Chapter 20]\(^\text{132}\)

[Diagnosis of diseased states]

(58) If organs that have a particular disease are organs that are on the outside of the body, the disease can be diagnosed by change of complexion, by whether the organ is soft or hard to the touch, by whether it is hot or cold, and by size and number. If they are internal organs, their diseases can be diagnosed by the impairment of the functions specific to them, by what is excreted from the body, by the pain specific to that place, and by the place of the organ and the correspondence of the symptoms.

(59) If a function is in some way impaired, the impairment can be of three sorts.\(^\text{133}\) First, its function can be lost completely, as occurs to vision in blindness. Second, its function can be weakened, as occurs

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132. B 20.1; K 1:355; G* 94.

133. Two MSS include the gloss: “The variant ‘kinds’ [reading anḥāʾ ḥbʾkh ḥbʾkh for ḥbʾ ḥbʾkh] is found in another manuscript and is correct, but it has been altered in other manuscripts without good reason and is incorrect. That change is to ‘ḥbʾ’ [?]. [Galen] explains, ‘There cannot be another genus of diseases [another MS reads “symptoms”] here—only the one genus that I am mentioning to you.’ They are wrong to imagine that this change is necessary, since they think that his statement ‘No other genus of diseases occurs in the body,’ contradicts his statement later, ‘There is another genus of diseases.’ But it is not as they imagine, since what he actually said was, ‘No other genus of disease occurs in the body—in either the tissues or the compound organs—that is peculiar + [? to one of the two.’ After that, he says, ‘But there is another genus of diseases that I will mention to you afterwards, and that is common to all the organs that [the body] has.’ [A paraphrase of B 27.1; K 1:379; G* 133: ‘There remains one genus of disorders common to tissues and organs. This is dissolution of continuity.’] If he had said, ‘There is no specific genus except these two; but, rather, a common genus occurs’—that is, not specific to them—and is a third,’ then the statement would be correct and would not need to be changed to something else.

“What is in the text of this manuscript is correct, and one could take as evidence this sign that is found in three places. The proof that the change made to the text is an error is that it amounts to saying, ‘There is no third specific genus [of disease or symptom] in the body—only a third general genus.’ So it is as though he had said, ‘There is no third specific genus apart from these two, with the exception of one that is not specific but is common instead.’ This is a blatant error.”

This is certainly not entirely clear. The dingbat σ\(^\text{Π+}\) that appears at the beginning of the note before a variant presumably indicates a correction; but
الفصل العشرون

ذكر التعرف بأحوال مرضية

الأعضاء المريضة مرضًا خاصًا، إن كانت من الأعضاء التي هي في ظاهر البدن فأمراضها "تعرض" من تغيير اللون ومن لين الممس وصلابته وحراحته ويروده، ومن المقدار ومن العدد. وإن كانت من الأعضاء الباطنة فأمراضها تعرف "من مضاي أفعال"، ومن الأشياء التي تسترغ من البدن ومن الوضع الخاص بالموضع، ومن موضع "العضو ومعنً مما مناسبة الأعراض.

وكل فعل يتاله ضرر، فضرره تكون على ثلة وحده. إذا بأن يبطل فعله أصلاً في منزلة ما يعرض للبرصر عند الهذي، وإذا بأن يضعف فعله منزلة ما يعرض.

with vision when there is a film [over the eye]. Third, its function can operate badly and not in the way it ought to, as occurs with vision when the patient imagines that he sees a bug, a speck, or, in general, things that do not exist in reality.

(60) Some of the things that are excreted and expelled from the body are parts of the diseased organs.134 These excretions may indicate their organs by the specific property of their substance, as the throat—which belongs to the windpipe and its parts—indicates that the disease is in the lungs. The excretions may indicate the organ by their quantity, such as the coarse crust that flakes off an ulcer and comes out with the feces and indicates that there is an ulcer in the large intestines, or the fine crust that indicates that there is an ulcer in the small intestines. They may indicate the organ by their position, such as the crusts that come out with the feces and indicate an ulcer in the intestines, and the crusts that come out with coughing and indicate that the disease is in the lungs. There are also the things contained in the organs, some of which the organs contain naturally and some of which, when contained by the organ, are unnatural. Some of the things that the organs contain naturally are naturally excreted from the body, but the excretion of them deviates from the natural mode—either in quality or in quantity—such as feces that are too much or too little, too soft or too hard, and urine

the fact that it appears again as στ before a possibly different form of the variant and that the variant itself—in both places—makes no sense might also mean that the scribes of A and M could not read their exemplar and, as was sometimes done, drew the form of what they saw in the hope that their reader could figure it out. If so, I have disappointed them. It is also not clear to me why the cross appears in the middle of the note. As for the variant, it is undotted. I have read it as ḥbākhkh, with the khkh being an abbreviation for nusakh (manuscripts), rather than ḥbāḥ, which would require me to explain why it appears at the end of the line as ḥbā. I have read it as a corruption of anḥāʾ (kinds), which has the support of the sloppy but old and authoritative MS F; but ajnās (genera) is also a possibility. Finally, the quotations in the gloss do not, so far as I can tell, correspond exactly to anything in the epitome or in The Small Art itself.

The issue is the apparent contradiction between the interpretation of B 4.6; K 1:316; G* 27, given on pp. 72–73, paragraph 23, above, which identifies two genera of disease, and B 27.1; K 1:379; G* 133, which says that there is another genus of disease, loss of continuity—a problem also discussed in the gloss on p. 73, n. 60, above. The point of the variant would be that most of the scribes changed anḥāʾ (kinds), which implies genera, to wujūḥ or awjuh (sorts), which does not.

134. B 20.10–11; K 1:357–58; G* 99: Galen mentions this distinction without elaboration, referring readers to his work The Diagnosis of Diseases of the Internal Organs, which, he boasts, is the first book to treat this subject systematically.
للصرع عند الفشاعة، واما بأن يجري فعله مجرد ردًا على غيرما يبينغ بمظلة ما يعرض للبصر إذاً يرى خيال البق أو خيال القذا، وللملة إذاً رأي أشياء ليست موجودة في الطبع.

(2) والأشياء التي تستخرج وتخرج من البطن، منها أشياء هي أجزاء من الأعضاء الداخلية، وتدرع على تلك الأعضاء إما بخصوصيةً جوهرها بمظلة الحلق التي من قصبة الرئة وقصبة الرئة التي تنشر من القشرة إذا خرجت عبر البراز. فإنها تدرع على أن القشرة في الأمعاء، ب укра، والرضة تدرع على أن القشرة في الأمعاء. والقشرة التي تستخرج من البطن تدرع على أن القشرة في الرئة، ومعها أشياء هي ما يحتوي الأعضاء عليها. ومن هذه الأشياء ما 7 احتوى تلك الأعضاء عليها بالطعع. ومنها أشياء احتوى 2 على القشرة التي احتوى الأعضاء عليها بالطعع، وإنما يكون أشياء خروجها من البطن موجود في الطبع إلا أنها قد خرجت من عما عليها مغارة بالطعع، إنما في كتبها وإنما كان ليناً أوقل، وإذا كان ليناً أوصلاً والبول إذا
that is either too much or too little or is black or white. Other things are excreted from the body in a way that is not natural, even though their quality is natural—such as blood, which is not naturally excreted from the body, even though the body contains it naturally. Some of the things that are not naturally contained in the organs are of the same genus as the things that exist naturally but are changed, such as blood,\(^\text{135}\) while others are of an unnatural genus, such as worms and stones.

(61) Pain may arise from a sudden change of the temperament\(^\text{136}\) with respect to either heat, coldness, dryness, or moisture. It may be caused by the dissolution of continuity, which may, in turn, be due to things that cut, things that stretch, or things that bruise the organ. It may also be due to position.

(62) The diseased organ is most often indicated by something swollen.\(^\text{137}\) There are four kinds of swelling: those from blood, which are called phlegmona; those from the bilious humor, which are called erysipelas; those from phlegm, which are called edema; and those from the melancholic humor, which are called induration.\(^\text{138}\)

135. Two MSS contain the gloss: “A gloss of his: This division is correct in putting blood in the two places where you know that it is—that is, blood, so long as it is unaltered, is contained naturally in the body, while, when it is altered, it is contained unnaturally, such as menstrual blood. It is sufficient for me to mention menstrual blood, relying on the two manuscripts, for prior to the time of menses, it is unaltered, and it is contained there naturally; but during menses, it alters and its being contained there is unnatural.” There is a textual variant, probably also a gloss, that clarifies this point.

136. B 20.9; K 1:357; G\(^a\) 98.

137. B 20.8; K 1:357; G\(^a\) 98: Wārim being an unusual form, three MSS contain the gloss: “He means, ‘an organ with a swelling on it.’ ”

138. Some MSS of Galen’s text, including those from which the Arabic translation was made, omit erysipelas. These terms are also translated differently in G\(^a\). On the textual issue, see B, pp. 421–22. The terminological variants can be summarized as follows:

<table>
<thead>
<tr>
<th>Greek text of The Small Art</th>
<th>Arabic translation and some MSS of The Small Art</th>
<th>Epitome of The Small Art</th>
<th>English translation in Epitome</th>
</tr>
</thead>
<tbody>
<tr>
<td>φλεγμονή</td>
<td>al-waram al-ḥārr (inflammation)</td>
<td>ḥlaghmānī; waram damawī (hematoma)</td>
<td>phlegmona, from blood</td>
</tr>
<tr>
<td>ἐρυσαφέλη</td>
<td>———</td>
<td>ḥumra</td>
<td>erysipelas, from yellow bile</td>
</tr>
<tr>
<td>οἶδημα</td>
<td>al-rakhw al-manfūkh</td>
<td>tahayyuj; waram rakhw</td>
<td>edema, from phlegm</td>
</tr>
<tr>
<td>σκίρρος</td>
<td>al-jāsi al-ṣalh</td>
<td>ṣalāha</td>
<td>induration, from black bile</td>
</tr>
</tbody>
</table>
الصناعة الصغرى الطبية

كثيراً أو أقل؟ وإذا كان أسوداً أو أبيض، وإذا أن يكون أشياء خرجوا عن البدن على غير مجرد اللحم، وكذبها موجودة في اللحم بحالة الدم، فإن الدم ليس له في اللحم أن يجري من البدن، لكن أن يوجد للبده باللحم. إذاً الأشياء التي احتواء الأعضاء عليها خارجة عن اللحم. وإذا أن تكون من جنس الأشياء الموجودة في اللحم إلا أنها قد تغيرت بنزلة الدم، وإذا أن يكون من جنس الأشياء التي تجعلها خارجة عن اللحم بنزلة الدم والعصى.

(٢١) وإذا أو الموضع فإنه يحدث إذا بسبب تقدير المراة دفعة. وذلك يكون إذاً من قتل الحارسة. وإذا من قتل البرودة، وإذا من قتل البوس، وإذا قتل الزوبعة، وإذا بسبب تقدير الأنصار، وذلك يكون إذاً من قتل الأشياء التي تقطع، وإذا من قتل الأشياء التي تندد. وإذا من قتل الأشياء التي ترض العضو، وإذا الموضع.

(٢٢) فلقد ما يدل على العضو العليل الوازم، وأصناف الورم أربعة. وذلك لأنه إذاً أن يكون من الدم وبيضاء الغمولي، وإذا من الخلط المراري وبيضاء حمراء، وإذا من البلغم وبيضاء النجاح، وإذا من الخلط السوداوي وبيضاء الصلاة.

الله يخرج

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Some symptoms become apparent in the impairments of functions; from them is derived the standard and method by which one is able to determine the affected organ by means of the harm done to its functions. Other symptoms become apparent through the things that are excreted from the body, and from them is derived the method of making determinations by means of what comes out of the body. Other symptoms become apparent in the states of the body. Some of these states are visible, such as jaundice; some can be heard, such as growling in the stomach; some can be smelled, such as fetid odors; some can be tasted, such as bitterness in the mouth; some are palpable, such as heat, coldness, moisture, dryness, hardness, softness, coarseness, fineness, roughness, and smoothness. Some of these symptoms that are apparent from the states of the body are apparent to the senses in the diseased organ itself; and so, from that, it is possible to derive the methods of diagnosis from the location of the organ and from the pain specific to the organ’s place. Other symptoms are apparent to the senses in a different organ; and so, from that, it is possible to derive the method of deduction from the specific properties of the symptoms. For example, when the lung is diseased and its disease is inflammation, there is an accompanying redness in the cheeks, while, if the disease is a lesion, there is an accompanying bowing of the fingernails.

139. B 20.1, 8–10; K 1:355, 357; G 94, 98–99: Two MSS have the gloss: “That is, the correspondence of symptoms.”
(3) وأما الأعراض، فَهَا ما يظهر في ضارب الأفلاط، ويستبطن منهما القانون، والطريق الذي منه يستدُل به على الأعضاء بمضار أفعالها، ومنهما ما يظهر في الأشياء التي تخرج من البدن، وعَسِّر منِّها الطريق الذي يستدُل به ما يبرز من البدن، ومنها ما يظهر في حالات الأبدان، وهذه الحالات منهما مبصورة، بمنزلة اليرقان، ومنها مسموعة بمنزلة القرقر، ومنها المشمومة بمنزلة الزواج المنتمي، ومنها مذوقة بمنزلة مرارة الفم، ومنها مملوسة بمنزلة الحرارة والبرودة والرطوبة واليوسسة والصلابة واللحن والعظام والرطوبة والخشونة واللمسة. وجمع هذه الأعراض التي تظهر في حالات الأبدان بعضها يدرك الحسن في نفس الهيكل، وعَسِّر منهما الطريق الذي يستدُل به من موضع، والطريق الذي يستدُل به من الوجه الخاص بالموضع. ومنها يدرك الحسن في عضو آخر، وعَسِّر منها الطريق الذي يستدُل به من خصوصيات الأعراض بمنزلة ما يعراض إذا اعتُلَّت الرئة لأنه إذا كانت عليها و رمّا حارًا عرض معه حرارة في الوجنتين. وإذا كانت عليها قرحة عرض معها تقوع الأظافر.
[Chapters 21 and 22]^{140}

[Signs]

(64) There are signs of health, of disease, or [indicating] neither health nor disease. Some of the signs [indicating] neither health nor disease indicate both health and disease simultaneously; some indicate health at one time and disease at another; and some do not indicate either complete health or complete disease. Each of these [three]^{141} species indicates either what is the case at the present moment, prognosticates what is to come, or is mnemonic of what has already been. Some of the signs prognosticating a disease that is to come are of the same genus as the things that exist naturally, except that they indicate a disease that will occur. This is because the things have changed from their natural state in their quality, quantity, or time. Others belong to the genus of things that have diverged from the natural state, but only by a slight amount. Some of the signs prognosticating health and some of the signs prognosticating disease are apparent in impairments of function. These are signs that are always indicative. Other such signs are apparent in the states of bodies, but these signs are not always and primarily indicative.\textsuperscript{142} Other such signs are apparent in the things that are evacuated from the body. These signs are always indicative, but they are not primarily indicative; rather, they are indicative by means of coction\textsuperscript{143} and its opposite.

\begin{footnotesize}
\begin{enumerate}
\item[140.] B 21.1–22.4; K 1:358–65; G* 99–111. A summary of two chapters in which Galen treats these topics in more detail and with examples.
\item[141.] Added in some MSS.
\item[142.] Three MSS have the gloss: “A gloss of his: If, by saying ‘primarily,’ he meant ‘without intermediary,’ then he is right; but if, by saying ‘primarily,’ he meant ‘first for the senses,’ then he is not right. This is because it is possible to diagnose impairment of the function and to diagnose on the basis of it; yet, in both cases, the disease is diagnosed without an intermediary.”
\item[143.] This old term, meaning “cooking,” indicates the preparation of the waste products of digestion and disease for elimination from the body.
\end{enumerate}
\end{footnotesize}
الفصلان الحادي والعشرون والثاني والعشرون

ذكر العلامات

(٢٤) والعلامات منها صحية ومنها مرضية ومنها لا صحية ولا مرضية. وهذه التي ليست صحية ولا مرضية منها ما يدل على الصحة وعلى المرض remedy. ومنها ما يدل مرة على الصحة مرة على المرض. ومنها ما لا يدل لا على الصحة ولا على المرض remedy. وكل واحد من هذه أنواع. إذا أن يكون دائماً على ما هو حاضر، وإنما منذر بما سيكون. وإذا محزة بما قد سلف. والعلامات المنذرة بالمرض الذي سيكون. منها ما هو من حسب الأشياء الموجودة في الطبع إلا أنها تدل على مرض سيكون لأنها قد تشيرت عن الحال الطبيعي. وإما في كنيتها. وإما في كينيئها. وإما في وقتها. ومنها ما هو من حسب الأشياء الخارجة عن الطبيعة إلا أن مقدارها يسير. والعلامات المنذرة بالصحة والعلامات المنذرة بالمرض. منها ما يتبين في ماضي العمل. وهذه علامات ليس تدل دلالة أولية ولا دلالة دامئة. ومنها ما يتبين في حالات الأبدان. وهذه علامات ليس تدل دلالة أولية ولا دلالة دامئة. ومنها ما يتبين في الأشياء التي تستنزف من البدن. وهذه علامات تدل دامأة إلا أن دلاتها ليست بدلاً لأولية. فإنها فين يدل بتوسط النزيف وخلابة.
[Chapter 23]

[Causes]

(65) Some causes create health, some create disease, and some create neither health nor disease. Some healthful causes preserve health, and some bring about health. Some of the causes that create health preserve health, and some bring about health. Some of the causes that preserve health preserve the health of a body whose form is excellent and which has no flaw in its structure. Other such causes preserve the health of the body whose structure and form are inferior to the structure of the body that has an excellent form. Some of these causes preserve the body in its current state by means of things similar to it, while others—the transformative causes—change it from its current state by means of things opposite to it. Others transform the body and bring it to excellent form and structure. Still others transform its capacity and suitability to receive disease by eradicating the causes predisposing it to disease and thus keeping it in its original nature.

(66) Some of the causes that change bodies are things that change them necessarily;\textsuperscript{145} there are six genera of these. Other causes are things that do not necessarily change the body, such as a vicious animal, a stone, swords, and the like. The six necessary causes are the air surrounding the body; the genus of things eaten and drunk; the genus of sleep and wakefulness; the genus of motion and rest, either in the

\textsuperscript{144} B 23.1–5; K 1:365–67; G\textsuperscript{a} 111–13.

\textsuperscript{145} B 23.6–10; K 1:367–68; G\textsuperscript{a} 113–16.
الفصل الثالث والعشرون

ذكر الأسباب

(٢٥) الأسباب منها مضطربة، ومنها لا مضطربة، والأسباب المضطربة منها ما يُحفظ بالهيئة، ومنها لا يُحفظ بالهيئة، وهي الأسباب التي بنيتها وصيغتها دون بنيتها البدنية الفاضلة الهيئة. وهذه الأسباب منها ما يحفظ البُدن على ما هو عليه بالإلهامة المشابهة بها، ومنها ما يُحفظ عليه بالإلهامة المشابهة له. وهذه الأسباب النافذة لها، ومنها ما ينزل البُدن وينقله عليه بالإلهام المشابهة لها، ومنها ما ينقله عن الإلهام المشابهة لها. لقبول الأرض بِقِطع الأسباب المُقيَّدَة فيه ويوصِّه على طبعه الأول.

(٢٦) الأسباب المَقَرَّة للأبدان منها أشياء تقدير ضرورة، وهي ستة أجناس، ومنها أشياء ليست تقدير ضرورة، مثل الحيوان المُحسَّن والنجارة والسيوف وما أشبه ذلك. فأما الستة الأسباب الضرورية، فهي الهواء المحيط بالبُدن وجنس الأشياء التي تتخلل وتشرب ونجم الزوم واللياقة ونجم الحركة والسكن، إمامًا في جميع

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الصناعة الصغيرة الطبية

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entire body or in some organ to the exclusion of others; the genus of evacuation or retention of what can be evacuated from the body; and the genus of the accidents of the soul, which are joy, grief, anxiety, envy, anger, and fear.\textsuperscript{146} These six genera can be causes of health when they preserve its proper quality and quantity to achieve moderation; but they can be causes of disease when they diverge from moderation toward one extreme or the other, either in quantity or in quality.

\textsuperscript{146} Necessary causes are the factors that people cannot avoid being exposed to—the famous “six non-naturals”; see pp. 18–19, n. 43, above.
البدن وإما في بعض الأعضاء دون بعض. وجنّس استفراغ ما يستفرغ من البُدن
واحتباسه وجنّس عوارض النفس، وهي الفرح والحزن والغم والحسد والغضب
والفراغ. وهذه السَّبعة الأجناس قد تكون أسبابًا للصدمة إذا هي حُنَّت كَيْفِتَها
وكمّيتها على ما ينبغي على الا عَتِبَال. وتنون أسبابًا للمرض إذا هي زالت عن الا عَتِبَال
إلى أحد الطرفين "إما في كِيْفِتَها" وإما في كِيْفِتَها".
(67) When the form and structure of the body are excellent, the body needs these six genera to be moderate in order to preserve health—which is to say that there must be moderation in the air surrounding the body, moderation in its food and drink, moderation in the accidents of its soul, moderation in its sleep and wakefulness, moderation in its motion and rest, and moderation in the evacuation of the superfluities that are evacuated.\textsuperscript{148} There are three kinds of superfluity: feces, which are the superfluity remaining from the food that is assimilated by the stomach and belly; urine, which is the superfluity remaining from the food that reaches the liver;\textsuperscript{149} and sweat, which is the superfluity remaining from the food that reaches the body as a whole.

\textsuperscript{147} B 24.2–10; K 1:370–72; G\textsuperscript{\textregistered} 119–22.

\textsuperscript{148} One MS has the gloss: “And also moderation of foods and drinks.”

\textsuperscript{149} Two MSS add: “and the blood vessels.”
الفصل الرابع والعشرون

ذكر أسباب الفضية

(٢٧) والذي يحتاج إليه في حفظ صحة البدن الذي هيئة وبيته فاضلة

اعتادان هذه الفضية الأجباس، أعني اعتدال الهواء المحيط بالبدن واعتدال مطعنه ومشربه واعتدال "عوارض نفسه واعتدال نومه ويقظته واعتدال حركة وسكونه واعتدال استفراغ ما يستفرغ من فضوله"، وهي ثالثة البراز وهو فضل الظلمات الذي تسترية للعدة والبطن والبول وهو فضل الغذاء الذي يصير إلى الكبد، والمرء وهو فضل الغذاء الذي يصل ٢٧ إلى جميع البدن."
[Chapter 25]\(^{150}\)

[The cure of diseases]

(68) In order to cure a disease, one needs excesses of these genera that exceed moderation in the direction opposite to that of the disease. One of two things is needed to preserve the health of bodies whose health is inferior to the health of the body with an excellent structure. If you wish to preserve these bodies as they naturally are, you must employ these genera so as to exceed moderation in the direction to which that body inclines, so as to be similar to it. However, if you wish to change such bodies to an excellent temperament, then you must employ these genera, during the time in which you are trying to change the temperament, in a way opposite to the aspects in which these bodies diverge from moderation. But if you are afraid to change the temperament, you must use moderation.

(69) The corruption of any organ that, in some way, falls short of the excellent form is either in the tissues or in the compound organs.\(^{151}\) If the corruption is in the tissues, then either it is in all of them equally, or it is not in them equally—that is, in some of them but not in others. Each of these two kinds is also either simple or compound. Moreover, each of these two kinds must either be preserved by things similar to it,

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150. B 25.6–11; K 1:374–76; G* 123–27: Galen observes that the natural temperament of the individual must also be taken into account, not just an ideal moderation, so that bodies that are naturally hotter, for example, must be treated with hotter regimens.

151. B 26.1–2; K 1:376; G* 127–28: Galen goes on to discuss the treatment of the various classes of defects in tissues and organs.
الفصل الخامس والعشرون

[ذكرشفاء الأمراض]

(28) والذي يحتاج إليه في شفاء المرض ٧٠٧ هو إفراط هذه الأتجاس وجاو زتهاُ، الاعتدال ٧٠٧ إلى خلاف جهه المرض، والذي يحتاج إليه في حفظ صحة الأبدان التي صحتها دون صحة البدن الفاضل البينة أحد أمرين، وذلك أنك إذا أردت أن تحفظ هذه الأبدان على طبائعها، ف ينبغي لك ٧٠٧ أن تستعمل فيها من هذه الأجناس ما هو جيد ووزن الاعتدال ٧٠٧ إلى الطرف ٧٠٧ الذي ذلك البدن مائل إليه يكون مسبها له، وإن أردت أن تقلبه إلى المرج الفاضل، ينبغي لك مادمته في نقله ٧٠٧ أن تستعمل من هذه الأجناس ما هو خالف للوجه الذي ٧٠٧ تجاو زته.

تلك الأبدان الاعتدال إليه، وإذا فوعت من ٧٠٧ نقلها استعملت الاعتدال.

(29) لا يخلو فساد الأعضاء الناقصة عن الهيئة الفاضلة من أن يكون إما في الأعضاء المتشابهة الأجزاء وإما في الأعضاء الأخرى، فإن كان الفساد في الأعضاء المتشابهة الأجزاء، ليس يخلو من أن يكون إما فساد في جميعها واسواء وإما في بعضها دون بعض على غير تساوي، وكل واحد من هذين أيضاً إما أن يكون بسيطا وإما ٧٠٧ مريراً، وكل واحد من هذين أيضاً إما أن يحتاج إلى...


\begin{align*}
\text{AM} 706 & : \text{المرضي} ; F : \text{الأمرض} \\
\text{AM} 706 & : \text{للاعتدال} \\
\text{AM} 706 & : \text{صباح زها} \\
\text{AM} 706 & : \text{لك} \\
\text{AM} 706 & : \text{للاعتدال} \\
\text{AM} 706 & : \text{الجواب} \\
\text{AM} 706 & : \text{أو في كيفية أخرى} \\
\text{AM} 706 & : \text{ف hữu ساوة} \\
\text{AM} 706 & : \text{أو في كيفية أخرى} \\
\text{AM} 706 & : \text{سما على} \\
\text{AM} 706 & : \text{ف hữu ساوة} \\
\text{AM} 706 & : \text{أو في كيفية أخرى} \\
\end{align*}
which is when a person employs the necessary entities, or it must be corrected at the time of treatment by things opposite to it over a long period of time. If the corruption is in the compound—which is to say, the instrumental—organs, then it is either simple or compound. If it is simple, then it is in either the structure, the number, or the position. The corruption that occurs in the structure is in either the shape, the cavity, the ducts, the roughness, or the smoothness. The corruption that occurs in the number is either excess or deficiency. The corruption that occurs in size is in being either too large or too small. The corruption that occurs in position is either in the organ being moved from its place or in its relation to the organs with which it is associated.>

(70) Some of the necessary causes that affect the body dry, and some moisten. Those that dry are exercise; hot, dry air; insomnia; evacuation; a scanty diet; and all the accidents of the soul. Those that moisten are rest; sleep; retention of what might be evacuated; a heavy diet; and cool, moist air. Some of the necessary causes that affect the body warm, and some cool. Those that warm are moderate exercise; a moderate diet, especially if hot; hot air; retention of something hot, such as vapor; a preference for moderate food; moderate waking; and moderate sleep. Among the accidents of the soul, anger always warms, worry usually does, and joy sometimes does. Those that cool are strenuous

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152. That is, the six non-naturals discussed on pp. 111–12, paragraph 66, above.
153. This reads as though it could properly be part of the text, although three of the four oldest MSS omit it, perhaps because the topic is discussed again in paragraph 73 below.
155. One MS has the gloss: “A gloss of his: That is, moderate in quantity.”
156. Some MSS read: “a small quantity of moderate food.”
حفظه بالإنسان من الشياطين، وذَلِكْ إِذَا ما يكون الإنسان من ثلاث أمور
اضطراباً. وإنما أن يحتاج إلى إصلاحه في وقت الفراق على طول المدة بالأشياء
المضادة له. فإن كان الفساد في الأعضاء المركبة، وهي الآية، ليس يُبَلَّغ من
يكون إذا بسيطاً وإلا مركب، فإن كان بسيط، فإِنما أن يكون في الخلق وإنما في العدد
وامرأة في الخلق. أما في الخلق فإن فجعة فيها الفساد إنما في النزول وإنما في التليف
إِنما إنما في النزول وإنما في الخشونة وإنما في الملاسة، وإنما الفساد في عرضه
إِنما إنما في النزول وإنما بالقصان. وإنما الفساد في عرضه إنما في الصغر
وامرأة الوضع في عرضه إنما بقتل العضو وامرأة الفساد إنما يشارك
من الأعضاء ماً.

(٧٠) والأسباب، التي تعرض للبند باضطراب، منها ما يخفف ومنها ما يزيد.
أما التي تخفف فالمشقة والهواء البارد والشجر والفستفاغ وقلة الغذاء
وجميع عوارض النحس. وأما التي تزداد فالتكون والزمن واحتباس ما يستغرق
وكثرة الغذاء والهواء البارد. والأسباب التي تعرض للبند باضطراب،
بعضها يخفف وبعضها يزيد. أما التي تخفف فالمشقة المعتدلة والغذاء المعتدلة.
ولو سأما
إِن كان حاراً والهواء البارد واحتباس المشقة الحارة، فإن هذا المنظور وقصود في
الغذاء المعتدلة والصفر المعتدلة، ومن عوارض النحس والغضب، يفعل
ذلك دائماً، والله في أكثر الأمور والفرج في بعض الأوقات. وأما
التي تزداد.

|AMS: المشابهة | AMS: المشابهة |
|AMS: مشابهة | AMS: مشابهة |
|AMS: DFY ٧٠ | AMS: DFY ٧٠ |
|AMS: AFMY ٥٢ | AFMY: DFY ٤٤ |
|AMS: ADMY ٧٣ | ADMY: صيحة: هل: أي في مقداره |
|AMS: م: FF ٧٣ | AMS: تعويذة: في نفحة مكان المعني؟ |
exercise; an excessive diet, especially if the food is cold; air that is excessively hot or cold; delay in evacuation; excessive evacuation; an excessively scanty diet; excessive insomnia; and excessive sleep. Among the accidents of the soul, anxiety always cools, fear usually does, and joy sometimes does, provided that it is excessive. Some foods and drinks warm the body, such as meat and foods seasoned with pepper and mustard, and spiced, honeyed wine. Others cool, such as fruit, rūsātaq fish, and cold water. Some occupations warm, such as wrestling and the craft of the blacksmiths, while others cool, such as seafaring and fulling.

(71) There are five genera of causes of heat: first, exercise that is not excessive; second, contact with things that warm when the contact is moderate; third, matter analogous to heat such as hot foods, drinks, and drugs; fourth, retardation of the dissolution of something hot, which is accomplished by means of compression; and, fifth, putrefaction. There are six genera of causes of coldness: first, very excessive exercise; second, rest; third, contact with things that heat excessively, which means the same thing as dissolution; fourth, contact with things

157. Some MSS read “leisure.”
158. See p. 21, paragraph 20, n. 49, above.
159. Another word that the MSS have difficulty with, rendered variously as rūsātaq, rūsāṭan, and dūstāṭan. A gloss in several MSS reads: “This is a species of fish found along the shores of khilāṭ [or akhlāṭ] zaʿm [?].”
161. Some MSS read: “excessive exercise.”
الحركة المفعمة والمستوي من الغذاء وخاصة إن كان باردًا والهواء المفرط في الجزء والبرد والإبطاء فإما يستغرق ولا يستطيع الفطرة وقليل من الغذاء جدًا والسهر المفرط واللحم المفرط. ومنعوا رض النفس فقول ذلك دانه والتفرغ في أكثر الأوقات من الفرح في بعض الأوقات إذا كان الفطرة. الأطعمة والأشربة منها ما يمنع بمقابلة اللجم والأطعمة التي المختارة باللحم والخردل والخنديقون، ومنها ما يمنع بمقابلة الفاكهة والزهور الماء البارد. والأشياء منها ما تمنع الجد٢ بمقابلة المصارعة وصنعاء الحلاد.. ومنها ما يمنع بمقابلة الملاحة والقصار.

(١٧) أجلس أسباب الحرارة خمسة. أحدها الحركة غير المفرطة والثاني لقاء الآشية المفيدة إذا كان لقاءها معتدلة. والثالث الباردة الموافقة للزمنة بمقابلة الأطعمة والأشربة والأدوية الطيارة. والرابع إبطاء تحلل الشيء الحزاء. وذلك يكون بسبب التكشف. والخامسrafعة. وأجلس أسباب البروده ستة. أحدها الحركة المفرطة جدًا، والثاني السكون، والثالث ملاحة الأشياء التي تحقق بإفراط. ومنع هذا الفعل معنى القلقل، والزرايع ملاقة الأشياء التي تبرد.
that cool; fifth, matter compatible with coldness, such as cold foods and drinks; and, sixth, an excessively meager diet.

(72) If corruption occurs in the tissues and the defective temperament is uniform throughout all the organs, then a single species of treatment ought to be used for the entire body. If the defective temperament is not uniform, then each of the organs ought to be treated with something specifically suited to it.

والمتبقي الماء الملاحة الملاءمة للبرودة بمنزلة الأطعمة والشربة الماردة. والسادس تقليل الغذاء المفرط.

(٧٢) إذا حدث في الأعضاء للتشابهة الأخرى فساد. فكان سوء المزاج الزدي متساوي في الأعضاء كلها. فينبني أن يستعمل في مداواة البدن كله نوع واحدا من المداواة. فإن كن سوء المزاج الزدي غير متساوي. فينني أن يداوي كل واحد من الأعضاء بالشيء الذي هو ملائم له خاصةً.
[Chapter 26]^{163}

[Classes of organic diseases and their treatment]

(73) There are four aspects of the functional organs in which the disorders of these organs occur.\textsuperscript{164} These are the structure of the organ, its dimensions, its number, and its position. Each of these four exists in bodies in one of four ways. First, it may be in the excellent form, which is when it has the most excellent form and is most moderate. Second, it may deviate only slightly from the most excellent form, and for this reason it is accounted among the states of healthy bodies. Third, it may have deviated enough from the most excellent states so as to be not far from disease. A body in such a state is called “sickly.” Fourth, it may have deviated greatly from the state of the healthy body. When a body is like this, it is called “diseased.”

(74) Five kinds of defects and diseases occur in the structure of the organs: First, they may involve the shape, which happens whenever the shape of the organs changes—as when what is round becomes elongated. Second, the ducts, apertures, and orifices may contract, expand, or be

\textsuperscript{163} B 26.1–5; K 1:376–77; G\textsuperscript{a} 127–29.

\textsuperscript{164} Galen expresses this idea in slightly different ways in his separate discussions relating to the structure, dimensions, number, and positions of the organ. This particular formulation is the one he used in referring to defects of position and is quoted almost verbatim here. Throughout this chapter, the epistomist adds examples of his own or draws examples from later in The Small Art to fill out Galen’s chapter 26.
الفصل السادس والعشرون

ذكر أقسام الأمراض الآلية وعلاجها

(٧٣) الأشياء التالية للأشياء الآلية التي فيها تحدث آفات هذه الأعضاء وربما أشياء، وهي خلق إلها وتصدرها مقدارها وعددها ووضعها وكل واحد من هذه الأشياء موجود في الأبعد على ناحية أشياء أصاف. أحد هذه الهيئة الفائضة، وهو أن يكون على أفضل الهياكل وأشدها اعتدالاً، والثاني أن يكون دون هذه الفائضة فطلب. فيدخل بهذا السبب في إعالة الحالات الأبدان الصعبة. والثالث أن يكون قد بعد عنها الheaded التي هي أفضل الهميات حتى يكون قد قارب المرض، ويتداول إن هي السيد الذي حالها هذه الحالات المرض، والرابع أن يكون قد بعد عن حال البدن الصريح بعدة أشياء. ويدلال له إذا كان كذلك مريضاً.

(٧٤) والذي يحدث في الحلقة من الآفات والأمراض خمسة أصناف. أحدهما ما يحدث في الشكل، وذلك عندما يغير شكل العضو بينما حالة من الاستمرار مطولًا، والثاني ما يحدث في المجاري والأنبوب والمنافذ عندما يضيق أو ينبع

الصناعة الصغيرة الطبية

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third, the cavities may shrink, tighten, expand, loosen, fill, or become blocked. Fourth, there is what happens when the roughness of an organ that is naturally rough becomes smooth. Fifth, there is what happens when the natural smoothness of the organ that is naturally smooth is roughened. There are two kinds of disorders and diseases occurring in the dimensions of the organs: first, when an organ becomes small that ought by nature to be large; and, second, when an organ is enlarged that ought by nature to be small. There are four kinds of disorders and diseases occurring with respect to the number of the organs, two occurring when the number is greater than is natural and two when the number is less than is natural. One of the two kinds of superfluity involves an excess of things that exist naturally, such as a sixth finger. The other involves things that do not exist naturally, such as worms growing in the belly and scrofula growing on the neck. One of the two kinds of deficiency is when a part of an organ is lacking, and the other is when an organ is lacking entirely. There are two kinds of disorders occurring with respect to the position: First, the organ may be removed

165. Scrofula is tuberculosis of the lymphatic glands, characterized by swellings on the neck.
أو ينسد، والثالث ما يحدث في التجريف إذا صغر أو واقع أو أكبر أو أتمٍ، وأربع ما يحدث في الخشونة الطبيعية عندما يملأ العضو الذي هو بالطبع خشن، والخامس ما يحدث في الملاسة الطبيعية إذا خشن عضو هو بالطبع أملس، والذي يحدث في مقدار الأعضاء من الألغام والأمراض صنفان. أحدثهما أن يكون العضو الذي يبني أن يكون بالطبع كبيرًا يصغر، والآخر أن يكون العضو الذي يبني أن يكون بالطبع صغيرًا يضم، والذي يحدث في العدد من الألغام أربعة أصناف اثنان منها يحدث إذا كان العدد زائدًا على ما في الطبع. واثنان إذا كان العدد ناقصًا فإنما في الطبع، أما الصنفان الازدائن، فأحدثهما يكون من جنس الأشياء الموجودة في الطبع بنزلة الأصلع السانسة. والثاني من جنس الأشياء الخارجية عن الطبع بنزلة الدود المتولد في البطن والحنازير المتولدة في الرئة. وأنا الصنفان التاقيان فأخذهما يكون إذا تقص جزء من العضو، والثاني إذا تقص عضو بأسرة، والذي يحدث في الوضع من الآفات صنفان. أحدثهما أن ينقل العضو عن موضعه بنزلة ما

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entirely from its position, as occurs with the intestines when they move from their place in the coils and drop down near the testicles, or with one of the joints when it is dislocated and leaves its normal position. Second, an organ that is normally near to or apart from another organ when it is in use is changed from the way that it usually is, as happens with the fingers, the lips, or the eyelids when they are close together and cannot separate or are separated and cannot come together.

(75) There are two means by which it is possible to treat the disorders occurring in the shape of organs: first, by straightening and correcting through surgery; and, second, by binding. The causes with which it is possible to treat the disorders occurring in the cavities differ in accordance with the disorder. For example, if the cavity is enlarged and needs to be reduced in size, it is treated by binding and rest. If it is too small and needs to be enlarged, it is treated by exercising it or by that retention of the breath called, in Greek, κατάληψις, which is when someone holds his breath but nonetheless tries to force out the air of his breath. The means by which it is possible to treat the disorders arising in the dimensions of the organs also differ in accordance with the various kinds of these disorders. For example, if the disorder involves the organ being of excessive size, it is treated by rest and binding, while if it involves the organ’s dimensions being insufficient, it is treated by exercise and massage. There are a variety of diseases involving

166. Some MSS read: “In a rupture.”
167. B 26.6–10, 33.2–3; K 1:377–78, 391; G* 129–32, 153–54: The reader should remember that the original meaning of surgery was “the work of the hand” and that, in Galen’s works, it refers to physical therapy as well as the use of the knife.
الصناعة الصغيرة الطبيعية

يعرض للأمعاء إلا أن ينتقل ويزو لجن موضعها في الفلة وأ يخفّر إلى الأثاث أو يعرض لبعض المعايير الإخلاع والمخرج عن موضعه، والأخير أن يكون العضو الذي يشأ أن يقرب أو يعد من عضو آخر في أوقات الحاجة إلى ذلك يغادر عضوًا كله من بزلة ما يعرض للأصابع والشرايين أو للجنين إن يقرب الواحد من الآخر ولا يتابع عدته، أو يتبع ولا يدنهما به.

(٥٤) والأسباب التي بها يكون إصلاح ما يحدث في الشكل من الأفات

اثناء أحمّدها التقويم والإصلاح بياء، والآخرالبزايط، وأما الأسباب التي يكون بها إصلاح ما يحدث في التغريب من الأفات فيغدّب، فيسبح اختلاف الأفة. وذلك أنه إن كان التغريب قد عظم ويحتاج إلى أن يصير إصلاحه يكون بالزراق والسكون، وإن كان قد صغر ويحتاج إلى أن يكبر"، فإصلاحه يكون بتجريبه بالعمل وحصر النقص الذي يقال له باليونانية قاطلبسن"، وهو أن يحس النسان نفسه ويدفع مع ذلك هواة التنفس، وأما الأسباب التي بها يكون إصلاح ما يحدث في مقادر الأعضاء، فهي أيضاً تختلف بحسب أصناف هذه الأفات. وذلك أنه إن كانت الأفة إنما تحدث من طريق أن مقدار العضو زاد فإصلاحه يكون بالسكون والزراق، وإن كانت إنما حدثت من طريق أن المقدار تقص فإصلاحه يكون بالحركة والذالك. شكل الأعضاء يفسد.
distortion in the shape of an organ. It can happen that the head is long and narrow. A person’s spine can have a hump. The legs can be bowed inwards or outwards. In other organs, there can be conditions such as when the thigh is twisted.

(76) A blockage occurs either primarily or accidentally.168 The accidental blockage occurs, for example, from some kind of swelling.169 The primary blockage may occur from coarse, viscid humors, in which case it is treated by things that cut it and by things that cleanse it, such as oyx-mel and honey-water. It can also occur from some other coarse superfluity, such as hard feces, in which case it is treated first by moistening and then by cutting that coarsening, using enemas having an excess of sharpness. Finally, they can occur from things whose genus is completely unnatural, such as stones. Things that are entirely contrary to nature are treated by removing them from the body completely. Things whose quantity alone is contrary to nature are to be treated by decreasing them. If there is something in the blood vessels whose quantity is excessive, or something whose quantity is becoming excessive, it is to be treated by bloodletting from the vein. If it is something in the stomach, it is to be treated by an emetic. If it is something in the chest, it is to be removed by coughing. If it is something in the liver, then it depends on which side it is on. If it is on the concave side of the liver, then it is to be removed through the intestines by purgation; but if it is on the convex side of it, it is to be removed by means of the urine. An accidental

169. Some MSS omit this sentence.
إما في الأأس بميزلتة ما يعرض له إذا كان مستقفاً، وإما في الصلب بميزلتة ما يعرض إذا صارت بالإنسان حدية. وإما في المشاكل بميزلتة ما يعرض إذا كان المشاكل مقوسة إلى داخل أو إلى خارج، وإما في غير هذه الأعضاء بميزلة ما يعرض للنحو إذا أعوجت.

(76) السندة تحدث إما حدوثًا أوليًا وإما حدوثًا عرضيًا. فأما السندة العرضية بميزلة ما يعرض منها بسبب ورم الأورام وفقط السندة الأولى. فيكون إما من أخلاء غليظة أو يمتد نتيجة وراءها ومدعا بها، والإشاعات التي تتبع بميزلة اللحجين وماه العمل، وإما من فصل آخر غليظة بميزلة الزنجبيل الصلب ويداوي أولًا والتزيب ثم تقطع ذلك الفعل بالحقن التي لها ضعف حدة، وإما من شيء جملته من جنس ما هو خارج عن الطبيعة بميزلة الحمص. وعند الأشياء التي تجعلها من جنس ما هو خارج عن الطبيعة يكون بإخراجها عن البناد أصلاً، فأما الأشياء التي مقدارها فقط خارج عن الطبيعة، فبدايتها تكون بتفصيلها، وإما من شيء قد كثر مقداره والشيء الذي يكثر مقداره إن كان في العروق. فإن مبيني أن يستفز بفصص الورق وإن كان شيئ في المعدة فانه وإن كان شيئ في الصدر فالسمال. وإن كان شيئ في الكبد فحسب التاحية التي هو فيها وذلك أنه إن كان في الجانب للفعل من الكبد مبيني أن يستفز من الأمعاء بالإسهام. وإن كان في الجانب للدحاب مهما مبيني أن يستفز بالبول. وأما السندة

blockage may result from a hematoma, induration, edema, dryness, or distortion of the shape of the organ.170

(77) Roughness may occur in a bone, in which case that bone should be scraped until it is smooth.171 If it is in the tongue, it should be smoothed by viscid, glutinous things such as gum and ispaghula. If it is in the windpipe, it is to be smoothed with gum tragacanth or licorice. If there is a smoothness in the bone, it should also be scraped until it is rough. If it is in the womb, then the humor that makes it smooth should be purged.

(78) Things whose number is in unnatural excess should be removed by either steel, fire, or caustic drugs.172 Those that are too few in number should be treated in accordance with the source that they come from. For example, if the deficiency is in an organ created from blood, it might be possible to complete it, as is seen with flesh that is missing due to a deep ulcer. If the deficiency is in an organ that is generated from semen, it is not possible to make a complete replacement for it; but we can substitute other things for it, some of them acting as binding, as is done when something hard is fastened at the place where a bone is broken in order to bind it and connect it as flesh does. Some can be corrected by roughening the place, as is done with a lip that is shorter than it ought to

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171. B 33.14–15; K 1:393; G a 158. Two MSS have the gloss: “A gloss of his: In certain ulcers, the bone may become so rough as to mar its surface, the damage making it difficult for the flesh to adhere to it. That is what must be smoothed until the damage is gone. In other ulcers, the bone may become so smooth due to an injurious moisture that it is also difficult for the flesh to adhere to it. In that case, the bone must be roughened until that moisture is gone, allowing the flesh to adhere to it.”

be when we split it, lest it become limp and cover the teeth. Some of the organs are created from sperm. These include all the primary hard organs, such as the arteries and veins, the nerves, and the bones. Therefore, these organs are not likely to grow a replacement when something is cut from them, since the matter from which they are formed is not prepared and ready in the body. Other organs—the flesh and the fleshy organs—are created from the menstrual blood. Because the blood is continually prepared and made ready in the body, if something is cut from these organs, it might grow back. If the things whose number is unnatural in the sense that they are too few are created from blood, it is possible for them to return to their original state at any age. However, if they are among the organs created from the semen, it is only possible for them to come into being in childhood, since it is only at this age that there is a remnant of the substance of the semen ready in the body. If it is unnatural in the sense of being too many, then it must either be removed completely by surgery, as in the case of scrofula, or be moved so as no longer to be in that place, as is the case with water flowing down into the eye.

(79) The diseases occurring due to the positions of organs are treated by returning the organs to their natural positions and keeping them there by cauterization and binding. One of the diseases of position is dislocation, which is something that occurs by a forcible stretching. It is

173. Two MSS have the gloss: “A gloss of his: It can only truly be said that things are unnatural in number if they have, by nature, a particular number.”
لا يمكنني قراءة النص العربي في الصورة.
treated by stretching the joint in the opposite way, straightening it, putting it back in, and returning it to its place. Another such disease is the rupture—which is to say, the intestinal hernia. It is caused either by a tear occurring in the peritoneum because the latter has become hard, or by a distention in the peritoneum due to its softness.

(80) In connection with the compound diseases occurring in the interior organs, Galen gives the example of two patients whom he had seen. The stomach of one of them was cold, round, small, and protruding outward. There were four diseases in his stomach, three of which were diseases of the compound organs, which are instruments, and one a disease of the tissues: a cold temperament. One of the three organic diseases was in the size of the organ, which was its small size. The second was in its structure, which was its roundness. The third was in its position, which was its protrusion outwards. The other patient’s food was having difficulty rising from his stomach and belly to his liver. He applied his intuition and realized that there were two diseases in the patient’s liver: one in its structure, which was the narrowness of the blood vessels in it; and the other in its size, which was the small size of the liver itself.

175. B 19.2, 26.11; K 1: 353, 378–79; Gα 91, 132: Galen gives this as an example of one of the rare cases when it is possible to directly diagnose diseases of the internal organs—in this case, because the position, size, and shape of the stomach were plainly outlined under the skin. See p. 105, paragraph 57 and n. 130, above.

176. B 19.4, 26.12; K 1:333–54, 379; Gα 91–93, 133: Intuition was required in this case because the condition of the liver could not be observed directly. Galen does not actually mention the small size of the liver, so it is possible that the epitomist was conflating this case with the case of a small and misplaced bladder mentioned at B 19.3; K 1:333; Gα 91.
الصناعة الصغيرة الظبيّة

والإدخال والرذة ومنها الفتق، وهي"قيلة الأمعاء، وذلك يكون إما بسبب غرقٍ يحدث في الصفاقة لصلابة، وإما بسبب تمدد في الصفاقة لثباته.

(8) إن جالينوس"بمثّل في الأمراض المركبة الحادّة في الأعضاء الباطنة بإنسانيين رآهما"، أتّهمها كانت معدّة برداً مستدراً صغيرة ناتجة إلى خارج، وكان"بهذه المعدة أربعة أمراض، ثلاثة منها من أمراض الأعضاء المركّبة التي هي الآلات، وواحد من أمراض الأعضاء المتشابهة الأجزاء، و هو مزاج البارد، وأما"الثالثة الأمراض الآلية، فواحد منها كان في مقدار العضو، وهو صغره، والثاني"في خلقه، وهي"استدراك، والثالث في وضعه"، وهو نموه إلى خارج، وأما الإنسان الآخر، فكان عداوه"لا يبرّق من معدّة وبطنه إلى كبده الأكبد، فاستعمل"في الحدس ووقف على أنّ في كبده مرضٍ"، أحدهما في خلقه، وهو ضيق العروق التي فيها، والآخر صغر"مقدارها، أعني"الكلذ نفسها.

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[Chapter 27]\(^{177}\)

[Dissolution of continuity]

(81) Dissolution of continuity can occur in fleshy tissues, nervous tissues, or bony tissues. Those that occur in the fleshy tissues are called “lesions” and need to be treated in four steps—first, to bring together the parts that are separated; second, to protect them after they are brought together; third, to ensure that nothing gets in between those parts, either at the beginning or after a time; and, fourth, to consume a diet whose quality is coarse and viscid and whose quantity is moderate. Those that occur in the nervous organs are called σχίσμα in Greek, which means “break,” and ἄμυγμα, which means “tearing.” Those that occur in the bony organs are called “fractures.” Knitting of the fracture corresponds to the knitting of the flesh in the sense that they both result from the functioning of nature and involve matter existing in the body that is one and the same. However, the knitting of a fracture is different in respect to hardness. That is because the thing by which symphysis occurs in the hard bone comes from the symphysis of the flesh, since it is close to the substance of bone.\(^{178}\) The dissolution of continuity is compounded in three ways: It can occur with one of the causes of diseases, as happens with fractures when there is matter that gets into the fractured tissue. It can occur with one of the diseases, as happens with swellings, concavity,\(^{179}\) and bad temperament. Finally, it can occur with symptoms, such as pus and ichor in the urine.

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\(^{177}\) B 27.1–2, 29.1–31.3; K 1:379, 385–89; G\(^{2}\) 133–34, 142–48.

\(^{178}\) An early MS adds, “And it is called the Ḿ [or ṭ]-sh-b-dh.” It is not clear what is meant by this. One old MS, followed by two late MSS, reads: “The thing by which the bone knits is harder than the knitting of flesh.” It may relate to the appropriate diet for healing a fracture, which is what Galen is discussing.

\(^{179}\) Galen is discussing cases where a fracture cannot be set without leaving a gap.
الفصل الحادي والعشرون

ذكر تفرق الأجزاء

(81) تفرق الأجزاء يحدث إذا في الأعضاء الخمسية، وأما في الأعضاء العضوية، والذي يكون في الأعضاء الخمسية يقال له كريهة، والفرقحة تحتاج إلى مداواتها إلى أربعة أشياء، أحدهم جمع الأجزاء التي تفرق، والثاني حفظها بعد الجمع، الثالث التوقي، من وقوع شيء ما بين تلك الأجزاء في مبدأ الأمر أو بعد زمن، والرابع الغذاء الذي يكون كيسيته غليظة لزجة، ومقداره معتدل، وأما الذي يكون في الأعضاء العضوية، يقال له بالبولانية لسناها، وتفسيره المنع وأوغرها، وتفسيره المبتكر، وأما الذي يكون في الأعضاء العضوية، فيقال له المسكر، والقزاع المسكر ممتنع لا لقظام النوم من طريق أنهما جميع يكونان من فعل الطبيعة ومن المادة الموجودة في البدن التي هي واحدة بينهما. وهو خالف له من جهة الصلابة، وذلك أن الشيء الذي يفرق العظام الصلب من لحم اللمب لا يقرب من جهر العظم. تفرق الأجزاء في لفظ "مركبة" على ثلاثة أوجه: إما مع سبب من أسباب الأعراض المعزولة ما يعرض إذ كفا ولا يمكن تنصب إلى العصب المكسور، وإما مع عرض من الأعراض المعزولة المرء والإيمان وسوء المراج، وإما مع مرض من الأعراض المعزولة بول القمع والسديد.
(82) A poor temperament may be well established and complete. It is cured by what is called a “treatment”—that is, by things whose potency is opposite to it. It may be on the verge of coming to be and then is cured by a treatment compounded with prophylaxis. Finally, it may be tending to come to be and is prevented by what is called “prophylaxis combined with treatment.” In general, this is called “prophylaxis.” When we say “treatment,” we mean, for example, using theriac to alter and destroy the putrefaction in a quartan fever or using a douche of cold water to quench and still the fever’s heat in a tertian fever. When we say “prophylaxis,” it is, for example, using hellebore to evacuate the melancholic humor and using scammony to evacuate the bilious humor in tertian fever, thereby preventing a recurrence. Evacuation may be performed by attraction through an organ located on the opposite side from the diseased organ but that corresponds to it. The matter will thus flow afterwards to the diseased organ. Evacuation may also be effected by transfer and extraction of the superfluity from that same diseased organ or from an organ close to it or that

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181. Some MSS read: “simple treatment.”
الفصل الثامن والعشرون

ذكر المعالجة والتقدم بالحفظ والإغاش

(82) سواء الرجل منه ما قد استحكم وانتهى، وإصلاحه تقال له مداوّة، وتكون بالأشياء الصنادع له في قوته، ومنها ما هو في حذ الكلون، وإصلاحه تقال له مداوّة مركبة مع التقدم بالحفظ، ومنها ما هو "يريد" أن يكون ومع هذا من أن يكون، يقال له الحفظ المركب مع المداوّة، ويقال له بالجملة التقدم بالحفظ، أما قولنا مداوّة، فلندع الفنون واحالتها في حيى النعّ بالتباطع واطفاء "حارة الحنّي وتسکینها في" الغرّ بإسقاء الماء البارد، وأما قولنا التقدم بالحفظ فعلى استفراغ الخلط السوداوي في حيى النعّ بالخليط الأسود واستفراغ الخلط الماربي في حيى الغرّ بالسقونيا بمن بذك من عودة "دو ر"، و والاستفراغ يكون إما على جهة الجذب "من عضو موضعه في خلاف الناحية التي فيها العضو الولّى، وهو مع هذا مشارك له، وذلك عند ما تكون المادّة هوذا تنصب بعد إلى العضو الولّى، وإما على جهة النقل والانتراغ "من نفس العضو الولى أو من عضو

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corresponds to it. That is done when the matter is fixed solidly in the organ and we wish to extract it and evacuate it from the organ. Both these two kinds of evacuation are performed by bloodletting, enemas, diuretics, and sweats.

(83) When a swelling occurs in one of the organs,\textsuperscript{182} the matter causing it is to be evacuated either by its being returned to where it came from or by its being removed from that organ. Returning the matter to where it came from can be done by repelling it, by attracting it, or by sending it away.\textsuperscript{183} Its removal from that same organ is either a removal that can be perceived by the senses, as when the matter that is in a swelling is removed by scarification, or a removal that can be perceived by the mind, such as the dissolution of the contents of the swelling by a hot poultice.

(84) It is possible to deduce the treatment needed for a diseased organ from the position of the organ, its temperament, its structure, or its faculty.\textsuperscript{184} In the case of its position, the treatment is deduced from whether the organ is near to or far from or communicates with the place from which it is possible to evacuate what is in it. In the case of its structure, it is deduced with respect to whether or not it has a cavity.

\textsuperscript{182} Some MSS add: “and remains.”

\textsuperscript{183} One MS has the gloss: “[Galen’s] text says [paraphrasing B 34.4; K 1:395; G\textsuperscript{a} 161], ‘Either by repelling, attracting, or moving.’ He himself explains it in the text and says later [B 34.7; K 1:396; G\textsuperscript{a} 162], ‘If you strengthen the blood vessels by astringent drugs, they will transport that superfluity from the diseased organ to someplace else.’ It may be that the difference between that and expulsion is that expulsion is done by means of the action of the astringent on the matter without the mediacy of the power of the blood vessels. That which is named ‘transporting’ is the action of the astringent by means of the faculty of the blood vessels and their dealing with the matter [of the superfluity].”

\textsuperscript{184} B 34.8–19; K 1:397–400; G\textsuperscript{a} 163–69: Galen is discussing cases where there is more than one cause of the disease.
 قريب منه، وذكرناً، وذلك إذا كانت""، ونستخرجها منه. وهذا النموذج لكي لا يكون

 بإخراج الدم والحقنة والأدوية المدروسة للبول والعرق.

(83) مثلي حدث في عضو من الأعضاء، ورم"". فلا المادة الفاعلة له يستخرج إذا

 بأن يرجع"" إلى ورائها، ونافذ بأن يخرج من نفس العضو العلٍٍم"". ورجع المادة إلى

 وراءها يكون يمنع بأن يدفع"". وإذا كان يذهب"". وإذا يرسل"". وخروجها

 من نفس العضو يكون إما خروجًا يدرك الحسن مثل خروج ما في الورم البشري، وإما

 خروج يدرك"". فالفعل مثل"". تحلل ما في"" الورم بالنهاية المستفيض.

 قد يستدَّل على ما يحتاج إليه في مداوات العضو العلٍٍم من وضع العضو

 ومن مراقبة ومن خلقته ومن قوته. أنا من وضعه فحسب موضعه إن قرَب أَو

 بعيدًا أو يحسب "" مشابكة الموضع"" الذي منه يمكن أن يستخرج ما فيه، ونافذ من

 خلقته فحسب ما هو عليه من أن له تجريب أم "" لا يجريف له. وأنا من قوته فحسب
In the case of its faculty, the treatment is deduced from its condition in itself—whether it is the root or origin from which the faculty penetrates to other organs, such as the liver; or whether its function is general and benefits the entire body, such as the stomach; or whether it is a sense faculty, such as the eye.

(85) Prophylaxis tends to be concerned with the problem of the humors. The humors vary in quantity when they increase and in quality when they are transformed. They can increase in two ways: first, by increasing entirely from a single cause; and, second, by having something generated from them by which the rest of what is there changes and is transformed, thereby increasing in that respect. They can change in quality in three ways: First, they can become more subtle and thus be finer, or they can become coarser. Second, their color can change so that they become yellow, bright red, or the color of fire. Third, their smell can change so that they come to have a bad smell. The humors can be returned to their natural state in one of two ways: by changing and transforming them by coction, or by evacuation. Evacuation is done by enemas, diuretics, and sweats.

(86) Convalescence is divided into three classes; first, the regimen for the bodies of children; second, the regimen for the bodies of old people; and, third, the regimen for the bodies of people convalescing from disease. These all have bodies in which the blood is excellent but deficient in quantity, so that the body is dry and, for that reason, weak. Such
الصناعة الصغيرة الطبيعية

حالة ينفسه هل هو أصل ومعدن تنذر "منه قوة إلى الأعضاء" بميزلة الكبد أو
هل هو يفعل تماماً "يلعف" "البدن كله ميزلة المعدة أوهل هوقوى المس
ميزلة العين.

(85) التقدم "بالحفص من شأنه العناية بأمر الأخلات. والأخلاط تغير
إما في كفها إذا هي تزيدت. وإما في كفتها إذا هي استحالت. وتزيديها يكون على
ضررتين. أحدهما أن يكون "كلها تولد" من سبب واحد. والثاني "أن يكون قد
تولد منها شيء. وبذلك الذي تولد تغير وتحمل سائر ما هناك. فيكتم من هذا
الوجه. وتغيرها في كفتها يكون على ثلاثة أوجه. "أحدها أن "يلطف فيرق". وإنما
فإنها "يلطف. والثاني "أن "يغير لونها. ليصير إما أصغر وإما "أحرر. وثالث
بلون النار. وثالث أن "يغير رائحةها ليصير "ردى الزائحة". ورد الأخلات إلى
الحال الطبيعية يكون أحد. "وجهاني. إما بالغير والإحالة بتحيز وإما بالاستفاغ
والاستفاغ يكون بالحقن وللأدبية المدورة للبول وبالعرق.

(86) الإعشا" "يقسم ثلاثة أقسام. أحدها تدبير أبادان الصبيان. والثاني
تدبير أبادان الشيوخ. والثالث تدبير أبادان النائبين من المرض". وهي الأبدان
التي "لهم فيها جيد إلا أنه يسبر "المقدار" والبدن يابس، فهو لذلك ضعيف.
bodies ought to be treated with foods that are quickly digested and of
moderate temperament, such as the meat of chickens, [other] poultry,
and fish; appropriate drinks such as light, clear, aromatic young wines;
and moderate exercise, such as moderate walking, bathing, and riding.¹⁸⁷

This completes

the Alexandrians’ epitome

of Galen’s book known as

*The Small Art of Medicine*

translated by

Abū Zayd Ḥunayn ibn Isḥāq¹⁸⁸

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¹⁸⁷. Galen concludes with an extended advertisement for some four dozen
of his own books, with advice on the order in which they should be read. Many of
them were mentioned earlier in the text.

¹⁸⁸. The colophons vary in wording, with some adding blessings.
وينبغي أن يصل هذه الأبدان بالآفعة "الزمرة" الناهضة المعتدلة المزاج مثل "قلب" الدجاج" والطريقة والملكة الزرقاء وبالشوب المواقـات مثل الحور" "الطبية الزرقاء" "ال严厉ة التي لم تبق" وبالزينة المعتدلة مثل" المشي المعتدل والماء والزَّكوب.

تمت "جوامع الإسكندرائيين" 
لكب" "ماليوس المعروف" 
بالصناعة الصغيرة "الطبية" 
نقل "إي زيد حسين ابن إسحق" 

١٧٩
The Alexandrian Epitome of Galen's Book
On the Elements
According to the Opinion of Hippocrates
Part two of the epitome of Galen’s books,

In which are *On the Elements*, *On the Temperament*,
*On the Natural Faculties*, and *On Anatomy*,

According to the opinion of the Alexandrians,

Translated by Ḥunayn ibn Ishāq

Ex libris ʿAbd al-Wāḥid ibn Muḥammad, the physician;

Then it passed to Hibat Allāh ibn Haykal, the physician;

[then to] ʿAbd Allāh ibn al-Ḥusayn, the physician;

then to his son Ḥasan ibn ʿAbd Allāh ibn al-Ḥusayn, the physician,

on 14 Ṣafar 547/[21 May 1152];

then it came into the possession of this writer,
the humble Muḥammad,

son of the late Nāṣir al-Dīn ibn ʿAlī ibn Muḥammad
al-Bulyānī al-Shāfiʿī al-Azhari,

in the year 984/[1576]—may his end be good!*

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* Text from the flyleaves and title pages of R.
الجزء الثاني من جوامع كتاب جالينوس
في «الإسطفقات» و«المراجع» و«القوى الطبيعية» و«ال_HERE»
على رأي الإسكندرانيين.
ترجمته حسين بن إسماعيل

من كتاب عبد الواحد بن محمد الطبيب.
ثم صار إلى هيئة الله بن هيكول المتطلب.
عبد الله بن الحسين المتطلب كان.
ثم ولده حسن بن عبد الله بن الحسين الطبيب، وذلك في الرابع عشر من صفر، سنة
سبع وأربعين وخمسة.
ثم هو في نوبة كتابه الفقيه محمد بن المرحوم ناصر الدين بن علي بن محمد الطبيبي الشافعي
الأزهر.
في سنة 984ه، أحسن الله خاتمته.

R١٣٢ | R١
[The eight headings to the epitome of Galen’s On the Elements]¹

If the customary laws are observed, your end and goal will be successfully attained; but if they are discarded in neglect, the end will be thwarted, and after much thought you will come to the opposite of your end. The laws of logic command that each art begin with the investigation of its subject—not with respect to its existence, but, rather, with respect to the questions that follow from what is to be investigated. These are what it is, which thing it is, and why it is.

The subject of this art of ours is the body of man. Our goal is the preservation of health existent in it, or the restoration of health that has been lost from it. Thus, we must first begin with the knowledge of the human body, for without that, we will not have the ability to affect it. Because the human body exists in two states—a natural state and an unnatural state—we must know it in both of the two states, so that we know the natural entities and the unnatural entities that diverge from the natural, in order that we might preserve the natural entity by its like and restore what has become unnatural by means of its opposite. Therefore, it is true to say that our art is divided into four parts: the knowledge of natural things, the knowledge of the unnatural things, the preservation of natural things, and the reversal of unnatural things. Because the knowledge of the natural is prior to the knowledge of the unnatural, it is necessary to begin with it first. You already know that the knowledge of the thing is completed by the knowledge of its causes and first principles. The principles of the body are the four elements, and its genesis from them is generated and completed by their mixture. When the elements are mixed, the four humors result from them; and from these result the tissues; from the tissues, the organs; and from the organs, the complete body. Each of the organs has a faculty, and the faculties have functions. Thus, the one who wishes to know the human body is led back to the necessity of knowing the things that we have enumerated.

1. One of the introductory glosses found before most treatises in S. It is in an unpleasant and not-always-legible, crabbed hand. The convention of introducing a book to students by explaining its “eight heads” apparently originated in late antiquity and was sometimes used by Islamic scholars, particularly in the scientific and philosophical tradition.
الزؤوس الثانية لجواب كاب جانينوس في العناصر

عادة القانون إذا أثبت أنجح وبلغت الغرض والغاية، وإذا أُهمِل وأُجْهَت أحيت وأُكزفت الفكر وتائت إلى خلاف الغاية. والقانون المُنظّم بمرأ أن يُجِب كل صناعة من النظر في موضوعه لا في وجوهه. بل في المطالب المتعلقة بهذا الطلب وهي ما هو وأي شيء هو ولم هو.

وموضوع صناعته هذه هو بدن الإنسان. وغرضنا حفظ صحة موجودة فيه أو رد صحة قد فقدت عنه. فيجب أن نشبع أولاً في العلم بدن الإنسان. فلن دون ذلك لا يكون لنا قدرة على الفعل فيه. ولأن بدن الإنسان وحد على حاين، حال طبيعية وحال خارجية عن الطبيعة. فيجب أن نغمه على حاليه جميعاً. فعلم الأمور الطبيعية والأمور الخارجية عن الطبيعة لمورد الأسرة الطبيعية وبقيه ورد الأمر الخارج عن الطبيعة بعده. ولهذا صدق من قال إن صناعتنا تتسم إلى أربعة أقسام. إلى علم الأشياء الطبيعية وعلم الأشياء الخارجية عن الطبيعة وإلى حفظ الأشياء الطبيعية ورد الأشياء الخارجية عن الطبيعة. ولأن العلم الطبيعي يقدم للعلم الخارج عن الطبيعة وما في نشبع فيه أولاً، وأنت فقد علمك أن العلم بالشيء يتم من العلم بأنسابه ومبادئه الأول. ومبادئ الجسم الإسباسات الأربعة، وكونه منها يكون وليم بالمتراقبة. وإذا امتزجت حدث عنها الأخطاء الأربعة. وهذه يحدث عنها الأعضا المشابهة الأجزاء. وعن المشابهة الآلية. وعن الآلية جملة البدن. ولهك واحد من الأعضاء قوة. وللقوى الأفعال. فتعود الضرورة من أراد علم بدن الإنسان أن يكون العالم بالأشياء التي عزدها.

1. **Our goal in this book.** Out of all the things that we have enumerated, our goal is the investigation of the elements, because the beginning must occur in accordance with how nature begins. Nature is prior, so you take the elements and mix them, and from them you make the humors and the organs. This is also because the discussion of simple things is prior to the discussion of compound things.

2. **The usefulness of this book.** This book includes both theoretical and practical medicine. It includes theoretical medicine since the human body can be perfectly known only by knowing its principles and its principles can be known only by the four elements. The inclusion of the practical is due to the fact that the goal of the practical part of medicine is the preservation of existent health and the restoration of lost health. Health and disease are moderation and lack of moderation, and moderation and lack of moderation both exist only in the temperament of the elements.

3. **Its title.** *The Book of the Elements According to the Opinion of Hippocrates.* The book’s title corresponds to its purpose. We say “according to the opinion of Hippocrates” because Galen follows the opinion of Hippocrates in this, for it was Hippocrates who was the first to make this great discovery concerning natural entities—that is, that there are four elements. In this he is followed by Plato and Aristotle, the greatest of the
وجليسون يعرفون عن الإسطفقات في كاسب ترحيم بـ"الإسطفقات على رأي
بقرط" وفي الراج في كاسب بـ"في الراج" وفي الأخلات في مقالة "في الأخلات"،
وفي آخر "كاسب الإسطفقات" لأن الأخلات أقصى مبادئ البند ولكن قوية،
وفي القوى الطبيعية في كاسب "في القوى الطبيعية" وفي الحيوانية في كاسب "في
النض"، وفي النفسية في كاسب "في آراء بقرط وفلاطن"، وفي الأعضاء في كاسب
في التحقيق، وفي الأفعال ومناقشة في "كاسب منافق الأعضاء".

- فخورنا في هذا الكسب من جملة ما أدناه النظر في الإسطفقات لأن المبدأ
يجب أن يقع من حيث ابتدأت الطبيعة، والطبيعة ابتدأت فأخذت الإسطفقات
فرجها وعملت منها الأخلات والأعضاء ولا أن الكلام في الأشياء البسيطة
يقدم على الكلام في الأشياء المركبة.

- فأذا منظمة هذا الكسب فإنه يشمل قومي الطبي البالي والعلمي، أنا العلمي
ثلاث العلماء الإنسان إنما يتم بعلم مبادئه وبمبادئه الإسطفقات الأربعة،
وأما في العلم فن قيل أن غرض المجزء البالي حفظ صحة موجودة ورد صحة مفقودة،
والصحة والمرض مما اعتاد ولا اعتدال. والاعتاد ولا اعتدال إنما يوجد في
مراجع الإسطفقات.

- فأنا سميته ف"كاسب الإسطفقات على رأي بقرط"، وهذه النقطة
موافقة للفروع، وقولنا على رأي بقرط لا تتبعه في هذا الرأي بقرط. فأول من
وجد هذا الكبير العظيم في الأمور الطبيعية إبترات. أعني أن الإسطفقات أرقى.
philosophers. Some of the elements are remote and some proximate. The remote elements are fire, air, water, and earth, while the proximate elements are the four humors. These encompass all the rest of the compound entities that are beneath the sphere of the moon—though, to be sure, some animals exist that do not have these humors (for example, the worm, though there is something in it performing the same function).2

4. Its rank. You read the Physics before it. After it you read all the physical works, one after another.3 This is because man is included within the subject of the physical books, which include the four elements and the nine temperaments. You then pass on and read Galen’s books On Diseases and Symptoms, The Kinds of Fevers,4 and The Method of Healing.

5. Its being by Galen. Its authorship is obvious from its style, its accuracy, the testimony of the commentators, and its conformity in content to the views of Hippocrates, Plato, and Aristotle.

6. To which of the two parts of the art [of medicine] does it belong. This book belongs to the theoretical part of medicine; and within the theoretical part, to the knowledge of natural things.5

7. Its divisions. It has two parts.6 The first of them discusses the primary elements—that is, fire, air, water, and earth—while in the second it discusses the proximate elements—that is, the humors.

8. The method of the science. It follows the method of combination in that it begins with the elements and proceeds to the humors, but the method of analysis is the opposite, which begins with the humors and ends with the elements.

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2. Worms were not thought to have blood; see p. liii above.
3. Presumably, Aristotle’s Physics, On Generation and Corruption, and On the Heavens, which were part of the Alexandrian curriculum.
5. See p. 3, paragraph 2, of the epitome to The Medical Sects above.
6. In accordance with a Greek tradition of dividing the work into two books; see p. lii above and L 10.1; K 1:492; G 117. The epitome, however, supports the Arabic tradition and some Greek sources in holding that On the Elements consists of one book, not two.
ابنه في ذلك عظماء الفلاسفة. أعني فلسطين وأرسلوطناليس، والإسطعارات
منها بعيدة ومنها قريبة. وال بعيدة النار والهواة والماء والأرض. والقربة الأخلاق
الأربعة. وهذه شالمة لنسائر الأمور المركبة التي تحت تلك القمر. وإن وجود بعض
الحيوان ليس في هذه الأخلاق كالأدوار فهي ما تتوب منها.

د- فأمامه، فإن يقرأ قبل العلم الطبيعي، ومن بعده يجب أن يقرأ الكتب الظبية
بأمرها واحداً واحداً. هذا أن أخذ الإبلان بف징ة الكتب الظبية وهو
الإسطعارات أربعة. والأمرزة تشهوة. وتنقل فقرأ: "كاب العلل والإعراض"
و"فصوص الحميات" و"حيلة البر".

ه- وأما أنه جايبين، فظاهر من فط كلاهما وصحة معايدي وشهادة المفسرين
له ولاتباعه فيها آراء بقراط وأفلاطون وأرسلوطناليس.

و- فأما إلى أي قسم الصناعةرفتة. فإلى الجزء النظرى ومن جملة الجزء النظرى
إلى علم الأشياء الظبية.

ز- وأقسمه جرّان في الأند منهج ينكّم في الإسطعارات الأول. أعني النار
والهواء والماء والأرض (ح). و في الثاني ينكّم في الإسطعارات القرية. أعني
الأخلاق.

[ح] - و نحو اللفظ، وذلك أنه يسلك فيه طريق التركيب. وهذا بأن يبتدا من
الإسطعارات وتأتي إلى الأخلاق و نحو التليل بالعكس، وذلك إذا يبتدا من
الأخلاق وانتهى إلى الإسطعارات...
(1) There are three genera of elements. The remote elements—those common to all composite corporeal bodies whatsoever—are fire, air, water, and earth. The proximate elements, those specific to the living bodies of animals that have blood, are the four humors—that is, blood, phlegm, yellow bile, and black bile. The most proximate of
الله أنتigation
جوامع كتاب جالينوس
في العناصر على رأي إبّن إبّرِاط
ترجمة حنين بن إسحاق
الفصل الأول
أجناس العناصر
أجناس العناصر firstly. فنها عنصر بعيدة تم الأجسام المركبة كلهما.
وهي النار والهواء والماء والأرض، ومنها قيّة تخص أبناء الحيوان الذي له دم.

١٣٥
elements are the organs specific to each individual species of animal—that is, the tissues such as fat, flesh, horn, teeth, marrow, and nail.

(2) The element is a single, simple part of the thing of which it is an element. The thing can be single and simple in two ways: either to the senses or in nature. The things that are simple and single to the senses are of the order of nerve and bone; but though they may be simple and single to the senses, in their nature they are composed of fire, air, water, and earth. That which is simple in nature—that is, what is truly simple—is of the order of fire, air, water, and earth; for our knowledge that they are elements is not sensible knowledge, but rational knowledge.

8. The title and ascription of authorship vary considerably in the manuscripts. The main variations are (1) the omission in some MSS of “According to the Opinion of Hippocrates”; (2) the addition of “by the Alexandrians” at one point or another; (3) additions to Ḥunayn’s name of “Abī Zayd,” “al-ʿIbādī,” and “al-Ḥīrī”; and (4) the addition of pious formulae.

9. L 1.1; K 1:413; Ga 9: An introduction to On the Elements 1 and, by extension, Hippocrates, De natura hominis (On the nature of man) 1–2. In this chapter, Galen defines “element” but neglects to give the specific senses in which “element” can be used in medicine. The explanation is necessary because “element” originally meant the indivisible part or fundamental principle of something; but, by Alexandrian times, students would certainly have thought mainly of the four elements. In medicine, the term would be used of either the four elements or the four humors. The epitomes characteristically present the accepted view in the form of a list, as is done here.

10. Ajsām. Galen’s text uses two words that can be translated as “body”: σῶμα, jism, “corporeal body”; and badan, “animal or human body,” depending on the context. Where the context makes the meaning clear—which it usually does—I simply use “body.” The text systematically maintains this distinction between material and living bodies.

11. One MS reads “blood vessels.”

12. L 1.1–9; K 1:413–14; Ga 11–12: The chapter in On the Elements begins with the less precise definition, “An element is the smallest part of that of which it is an element,” and then uses the example of a mixture of finely ground powders to argue that reason, not the senses, must be used to determine what the elements of something actually are and that the true element is the simplest part by nature, not by sense. One MS adds: “which is to say, the stoicheion.”

A gloss in one MS reads: “Aristotle defines the element as the first thing from which the composite is compounded, which exists in it potentially, not actually, and whose increase in it is potential in the sense that the element from which our bodies are compounded are compounded not by way of combination, but by way of temperament. Therefore, their forms are not preserved and are existent
الأخلاق الأربعة: أعني الدم واللبم والرئة الصفراء والرئة السوداء. ومنها أقرب ما يكون. وهي الأعضاء التي بذل كل نوع من أنواع الحيوان شخصية منها بشيء. أعني الأعضاء المتشابهة الأجزاء بمنزلة الجسم المطلق واللقاون والآيات والذلاك.

(2) والنصر: هوجز مفرد بسيط للأشياء الذي هو عنصره، والشيء المفرد البسيط على وجهين، أحدهما عنصر، والآخر عنصر البسيطة. البسيطة المفردة عند الحس منزلة العصبة والعظم. فإن هذه وإن كانت عن الحس بسيطة مفردة إلا أنها في طبيعتها مركبة من النار والهواء والماء والأرض. وإذاً البسيطة المفردة عاجزة البسيطة، وهو البسيطة الحس، فهؤلاء منزلة النار والهواء والماء والأرض لأن هذه ليست عـامـاً، لأنها عناصرعلم حسناً بل علم عقلي.
(3) People disagreed in their views about the elements. Some said that there was one element and others that there were more than one. Some of those who said that there was one element said that it did not move, while the others said that it did move. Some of those who said that it did not move said that it was finite, as was the view of Parmenides, while others said that it was infinite, as was the view of Melissus. Some of those who said that it moved said that the one element was water. Among them were Thales and Hippon. Others said that it was air, as was the view of Anaximenes and Diogenes [of Apollonia]. Still others said that it was fire, as was the view of Heraclitus and Hippasus. Finally, there were those who said that it was earth, among whom was Xenophanes. Some of those who said that there was more than one element held that they were finite in number, while others held that they were infinite in number. Of those who thought that they were finite in

potentially, not existent actually.” Cf. Aristotle, On the Heavens, 3.3 302a15–17: “An element . . . is a body into which other bodies may be analyzed, present in them potentially or in actuality (which of these, is still disputable), and not itself divisible into bodies different in form.”

Another gloss in that MS reads: “A skeptic has objected, ‘How can they say with respect to the element that so long as it is pure—even though it is just fire, earth, or air—we do not apprehend the element by sensation?’ We do not say that the element is this fire, water, earth, and air that we do apprehend by the senses. In this respect the element is analogous to what it is an element of.”

13. L 2.1–8; K 1:415–16; G* 12–15: Galen, commenting on Hippocrates, On the Nature of Man 1, alludes to disagreement about the number and nature of the elements and, like Hippocrates, does not list the different opinions. The names were mostly unfamiliar to the scribes of the Islamic period, so there are many errors. This section refers to several passages in On the Elements, but it is mainly based on Aristotle, Physics 1.2; cf. Galen’s citation of Physics 1 at L 4.21; K 1:448; G* 61.

14. Ghayr mutaḥarrik (unmoving) and mutaḥarrik (moving) render ἀκίνητος and κινούμενον, which, in philosophical usage, refer both to motion and to change in general.

15. L 4.16–5.6; K 1.447–49; G* 59–62; Hippocrates, On the Nature of Man 1. Parmenides of Elea, fl. ca. 475 BCE, held an extreme form of monism in which reality was one, unchanging, and finite. Melissus of Samos followed Parmenides but held that being was infinite. Aristotle was contemptuous of him (see Physics 1.3, 185a10, φορτικόν [vulgar]); and Hippocrates, Aristotle, and Galen all

16. See the following page.
الفصل الثاني

"اختلافهم في المناصرة"

(3) وقد، اختلف الناس في الكلام في المناصرة، فهؤلاء من قال إن المنصر واحد، ومثلك منهم من قال إن المنصر أكثر من واحد، والذين قالوا إن المنصر واحد منهم، من قال إن المنصرة "تحرك". ومنهم من قال إن المنصرة من قائل إلهية من قائل إلهياً "تحرك". والذين قالوا إنه غير متحرك، منهم من قال إن منتهياً بمنزلة قول بارامانيدس. ومنهم من قال إنه غير منتهي بمنزلة قول مالمسن، وأما الذين قالوا إنه "تحرك" فهؤلاء من قال إن هذا المنصر الواحد. أما الماء، ومثلك قال ذلك組ئاس واينت، ومنهم من قال إنه التار، ومثلك قال ذلك ابراقليطس، وياياسس، ومنهم من قال إنه الأرض، ومثلك قال ذلك كابوفانس. فأما الذين قالوا إن المناصرة منتهية، فهؤلاء من قال إنها منتهية العدد، ومنهم من قال إنه لا نهاية لعددها والذين قالوا إنها منتهية العدد منهم.
number, some held that there were two elements, some that there were three, and some that there were four. Among those who said that there were two elements was Empedocles. Though he claimed that there were six elements, he also said that two of them, strife and love, were principles and therefore not elements, while, of the four remaining, one of them was hot and the other three were cold. Therefore, we must combine the four elements, resulting in two. One of those who held that there are three elements was Ion of Chios, who claimed that the elements were earth, water, and fire. Among those who claimed that there were four elements was Hippocrates. He held that the elements were fire, air, water, and earth. Some of those who said that the elements were infinite in number held that they were homoeomerous bodies, as was the view of Anaxagoras, while others held that they were indivisible bodies.

Assumed that if a theory could be reduced to that of Melissus, it was self-evidently absurd. The objection given by Aristotle and Galen was that denying change made physics—and, by extension, its subfield of medicine—moot, since the subject of physics is change, generation, and corruption. On the Greek philosophers mentioned here and below, see appendix 1, pp. 187–202.

16. L 4.6–8, K 1:444, G 54–55: Those named were Ionian physicists of the sixth and fifth centuries BCE, all of whom held—or were alleged to have held—that one of the four material elements was primal and the rest were derived from it. The doxographers, needing an Ionian champion of earth as the primal element, assigned the role to Xenophanes; cf. DK 21A32–33, 36; 21B27–28; Actius, [Pseudo-Plutarch], Actius Arabus, 3.11. Better authorities—such as Sextus Empiricus, Simplicius, and Galen—said that he held that the first elements were earth and water; see KR, 176–77; Galen, History of Philosophy 5, K 19:243. Some manuscripts read “Parmenides” for “Xenophanes.” Galen mentions only Thales, Anaximenes, and Heraclitus here.

17. Literally, “roots and heads,” perhaps rendering the “roots” ῥιζώματα of Empedocles; cf. DK 31B6; KR, 323, no. 417, or the “real first principles” (τὰς κυριῶς ἀρχὰς) mentioned by Simplicius; DK 31A28; KR, 329–30, no. 426; see n. 19 below.

18. Some MSS add: “and that is fire.”

19. Empedocles said that the four elements of earth, air, fire, and water were activated by love and strife. He thought that the four material elements were unchanging, being subject only to combination and separation, for which he is criticized below. Three marginal notes in one MS explain that it is the function of love and strife to combine and separate, making them the active causes,

20–21. See the following page.
من قال إنها أثنيان. ومنهم من قال إنها تثلثة. ومنهم من قال إنها أربعة. والذين قالوا إنها أثنيان. منهم إيميدلفس ؛ فإنا هذا. وإن كان يزعم المناصر "ستة. فإنه يقول إن اثنيان منها إبداً. هي. أما أصول ورؤوس وليست بعناصر. أعني الغابة. والخبرة. ويتقلل في الأربعة الباقية إن واحداً. منها. حار وثلثة باردة. فهي من ذلك أن يكون بجمع العناصر أربعة وتحصلها. في اثنيان. وأما الذين قالوا إنها ثلثة. فهم إيون المنسوب إلى كيورس. فإن هذا زعم أن المناصر. هي الأرض والثلاجة. والثلاجة. وأما الذين قالوا إنا أربعة. فهم إياكروس. فإن هذا قال إن المناصر. هي التار والهواء والثلاجة والأرض. وأما الذين قالوا إن العناصر غير متناهية العدد. فهم من قال إنها أجسام لا تجري. ومن هؤلاء. إياكروس. وهو يزعم أنها لا تتقطع. ولا تنقسم. ومنهم أسقليبا ذس. وهو يزعم أنها لا تتحمل ولا تقتسم. ومنهم لوقيفس. وهو يزعم أنها أجسام ليس لها أجزاء...
On the Elements

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<The difference between the element and the principle>^22

(4) The difference between the element and the principle—which is to say, the source—is that the element is one of the simple parts of the thing of which it is an element. Thus, the element must necessarily be potentially existent in that of which it is an element, while the principle—which is to say, the source or the basis—need not necessarily be existent in that of which it is a principle. Thus, smoke is not existent in the wood, and the principle is necessarily not a part of that of which it is a principle, even though the stability and continuance of the thing may depend on the principle. This is the case with prime matter and form, for they are not two parts of the body, since they are not a body and it would be false and absurd to claim that what is not a body is part of a body.

<The principles of things>^23

(5) Some of those who talked about the principles and sources of things said that there was one principle, while others said that they were multiple. Some of those who held that there was one principle said that it was one in species, as was the view of Democritus and Leucippus. Others held that it was numerically one, as Parmenides and Melissus said. Some of those who said that the principles were multiple claimed that there were two: God, may He be blessed and exalted, and prime while the other four are passive. Both Aristotle (Physics 1.5, 188b34) and Simplicius (DK 31A28; KR, 329–30, no. 426) said that Empedocles actually posited two elements, but they are both referring to love and strife.

20. On Ion’s three elements, see Philoponus, On Generation and Corruption 227.14, though at 207.19–20 he seems to give fire, earth, and air; DK 36A6, 36B1.

21. These were Atomists of various sorts. Anaxagoras held an eccentric theory of “homoeomerous seeds,” in which all substances originally existed in scattered particles that Mind collected to make things of varying kinds. Leucippus and Democritus developed the classical atomic theory, in which they were followed by Epicurus. Asclepiades, a founder of Methodism, held a corpuscular theory of matter and was cordially detested by Galen.

22. Cf. L 6.39; K 1.470; G+ 39: “For element [στοιχεῖον; ı̇staqis] differs from first principle [ἄρχη, mabda’] in this, that first principles are not necessarily homogeneous with the things whose first principles they are, but elements are entirely homogenous.” The comment occurs in a passage where Galen criticizes Athenaeus for not understanding the distinction between the two. The difference 23–25. See the following page.
"الفرق بين العنصر والرأس" 

(6) الفرق بين العنصر والرأس الذي هو الأصل أن العنصر جزء بسيط من أجزاء الشيء الذي هو عنصره، والعنصر لا حالة موجودة فيهما هو عنصره بالقوة، والرأس. أعني الأصل والليدة. ليس يجب أن يكون لا حالة موجودة في الشيء الذي هو رأسه. من ذلك أن البخار ليس هو موجود في الحشب، والرأس لا حالة ليس هو جزء من الجسم، إن ذلك منكر شرعًا.

"رؤوس الأشياء" 

(5) الذين تكلموا في رؤوس الأشياء وأصولهم منهم من قال إنرأس واحد، ومنهم من قال إنها كثيرة، والذين قالوا إن الرأس واحد منهم من قال إنه واحد في النفع على ما قال ديقمةينوس وقوامه، ومنهم من قال إنه واحد في العدد على ما قال إيراستوس وكلاهما، فأما الذين قالوا إن الرؤوس كثيرة، فإنهم من قال إنها اثنان، الله بارك وتمالك والهيوله، ومنهم من قال إنها ثالثة،
matter. Others of them said that there were three principles: form, prime matter, and nonbeing— which was what Socrates said. Some of them said that there were four: God, form, matter, and nonbeing— which was what Aristotle said. Some said that there were six principles: the four elements, strife, and love— which was what Empedocles said. Some said that there were ten principles, which was the view of the Pythagoreans. Some of those who, like Democritus, held that the elements were multiple believed that they were numerically multiple. Those who held this theory claimed that the bodies generated from these elements became different only by virtue of the differing shapes, positions, and oppositions of these elements; for these indivisible elements differed in that some of them were round and some oblong in shape, some erect and some horizontal in position, and some prior and some posterior in their oppositions. Others held that they were multiple in species, as was the view of Hippocrates. Those who held this view said that the differences among bodies compounded from these elements were due to different temperaments of these elements. According to Epicurus’s theory, the diseases that occur in the tissues are of two kinds: one that is condensation and the other that is rarefaction.

is that elements are constituents of physical reality, while principles are their ultimate causes of whatever sort. See, in general, Aristotle, *Metaphysics* 1.4 and *Physics* 1.1. In the latter, Ishāq ibn Hunayn translates ἀρχαὶ ἢ αἰτία ἢ στοιχεῖον (principles, causes, and elements) as al-mabādiʾ aw al-asbāb aw al-istaqisāt.


24. Helmreich’s edition of Galen’s text mentions only Leucippus here. De Lacy in L reads “Diodorus and Leucippus” on the strength of Sālim’s edition of the Arabic translation, concluding that it refers to Diodorus Cronus, also an Atomist. However, the one MS that I am able to consult of the Arabic *On the Elements*, Aya Sofya 3593, f. 2a13, clearly reads “Democritus and Leucippus,” as do the parallel passages in Aristotle’s *Metaphysics* and this epitome.

25. Some MSS add: “such as the Stoics.”

26. S alone reads “number,” with an interlinear correction to wa-al-ʿadam (and nonbeing), the reading supported by the other manuscripts. *Aetius Arabus* 1.3.21 says that Socrates (and Plato: 1.7.31) believed in three principles: God, the element, and the form. Possibly the text refers to the Platonic doctrine of three classes of entities: the Ideas, the mathematical, and the material objects; cf. Aristotle, *Metaphysics* 1.6, 987b15–18. If, however, “nonbeing” is correct, it must refer to Becoming (γέννησις).
في المناصر

النوع والهيئة والعدد: "على ما قال سوقراطيس", ومنهم من قال إنها أربعة، الله
بارك وتعالى والنوع والهيئة والعدد. على ما قال أرسطو طليس", ومنهم من
قال إنها ستة. الأربعة المناصر والغلبة والحبة. على ما قال إيبتاغو روس". الذين قلوا إن المناصرات
منهم من قال إنها كثيرة في المولد بحلقة قول ديمقرطيس", وزعم أهل هذا القول " أن الأسس المكونة" من هذه المناصر إنها صارت مختلفة من قبل اختلاف
هذه المناصر في أشكالها ووضعها وتضاها. أما في الشكل فإن هذه المناصر
التي لا تقرر تختلف لأن بعضها مدور وبعضها مطاول. وأما في الوحد فلان بعضها
منصب وبعضها مطروح", وأما في التضداد فلان بعضها متقدم وبعضها متأخر،
ومنهم من قال إنها كثيرة في المولد بحلقة قول إيبتاغو روس"، وأهل هذا القول يقولون
إن اختلاف الأسس التي هي مؤلفة من هذه المناصر إنها جاء من قبل اختلاف
مئات المناصر. الأعراض الحادة في الأعضاء المشابهة الأجزاء على رأي
إيبتاغو روس" ضرباء", أحدثها الكافئون والآخرين مطلق.

: A: FRU 84 | S: RS 83 | M: أرسطو طليس | S: D 86 | DMY: إيبتاغو روس
: سوقراطيس: | DMSY: إيمبوليس
: إيبتاغو روس: | ADFSY 88
: DMSY 93
: DMSY
(6) Some of those who said that the elements were more than one said that they could neither sense nor suffer. This was the view of Democritus. Others said that they could both sense and suffer, as Asclepiades held. Some, such as Anaxagoras, held that they could not suffer, but they could have sensation. Finally, there were those, such as Hippocrates, who held that, while they could suffer, they could not have sensation. “To suffer” here means the reception of influences. If suffering, sensation, not suffering, and lack of sensation are each matched with the other three, each pair will produce a combination, some of which are compatible and others not, in this pattern:

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27. L 2.18–3.8, K 1.419–28; G a 18–29: The context is a discussion of whether a body can have sensation and sentence if its elements do not. It is unfortunate that the translator renders πάσχω (to suffer) by the verb alima (to feel pain) and its derivatives, which are thus confusingly used here in the philosophical sense of “to be affected,” rather than in the medical and ordinary sense of “to suffer” something unpleasant. Toward the end of this paragraph of the epitome, the translator feels obliged to explain that the verb alima is not used in its usual sense of “to feel pain.” The original passage from Hippocrates that Galen is quoting does say ἀλγεῖν (to suffer pain), but Galen switches to using πάσχειν (to suffer, in both senses) a few lines later.
الفصل الثالث

اختلافهم في أن للمعانصرسن ولأم

(٦) الذين: قلوا إن المناصبيرة منهم من قال إنها لا تعص ولا تأم بمجزة قول ديمقراطس. ومنهم من قال إنها تعص وتأم بمجزة قول أنكاساغورس. ومنهم من قال إنها لا تعص لكنها تأم بمجزة قول إبقراطس. ومعنًى: الأمل هنا قول الأحداث. وإذا جمع كل واحد من الألما والحس ومن الألما وعدم الحس مع كل واحد من الثلاثة الآخرين، ترك من كل اثنين منهما تركيا. وبعض هذه التركيات يتأم ومنها لا يتأم على هذا المثال:

عناصر عديمة الحس لا تتأم عناصر حساسة

عناصر لا تقبل الأحداث لا تتأم عناصر تقبل الأحداث

| R | AU ٩٥ | والذين: AU ٩٦ | . . . بالمل تعص وتأم |
| R | : ديمقراطس |
| R | : أنقلساغورس |
| R | : ديمقراطس |

| M | RU ٩٨ | حاشية له: لا تعص ولا تتأم |
| R | : ديمقراطس |
| R | : أنكاساغورس |
| R | : إبقراطس |

| S | FY ١٠٤ | MI: ركساغورس |
| S | : أنكاساغورس |
| S | : إبقراطس |
| R | : ديمقراطس |

| A | MS ١٠٣ | AU ١٠٣ | من الأجزاء |
| A | : F |
| A | : RU ١٠٥ | من الأجزاء |
| R | : RU ١٠٥ | من الأجزاء |
| S | : AU ١١١ | إبقراط |
| R | : ديمقراطس |
| F | : أنكاساغورس |
| S | : RU ١٠٩ | إبقراط |
(7) Some of those who insisted that the elements had no parts said that they were indivisible due to their hardness, and some said that they were indivisible due to their small size. The one who held that they were indivisible due to their hardness was forced to two unacceptable absurdities. First, they have qualities and accept effects. That is because, if they have hardness, they must also have softness, and softness is something that implies ease of accepting effects. Moreover, hardness is itself a quality resulting from coldness or dryness. The second conclusion is that, if the cause of its resistance to accepting effects is its hardness, then what is it about them that makes them small rather than large? On the other hand, the one who says that the elements are indivisible because they are small is compelled to admit that, though these elements might be actually indivisible, they are nonetheless potentially divisible, since their nature is such as to accept division and distinction of parts, though their smallness prevents it.

<The occurrence of pain>29

(8) The occurrence of pain requires two things: first, to receive what it suffers and, second, to sense the suffering that occurs in it. Receptivity to what it suffers is required because, if a creature possessing sensation does not suffer, it will neither sense nor acquire pain. Sensation of what it suffers is required because, if that which suffers has no sensation of it, it will not experience pain from what it suffers.

<Compounds>30

(9) Some things that are compounded with each other are only compounded by contiguity and contact, as is the case of the things from which a house is built or the cases in which seeds are mixed. When

28. L 2.17; K 1:418–19; G* 17: Explaining that according to the Atomists, the qualities of the atoms do not change.
29. L 2.18–21; K 1:419–20; G* 18–19: Cf. Hippocrates, On the Nature of Man 2.10: “... but I hold that if man were a unity, he would never suffer pain.”
30. L 3.8–18; K 1:428–31; G* 29–33: Galen is explaining how a compound in which the parts retain their individual qualities differs from a true temperament, in which new qualities occur. The examples of compounds that he gives are the construction of a house and the mixing of different kinds of seeds in a basket. This occurs in the course of his argument that the Atomists cannot give a satisfactory account of living bodies, since the atoms are neither sentient nor able to be affected.
31. Some MSS read “powder” for “seeds,” following L 1.2–3; K 1:413–14; G*
الذين أوجبا عناصر لا أجزاء "، لذا منهم من قال إنها لا تجزأ لصلاةها، ومهما من قال إنها لا تجزأ لصغرها. ويلزم من قال إنها لا تجزأ لصلايتها أماران منكمان شنمان. أخذهما أشدّا "كون مكيفة " قابلة للأحداث، وذلك " أن إن كانت لها صلابة، فلها أيضاً لين، والليل الشيء، يوجب سهولة قبول الأحداث مع أن الصلاة نفسها هي أيضاً " مكيفة تابعة للبرودة أو البيوضة "، والأمر الآخر أنه إن كان إما السبب في بعدها عن قبول الأحداث صلابتها، فإن صارت على ما يقوله " به من أمرها يكون صفاراً ولا تكون سبباً؟ وأما من قال إنها لا تجزأ لصغرها فليرفع أن يكون هذه العناصر، وإن كانت لا تجزأ بالفعل، فهي تجزأ بالقوة لأن طبعها من شأنه أن يقبل القوة والفرصة. لكن صغيرة بمنع من ذلك.

\(" حدوث الوجع\)

(7) حدوث الوجع يحتاج فيه إلى أمرين، أحدهما تبول الألم والآخر أن يمسح ما يتلله من الألم، أما تبول الألم فلأن ما له حس في هو " لم يأكل لم يمسح ولم يبتاع، وأما حس الألم فلأن الذي يأكل إن لم يكن له حس لم يوجهه ذلك الألم.

\(" ترتيب الأشياء\)

(8) الأشياء التي ترتيب بعضها مع بعض منها ما يكون ترتيبها على طريق الجو ورية والملامسة فقط بمنزلة الأشياء التي يبني بها بيتهم والأشياء التي تخلط منها"
things are compounded in this way, the whole of the compound thing contains nothing save that which is already contained in the simple parts from which it was compounded. Other things are compounded by way of composition and the tempering of one with the other, as is the case with vinegar and honey, which are compounded to form oxymel. If something is compounded in this way, something else results from combining its parts that it did not have while the parts were still simple, before they were combined. According to those who hold that the elements are numerically many—that is, the followers of Democritus—bodies can be compound only by way of contiguity, since these elements do not have an effect in each other, nor are they affected by each other in such a way that a temperament could result from them. Therefore, it is impossible for the adherents of this view to hold that they can generate bodies that are able to be affected and have sensation by compounding elements that neither have sensation nor accept changes. However, according to the view of those who hold that elements are of more than one species—that is, the followers of Hippocrates—bodies are compound in their theory only in the sense of temperament, because they say that these elements are able to be affected. Therefore, even though they say that the elements do not have sensation, they are able to deduce that bodies capable of sensation are generated from this temperament.

10–11, which gives the example of a mixture of four substances ground to a fine powder. If the reading “seeds” is correct, it comes from L 3.18, which criticizes the Atomists by comparing their theory of compounds to mixing different kinds of grain. In either case, the point is that the mixture would appear homogeneous to the eye, but its parts would nonetheless still be distinct substances unaffected by their being mixed together—unlike a true compound, in which a new substance comes into being. A gloss in one of the manuscripts reads, “That is, like a basket. For example, kinds of seed are mixed so that they are completely blended, even if that thing has a specific arrangement, such as a building—or, indeed, has no order at all. Galen’s text [i.e., L 3.18, K.1.431] reads, ‘Those who hold that this happens [i.e., that a body becomes alive] with [the parts] remaining as they were except for being mixed together—like wheat, barley, chickpeas, and beans in a heap—are making an absurd claim.’” Another gloss gives a shorter version and mentions that Galen’s text refers to a “heap” of mixed seeds instead of a basket.
في العناصر

الإذور والرفاه، وما كان تركيزه على هذه الجهة فليس يكون لثأر المركب شيء ليس له بالأجزاء الصغيرة البسيطة التي منها تركيز، ومنها ما يكون تركيزه على طريق الطائرة والميزة ببعض من صلب المخل والعمل للذين تركزاً منها السكينين. وما كان تركيزه على هذا الوجه فقد يذلون من الأجزاء إذا ركز شيء آخر لم يكن لها في وقت ما كانت بسيطة قبل أن تتركز. وكون الأجسام المركبة بحسب رأي القوم الذين يخللون عنصر كثرة المعد، أعني أصحاب ديمقراطس، إنما يكون على جهة الجوهر إذا كانت هذه العناصر لا يفعل بعضها من بعض ليكون منها مراجاً، ولذلك ليس يمكن أن هذا الرأي أن ينتجوا، وويلد وام تركيز عناصر لا تحل ولا تكون الأحداث أجساماً قابلاً للأحداث حنانية. فأما بحسب رأي القوم الذين يخللون عنصر كثرة في النوع، أعني أصحاب إبراط، إنما يكون الأجسام المركبة عندهم على جهة المراج لأنهم يقولون إن هذه العناصر قبل الأحداث، ولذلك قد يكونهم وإن كانوا يقولون إن العناصر لا يحسن أن ينخوجوا، وويلد وام من مراجها أجساماً متحمس.

١٣٢
<The tools of inference>\(^{32}\)

(10) There are two devices and tools by which the knowledge of entities is acquired. One of them is inference and the other experience. The fact that the elements are not of a single species, as Democritus thought, may be known both by inference and by experience. It may be known by inference through the argument of Hippocrates when he says that if man were unitary, he would not feel pain; but since we find that he does feel pain, he is therefore not unitary—that is, he is not compounded from a single element. This is because whatever is subject to pain must necessarily change, and that which changes can only do so by moving and changing from one thing to another. It can also be shown by experience, for when we prick our body with a pin, it gives it pain. If Democritus were to say that that pin had merely entered the void between the atoms, then surely no pain would occur when the pin entered it, for the void and the space that are between these parts are nothing. If he were to say that the pin enters the atoms themselves, then that which he had posited to be indivisible would have been divided and that which he had posited as unable to be affected would be affected, just as Hippocrates had deduced when he said that the occurrence of pain implies that the element is not unitary. We can draw the very

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32. L 2.9–43, 3.23–30; K 1:416–24, 432–34; G* 15–24, 33–41; Hippocrates, *On the Nature of Man* 2: This passage summarizes and clarifies a passage where Galen argues against the Atomists on the grounds that they cannot explain the experience of pain. He first argues on the basis of reason; then he stops and points out that arguments can be made on the basis of both experience (ἔμπειρία, *tajribah*) and reason (λόγος, *qiyyās*).
الآلات الاستخراج

(١٠) الأدوات والآلات التي بها يستخرج معرفة الأمور اثنتان، أ، أخذها القياس والآخر التجربة. وقد يتُعلم أن العنصر ليس هو الواحد في النوع على ما ظن ديمقراط، من القياس ومن التجربة. أما من القياس فإن قول إبراط

في الحالات، الوالد المبتدأ. فإن قال ديمقراط: إن تلك الإبرة إما دخلت في الحالات، الذي بين الأجزاء التي لا تتجزأ. فقد كان ينبغي أن لا يحدث بدخلاً
وجماً، لأن الحال والفضاء الذي، فيما بين هذه الأجزاء ليس هو. شياً. وإن قال إن الإبرة دخلت في نفس الأجزاء التي لا تتجزأ. فقد تجرأت التي هي عنده غير مبركة وقبلت؛ الأحداث التي هي عند غير قابلة للأحداث. كما أربع إبراط في حدوت الوالد أن العنصر ليس بواحد. كذلك قد يمكنا أن نتجر من جميع التغييرات

| DR: AUY ١٤٣ | ADMSY ١٤١ | SY: إثنان | R: ١٤٠ |
| DMR: SY ١٤٦ | DMY: القياسات | M: ديمقراط | AFY ١٤٤ |
| DMY: القياسات | AFY ١٤٥ | DF: مركب | ١٥٠ |
| FM: واحد | S: ١٤٨ | A: ميتاً ومتقلب | ١٥١ |
| MR: ديمقراط | AFU ١٥٢ | DF: ديمقراط | ١٥٣ |
| MR: ديمقراط | AFU ١٥٢ | MR: ديمقراط | DFSUY ١٥٨ |
| A: R: ١٥٥ | D: ١٥٤ | DMSUY ١٥٣ | DFSUY ١٥٨ |
| DSU: ١٥٣ | SQ: ١٥٤ | A: وفقه | من |
| MSU: ١٥٩ | FM: ١٥٢ | R: ١٥٤ | DFSUY ١٥٨ |
| FM: ١٥٢ | MR: ديمقراط | DFSUY ١٥٨ | A: وفقه | من |
| SY: إثنان | R: ١٤٠ | MR: ديمقراط | DFSUY ١٥٨ | A: وفقه | من |
same inference from all other alterations. By other alterations I mean pleasure and grief, heat and coldness, and the other species. The argument is that, if man were compounded from a single element, he would experience neither pleasure nor grief, heat nor coldness, nor would any other changes affect him, since there could not be something that could hurt him—nor could that thing both be painful in itself and accept any of these effects [such as pain, pleasure, or grief], since it would be active and passive in a single respect in the same way.

*The refutation of the others’ arguments*\(^{33}\)

(11) The refutation of Democritus’s argument serves also to refute the views of the rest of those who claim that the elements are unchangeable, such as Empedocles and Anaxagoras, for Empedocles also held that the elements were unchangeable and unalterable and claimed that composite bodies resulted only from their being compounded by way of contiguity, not by way of temperament. Anaxagoras claimed that the elements were indivisible atoms, that they were unchangeable, and that generation and corruption resulted only from their combination and separation. Empedocles and Anaxagoras were actually in agreement in that they both held that the elements were unchangeable and that the composite bodies were generated and corrupted only by the

\(^{33}\) L 9.11; K 1:483–84; G* 105–6: Their views are being contrasted to Hippocrates’s belief in the transmutation of elements; cf. Aristotle, *Physics* 1.4, 187a21–187b8, and 3.4, 203a16–203b2, where he talks about their view that substantial change is blending (μίξις) rather than temperament (κρᾶσις), as the Hippocratics and Galen would have it; cf. pp. 147–58, paragraph 13 and n. 37, below.
في العناصر

الآخر. هذه النتيجة بعينها. أعنى بالتغييرات الإخّر لللذة والمم والحرارة والبرودة وسائر الأنواع الأخرى. وذكر أن لو كان الإنسان مربكاً من عنصر واحد لكان لا يدعّ، ولا يتمّ، ولا يتحاول، ولا ينال شيء. لذا، فإن الأحداث الأخرى، إذ كان ليس هناك شيء يتحاول ولا يمكن أن يكون النتيجة هو الدليل لنفسه والقابل للفعل منها حتى يكون هو الفاعل والمنفعل من جهة واحدة بعينه.

«انساخ أقوالهم»

(11) وبانساخ قول ديمقراطيس: "قد انتفعت أقوال سائر من زمن" وأن العناصر تقل الأحداث بمنعّة إما ذلّيس، وأكمسا غورس. فإن إما ذلّيس سخّط أيضاً: "أن العناصر تقل الأحداث، ولا يتعثر، وربما أن الأجسام المركبة إنما تكون من العناصر ترتيباً على طريق المرايا لا على طريق المرايا. وأكمسا غورس يعترض أن العناصر أجزاء لا تتزامن وأنها غير قابلة لأحداث وأن الكون والفساد إنما يكون بهما تجاعهما وترفقهما، وإما ذلّيس، وأكمسا غورس يشتركان ويتفقان في أنهما جميعاً تختلن أن العناصر تقل الأحداث وأن الأجسام المركبة..."
combination and separation of the elements. They disagreed in that Empedocles held that the elements were fire, air, water, and earth and that homoeomerous bodies were compounded from them, while Anaxagoras held the contrary view, saying that the homoeomerous bodies were the simple elements and that fire, air, water, and earth were merely compounded from them.

<Their views on the elements>³⁴

(12) The Ancients held four opinions concerning the elements. The first opinion was that of those who said that the elements do not have sensation and cannot be affected. Their view was false and clearly absurd, but it was not incoherent. The second opinion was that of those who said that the elements have sensation and cannot be affected. Their opinion is false, clearly absurd, and incoherent. That is because it is impossible for a human being to understand how something could have sensation yet be entirely unable to be affected. The third opinion is that of those who said that the elements had sensation and could be affected. Their view is plausible but untrue. It is plausible because living bodies that can be affected and have sensation could result from elements that can be affected and have sensation and because it is also necessary that

³⁴. L 3.1–8; K 1:427–86; G² 26–29: An elaboration of an argument directed mainly against the Atomists, claiming that the fact that living bodies are sentient can only be explained by a system of changeable, nonsentient elements.
إذا تكون ونقصد بأنه جمع هذه المناصر وتفرّقتها فقط، ومختلفً في أن إماذا قليس
يخل أن المناصرة النار والهواء والملاء والأرض. وأن المشابهة الأجزاء، فإنا
هي أجسام مركبة من هذه، وأناكما غورس ينتم خلاف هذا. وذالك أنه يقول
إذا الأجسام المشابهة الأجزاء هي المناصرة البسيطة، والنار والهواء والملاء
والأرض، فإنا هي مركبة من هذه.

"التحالهم في المناصرة" (12)

الرأي الذي احتله "القدماء في المناصرة أربعة. وأهل الرأي الأول،
ومن الذين قالوا إذا المنصرة تحس ولا تقبل الأحداث، قولهم " قال كتب
صراح جمل إلا أنه ليس هو قول لا يفهم. فأما أهل الرأي الثاني، وهم الذين قالوا إن
المناصرة تحس ولا تقبل الأحداث، قولهم " كتب صراح " جمل لا يفهم. وذلك
أنه ليس يمكن إنسان أن يفهم كيف يكون شيء يحس من غير أن يناله حدث
من الأحداث، وأما قول " أهل الرأي الثالث، وهم الذين قالوا إذا المناصرة
وتقبل الأحداث، وقولهم " قول يمكن إلا أنه ليس يحتم. وأما " إمكاناته في طريق
أنه يجوز " أن يكون من عناصرFlags الأحداث وحس أبدا تقبل الأحداث وتحس

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every part of something having sensation has sensation itself. It is false
because, if it were the case that the elements had sensation, then all
bodies formed from them would have sensation, whereas we know that
plants and many parts of animals are without sensation. The fourth
opinion is that of those who say that the elements can be affected but
do not have sensation—a view that is both plausible and true.\(^\text{35}\) That is
because we clearly find that some bodies have sensation and some do
not have sensation. From this it is obvious to us that the elements do
not have sensation and that things having sensation are generated from
their temperament. That is because it is possible for something having
sensation to be generated from that which does not have sensation, for
nature is always such that it progresses toward what is more excellent,\(^\text{36}\)
extracting it from nonexistence into existence. However, for that which
does not have sensation to be generated from that which does have sen-
sation is not in the realm of the possible.

\(<\text{Their disagreement about the temperament}>\)\(^\text{37}\)

(13) Men have disagreed about the question of the temperament.
Some have said that it is the substance of sensation and the substance
of all the psychic and natural faculties, which is what most of the physi-
cians say. According to their opinion, sensation must be generated from
the temperament. Some of them say that it is the first among the tools

35. A MS contains the gloss: “These have no parts. That which has sensa-
tion results from them by the effect that exists in them. If they were to remain as
they were without being affected, nothing could result from them that had an
essence different from their essence.”

36. A gloss in one MS reads: “Someone might object that, if it were possible
for there to exist something that is without sensation and something else that is
affected and has sensation, then, since it has existence from things having sensa-
tion, what is baser would belong to it. We reply that nature is such that it trans-
forms the baser thing into the more perfect, not the more perfect into the baser,
and that which has sensation is nobler than that which does not have sensation.”
This is not clear to me, but perhaps the point is that if what has sensation is
affected by what does not, then what has sensation is of a lower rank than that
which is insensible.

37. L 3.26–30; K 1:433–34; G 36–38: Galen declines to explain the exact
relation of the temperament to the soul and the psychic faculties, since, though
ومن أنه يجب أيضاً أن يكون كل جزء من الشيء الحسن من يحسن، وأما كله فن طرق أنه لو كانت المناصرة لكان جميع ما هو منها من الأجسام تحسن، ونحن نرى أنه لا الأمتات ولا كثیراً من أجزاء الحيوان للحسن، وأنا أهل الرأي الرابع، وهم الذين قالوا إن المناصرة قبل الأحداث ليست بحسناً، فهو قول ممكن حقا، وذلك إذا كنا نجد عيانا بعض الأجسام تحسن وبعضها لا يحسن، فقد تبين لنا من هذا أن المناصرة ليست لها، وأن الأشياء الحسانة إنما تولد من المراة، وذلك أن كون ما له حسن مما لا حسن له أمر يمكن لأن الطبيعة أبداً إنما شأنها المصر إلى الأحوال الأفضل، والنزوع من العدم إلى الوجود، فأنا إن يكون مما له حسن أشياء لا حسن لها، فليس ذلك ما يمكن.

"اختلافهم في المراة" 

(۱۳) قد اختلف الناس في أمر المراة، فمنهم من قال إنه جوهر الحسن وجوهر جميع القوى النفسية والطبيعية بمنزلة ما قال جل الأطباء، وهم رأي هؤلاء يجب أن يكون الحسن إنما يتولد من المراة، ومنهم من قال إنه الآلهة.
of the faculties, not their substance—as the deepest of the philosophers, Aristotle, and his disciples have said. According to their opinion, it is the suitability for the reception of sensation that is generated from the temperament.

<The genera of qualities>\(^{38}\)

(14) There are four genera of qualities, in three of which the thing and its opposite exist, while in the fourth it does not exist. The three that include opposites are existence and nonbeing, possibility and impossibility, and action and passion. Thus, in these genera there can be change from the thing to its opposite. The fourth genus—the one in which the thing and its opposite do not both exist—is shape.\(^ {39}\) That is because no shape is the opposite of another shape, just as no size is the opposite of another size. Therefore, in shape there can be no transformation and change, because every change and every transformation is from something opposite to something that is its opposite in that respect. When a square is constructed from two triangles, we do not say that they have changed or been transformed into the square, since the two triangles continue to exist in the square, unaltered and without transformation. In just this way, something small is not transformed when it becomes large, since the small thing is subsumed in the large thing.

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they are in some sense dependent on the temperament, his purpose here is only to refute those opposed to Hippocrates. “Temperament” (mizāj) is a mixture analogous to the result of a chemical reaction in which a new substance is formed, not the sort of mixture resulting from stirring together different kinds of seeds.

38. L 3.14–17; K 1:429–30; G a 31–32: Galen gives the examples of combining triangles to make a square and building a house (see pp. 142, 149, paragraphs 9, 15) as examples of compounds where the constituent parts remain unchanged. The point may be that atoms of different shapes are not sufficient to explain the changes brought about by temperament.

39. This is a strange list. Shape is the only item normally considered a quality. Action and passion are categories of their own in Aristotle’s list of categories. Perhaps this is a list of categories that was somehow garbled in transmission.
الأولى من آيات القوى، وليس هو جوهرها بمنزلة ما قال حُذَاق الفلاسفة”، وهم أرسطو طليقائه، وأصحبه، وحسب رأي هؤلاء يجب أن يكون الموافقة لقول الحسن
إما يتوالد من المراج.

”أجناس الكيفيات”

(4) أجناس الكيفيات أربعة. ثلاثة منها يوجد فيها الشيء، وخلاله، والرابع ليس يوجد ذلك فيه. أما الثالثة الجامعة للمثلاء: فهي الوجود والعدم والإمكان والإمكان
والإمتاع والفعل والانفعال. ولذلك قد يكون التغيير في هذه الإجناس من الشيء إلى خلافه. وأما الجنس الرابع الذي لاز Veteran في الشيء، وخلاله، فهو
الشكل. وذاك" أنه ليس من شكل مثاله تشكيل آخر، لا يكون عظمًا مثالًا
لمثال آخر، ولذلك لا يكون في الشكل استحالة وقيق. وذلك أن كل تغيير كل
الاستحالة إما يكون من الشيء، للغائب إلى الشيء، الذي هو خلافه من، أجل ذلك،
مثيل صارت من مثلين مرهق لا يقول إنّه التماثيل قد تغيّرنا أو سقالا” إلى المرجع لأن
المثلين قائمان موجودان في المرجع لم تغيّرنا ولم يستقبلنا كما لا يستطيع الصغير إذا
صار منه عظيم، وذلك أن الصغير داخل في الكبير.

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الأساطير والفلسفة: S: أرسطو | DFRY: ٢٠٥ | ر^٢: ٢٠٦ | DSY: أرسطو طليقائه، وأصحبه، وحسب رأي هؤلاء يجب أن يكون الموافقة لقول الحسن
إما يتوالد من المراج.

”أجناس الكيفيات”

(4) أجناس الكيفيات أربعة. ثلاثة منها يوجد فيها الشيء، وخلاله، والرابع ليس يوجد ذلك فيه. أما الثالثة الجامع
<The compound by contiguity>\(^{40}\)

(15) We have described the two species of compound, one being temperament and the other contiguity. The compound thing that is a compound by way of temperament may have qualities contained in it that the simple things from which it is compounded do not have—qualities that belong to the three genera of qualities containing both the thing and its opposite. However, the compound thing that is a compound by way of contiguity has no qualities whatever apart from those that the simple things from which it is compounded also have, nor is it in any of the three genera of qualities containing opposites, but only shape and size. This is because, if it gains anything from the compounding, it gains only these two. An example of that is a house, for when it is built, the color of the stone from which it is built remains in it, as do the weight and hardness of the stone, which remain as they were without alteration. Design and construction give something to the house that belongs specifically to it and does not belong to the stone: the shape in which the house is built and the exact size in which it is made.

<Absurdities>\(^{41}\)

(16) The absurdities forced upon the one who says that the elements are unchangeable are of this sort: First, if a person were compounded from a single element, he would not have sensation, since sensation can occur only when the one who senses receives a change occurring in him from the thing that he senses. If the person did not have sensation, he

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\(^{40}\) L 3.8–13; K 1:429; G\(^{a}\) 29–31: Galen gives the example of building a house to show why atomism cannot explain temperament.

\(^{41}\) L 3.27–29; K 1:433; G\(^{a}\) 36–37: An elaboration of the conclusion of Galen’s long argument against the Atomists and others who would deny the temperament of the elements.
تركيب المجاورة

(15) ومكانت أنواع التركب على ما وصفنا نواعينً، أحدهما المراة والآخر المجاورة. فقد يجب أن يكون الشيء المركب بتركيب المراة مجمّع له كفنيات لم يكن للكيفية البسيطة التي منها ركب في القائمة الأجناس من أنواع الكفنيات الجامعة للمشيء وخلافه. وأما الشيء المركب بتركيب المجاورة فليس له من الكفنيات التي لم يكن للكيفية البسيطة التي منها ركب شيء أصل. ولا في واحد من القائمة الأجناس الكفنيات الجامعة للمشغولات خلا المثال والظالم. وهذا إذ أن أكسب من التركب شيئًا، فإنه يكسب هذيين فقط. ومثال ذلك البيت. فإنه إذا ظل في لون الحار، لها ركب بها وثقله وصلابتها على حلا. لا ينعي. وأكبه التأليف والبناء شيكاً وليست خاصًا. وليس له تلك الحار، وهو الشكل، الذي ينعي عليه، والمقدار الذي يعمل له من العظالم.

الشغولات

(16) الشغولات التي تلزم في أن المناصر لا يقبل الأحداث هي على هذا الفرو، أولها أنه لوكان الإنسان مركبًا من عنصر واحد، كان لا يبس. إذ كان الحسن إنما يكون بقبول الحسن لحدث الواقع عليه من الشيء الذي يبسه. لونكان الإنسان
could not desire anything or reject something else. That is because desire must come to be either from a yearning for something helpful and beneficial, which is to be acquired, or from an aversion to something harmful, which is to be avoided. If something does not have sensation, it will not know the beneficial so as to acquire it, nor the harmful so as to avoid it. If a person had no desire, he would not have voluntary motion, since every voluntary motion by which a person moves is a motion due to his desire for something. Second, if a person did not have sensation, he also could not have imagination. That is because, if the images and forms of things were not taken up from sensation to imagination, a person could not imagine anything. If someone did not imagine, he could also not think, since there would be nothing for thought to exercise judgment upon if imagination had no forms or images taken from sensation.\textsuperscript{42} Third, if these three—voluntary motion, sensation, and deliberative actions—were not in him, he would also not have a soul. If he had no soul, he would not breathe—that is, be one of those things that have breath—and, if he did not have breath, he would not be animate.

\textsuperscript{42} Some MSS add: “Thus, he also would not remember, since if he had not acquired forms and images from imagination and thought, he would remember nothing.”
لا ينضن لكان لا يشتهي شيئًا ويعافّه ٣٦٢٥. وذاك أن المشهوة إنما تكون إماًًّ بالوقائع إلى الشيء المردوم ٣٦٢٣. التائفة: فيجب له٣٦٢٧. بإمبالبِقية** الشيء٣٦٢٦. الصنار٣٦٢٨. وإن لم يكن الشيء حسنً لم يعرف التائفة فيجب له ولا الصنار فتجتبه٣٦٢٩. ولوكان الإنسان لا شهوة له كان أيضًا لا يكون له حركة إرادية إذ كانت كل حركة إرادية تحرّكها الإنسان. فإما تحرّكها بالشهوة منه للشيء٣٦٣٠. والثانية أنه لوم يكن للإنسان حسن٣٦٣١. كنان يستطيع تغيبه أيضًا. وذاك أنه إن لم يتأذى إليه مثالات الأشياء وصورها من الحسن إلى التّغيب لم يغيب للإنسان لّ٣٦٣٢. شيء٣٦٣٣. ولو لم يكن الإنسان يغيب لكان أيضًا لا يتّكر. وذاك أنه ليس يكون للتّغيب٣٦٣٤. شيء٣٦٣٥. يحكم** عليه. مثّى ل يكن التّغيب صور ومثالات أخذهما عن الحسن٣٦٣٦. والثالثة أنه لوم يكون في الإنسان هذه التّثليثة٣٦٣٧. أعني الحركة الإرادية والحسن والأفعال السياسية. لم يكن له أيضًا نفس٣٦٣٨. ولو لم يكن له نفس لم يكن من نفسه. أي من ذوات النفس ولو لم يكن من ذوات النفس٣٦٣٩. لم يكن حيواً.
(17) Hippocrates gave two formal syllogisms to show that man is not composed from a single element. First, if man were from a single element, he would not feel pain, but we find that he does feel pain. From this, it follows that man is not compounded from a single element. In his second syllogism, he said that, if man did feel pain, even though he was unitary, he would always be treated medically in the same way. But we find that he is not always to be treated in the same way. Therefore, it must not be the case that man both feels pain and is a unitary thing. The point of this argument is that, if man is compounded from a single element, the syllogism necessarily implies that he cannot feel pain, since there would be nothing that would make him feel pain. Were we to overlook the difficulty faced by those who hold this view and grant them that he can feel pain, then it would be obvious that he would feel pain only from himself. Then, since his self was a unitary thing, it would follow that his pain would be a single kind of pain. Because his pain would be the same, it would follow that he would always be treated in the same manner, though we can plainly see that he must be treated in various ways. The basis of this syllogism is sensation and is a matter of consensus. Its premises follow from that basis by means of demonstration, and its conclusion follows from it by demonstration. That first principle, based on a conviction founded on sensation, is that there are different means of treatment. That is because some treatments employ things

43. L 3.43–47; K 1:436–38; G 41–43: Hippocrates, On the Nature of Man, trans. De Lacy, cited by Galen at L 3.32; K 1:434; G 38–39, had said, “I say that if man were one thing, he would never feel pain, for there would be nothing that would cause him pain if he were one.” Galen expounded this argument at length in L 2.23–3.42; K 1:421–36; G 19–41. Galen gives brief examples and mentions the structure of the hypothetical syllogisms underlying the extended argument. It is an example of Galen’s doctrine that the good physician must be trained in logic. Various aspects of this argument have been discussed in the previous paragraphs.

44. One MS adds: “if he does feel pain.”

45. This refers mainly to treatment by drugs, which work by changing the temperament.
قياس ومقدمات ونتيجة

(١٧) قد بين إنبراطٍ أن الإنسان ليس هو من عنصر واحد بقياسٍ من القياسات الوضعيّة، الأول منها: أنه قال لوكان الإنسان من عنصر واحد لكان لا يناله الوجع. وكما تناولنا ذلك في الوجع. فوجب من ذلك أن لا يكون الإنسان مركبًا من عنصر واحد. والقياس الثاني أنه قال لوكان الإنسان يناله الوجع، وهو شيء واحد. كانت مداواته أيضاً نحو واحدًا. فنحن نجد مداواته ليست نحوًا واحدًا. فوجب من ذلك أن يكون الإنسان ليس يناله الوجع، وهو شيء واحد. ومعنى هذا القول أنه إن كان الإنسان مركبًا من عنصر واحد، فالقياس يوجب ضرورة أنه لا ينبغي أن يناله الوجع إذ كان لا يوجد شيء يوجهه. وإن سامعنا أهل هذه المقالة في هذا وأعطيناهم أنه قد يناله الوجع، فالمر في ذلك بين أنه إنما يناله الوجع من ذاته. وإن كانت ذاته شيئًا واحدًا، فقد يجب أن يكون وجوه وجوهًا واحدًا. ولأن وجوه واحدًا، فقد يجب أن تكون مداواته نحوًا واحدًا. فنحن نجد عيانًا أن مداواته تكون بأنجاء شيئًا. ولهذا القياس ابتداء من الحسن داخل في باب الإجماع، ومقدمات تابعة لذلك الابتداد على طريق البرهان ونتيجة: تحصل من ذلك برهانًا. أما الابتداء الداخل في باب الإجماع الموجود حتمًا. فهو أن أنجاء المداوات مختلفة. ذلك أن منها ما تكون بالأشياء التي قضى. ومنها ما
that warm, some things that cool, some things that dry, some things that moisten, some things that restrain and prevent, some things that release and loosen, some things that contract and block, and some things that expand and rarefy. There are two demonstrative premises that follow from this starting point. First, if the means of treatment differ, then the ways in which pains occur are also different. Second, if the ways in which pains occur are different, then the things from which pains occur are also different. The conclusion resulting from these two premises is that a human being must necessarily not be composed from just one thing.
تكون بالأشياء التي تبرز، ومنها ما تكون بالأشياء التي تخف، ومنها ما تكون بالأشياء التي تربت. ومنها "بالأشياء التي تتجلى"، ومنها "بالأشياء التي تتحسن وتنمو"، ومنها "بالأشياء التي تطق وتخلل"، ومنها "بالأشياء التي تقبض وتتمزق"، ومنها بالأشياء التي تسع وتحلل. وأبناء المقدمات البارزانة التابعة لهذا الأصل. فقد نحن إحداها. "إن كانت أجزاء المداواة مختلفة، فقد يجب أن تكون أجزاء الأوجاع أيضا مختلفة، والثانية أنه إن كانت أجزاء الأوجاع مختلفة. فالأشياء التي عنها يحدث الأوجاع مختلفة أيضا، وأنا النتيجة الحاصلة عن هاتين المقدمتين، فهي أنه يجب "من هذا أن الإنسان ليس هو من شيء واحد."
[Chapter 4]

[That the element is not numerically one]

(18) Some of those who, like the followers of Democritus, held that there was only one element said that it was one in species; but their view has been refuted by a clear proof.46 Others of them said that it was one in number, but those who held this view differed among themselves. Some of them said that this element that was one in number did not alter, change, or move, as was the view of the followers of Melissus.47 Others said that it moved, altered, and changed. Those who held the first view rejected sensation and cast doubt on that which is apprehended directly. We are content to leave them to their complacency, since sensation itself reproves them and refutes their theory. However, we must examine the views of those who held the second theory and then refute it.48 Each member of this camp held his own theory that differed from the theory of every other member. One of them, Heraclitus, believed that the one element was fire. His demonstration of this was that, if fire condensed a little, it became air. If it condensed some more, it became water; and if it condensed even more than that, it became earth. Two others, Diogenes and Anaximenes, claimed that the element was air, their demonstration of this being that if air condensed a little, it became water, and if it condensed even more than that, it became

46. That is, atomism, which has been refuted by the arguments from the reality of pain and the diversity of drug therapy discussed on pp. 149–52, paragraphs 16–17.
47. See pp. 137–38, paragraph 3, n. 15, above.
ذكر في أن العنصر ليس واحده عدد

(18) الذين قالوا أن العنصر واحد منهم من قال إنه واحد في النوع بمثابة أصحاب ديقيقين. وقد أنتسب قول هؤلاء وظهرت عليهم النجاة. ومنهم من قال إنه واحد في العدد وأصحاب هذه المقالة يختلفون. فنفهم من يقول إن هذا الواحد في العدد لا يتميز ولا يقبل الأحداث ولا يمكنه بمثابة أصحاب مالسيس 77. ومنهم من يقول إنه يتميز ويتميز ويقبل الأحداث. وأهل المقالة الأخرى يقولون فيهم فيهم إذ كان الحس هو الموخ لهم وال фаيخ لقولهم. وأما أهل المقالة الثانية، فنفهم نظر في قولهم ونفسه. وهم جميعاً كانوا واحد منهم ينتمي في هذا الواحد 77. غير ما ينتبه الآخر. منهم إبراهيم. وهذا ينتمي أن التأريقي العنصر، وبرهانه على ذلك أن لها إذا تكانت قليلاً صارت هوا، وإذا زاد 77. تكانتها صارت ماء، وإذا كانت أكثر من هذا 77. صارت أرضًا. ومنهم ديوانان وأكسهما نس. وهم يزعمان أن العنصر هو الهواء، وبهارهما على ذلك أن الهواء إذا تكانت قليلاً صار ماء، وإذا زاد 77.
earth, while if it rarefied, it became fire. Two more were Thales and Hippon, who thought that the element was water. The demonstration they gave for this was that if water condensed, it became earth, while if it rarefied, it became air, and if it rarefied further, it became fire. Another one of them was Xenophanes of Colophon, who claimed that the element was earth, his demonstration for this being that if it rarefied a little, it became water. If it rarefied more, it became air, and if it rarefied still more, it became fire.

(19) Galen offered five proofs, refuting all of them collectively. First, these people had intended to justify their beliefs concerning the elements, but they unwittingly did something else. What they actually did was to explain the transmutations of the elements and the transformations of one into another. Second, on the basis of this transmutation and transformation that they affirmed of the elements, they drew an improper conclusion, one that was not the conclusion of a valid syllogism. They described the transmutation and transformation of the elements into each other and explained that this transmutation and transformation was in a single thing. From this statement, they ought to have drawn the conclusion that the thing that was the substratum of the four elements was a single thing, having neither form nor species peculiar to it—which is to say, prime matter. However, they overlooked this and instead concluded that one of the four was the element. Third, they posited that the element and the principle that was the root of all things must surely have been one, and then they claimed that it changed

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هذا نص للعربية.

"إذا تخلل صار تارا، ومنهم "تالس وإيبن"، وما يراني أن العنصرهولاهم. وبرها نهباً على ذلك أن الماء إذا تكاثف صار لرضا. وإذا تخلل صار تارا، وإذا ازداد "تخلل صار تارا، ومنهم كساموسن"، وهو ينمز أن العنصرهالأرض، وبرهانه على ذلك أنها إذا تخللت قليلا صارت ماء. وإذا زاد تخللها صارت تارا، وإذا تخللت أكثر من ذلك صارت تارا."

"وإذا زاد تخللها صارت تارا، وإذا تخللت أكثر من ذلك صارت تارا."

(9) وجالينوس يُحفظ "على هؤلاء، كلههم عامة، مرسما،" ويجير أنهم قوم أرادوا أن ينظروا" اعتقادهم في أمر العناصر، فتركوا ذلك وهم لا يشعرون وأخبر واستحالات العناصر إلى تناقل بعضها إلى بعض. والثانية أنهم أخرجوا من هذه الاستحالات والاكتتاب اللذين أوجبوها لعناصرهم شريكا لا يشتم ولا يجري على طريق النتائج القياسية. وذلك أنهم لم يوفقوا استحالات العناصر إلى تناقلها بعضًا إلى بعض. وينبغي أن يكون هذا النقلاء وهذه الاستحالات في شيء واحد.

وكأن ينفع هذا القول أن ينتجوا منه أن: "النقيب الموضع لعناصر الأربعة هو شيء واحد لاصلة صورة له ولا نوع مخصصه. أعني البهيني. فتركل ذلك وأقترح أن واحدًا من الأربعة هو العنصر، والثانية أنهما وضعوا أن العنصر والرأس الذي هو أصل الأشياء إنما هو واحد. ثم زعموا أنه يتغير ولا يفتقيل. وإن"، كان يفتقيل فقد فقت.
and was transmuted. However, if it were transmuted, it would be nullified and removed. Surely, the principle and root ought not to be removed and nullified but, rather, ought to continue and endure. If they replied that it did endure, how could they then explain how fire remained fire yet became water? Fourth, they all held opposing theories, yet each one supported his theory with one and the same demonstration: that, when this one element condensed and rarefied, the other elements were generated from it. Fifth, if they were to claim that this one element condensed and rarefied, then it was clearly the case that it was not one; for it is unquestionably necessary that its alteration from one state to another must be from something else that, at one time, alters it toward rarefaction and, at another time, toward condensation. Because of this, they must be two.

50. Hippocrates, *On the Nature of Man* 1, pointed out that they had used the same arguments to reach differing conclusions.
وارتفع، والرأس والأصل ليس ينبغي أن يرتفع ويطل. بل ينبغي أن يلبث ويبقى. فإن قالوا إنه يبقى. فكيف يجوز لهم أن يقولوا: التأريخ نارًا؟ والزرابه أن جميعهم يقولون: أقولاً أضدادًا. وكنهم يأتيون برهان واحد بعينه. وهو أن هذا العنصر الواحد إذا كافح وتحلل تولد منه العناصر الآخر. والحادسة أنهم إن كانوا يزعمون أن هذا العنصر الواحد يتحلل ويتكافح. فالآمر فيه بين أنه ليس بواحد إذ كان يجب لا محالة أن يكون تغيّره من حالي إلى حال إذا ما يكون من شيء آخر يغيّره مرة إلى التحّلل ومرة إلى التكافح. ففيّ من ذلك أن يكون اثنين.
(20) Some of those who held that there was one element were a group of practitioners of the science of physics, while others were a group of physicians. Those of them who were practitioners of the science of physics concluded that all bodies came to be from a single element, but they disagreed about what it was. Thales said that it was water; Heraclitus, that it was fire; Anaximenes, that it was air; and Xenophanes, that it was earth. Those of them who were physicians held that man comes to be from a single element, but they also disagreed.\footnote{51 L 5.1–14, 14.1; K 1:448–51, 506–7; G² 61–65, 136–37; Hippocrates, \textit{On the Nature of Man} 2–3. Hippocrates referred to physicians who held that the body is composed of, or generated from, only one of the four humors; but blood is the only alternative specifically considered either by him or by Galen, perhaps because none of the other humors had credible defenders. Galen pointed out that Aristotle and Hippocrates used identical arguments to refute those who held respectively that there was only one material element and that the human body was generated from only one humor.} Some of them say that man was from blood; some, that he was from phlegm; some, that he was from yellow bile; and some, that he was from black bile. However, the fact that man is not from a single element can be known from three things: first, generation; second, diversity of species; and, third, diversity of faculties. Generation is incompatible with a unitary thing because two things are unquestionably needed in the generation of simple bodies such as fire and water, one being active and the other passive. The generation of compound bodies from these can only
الفصل الخامس

ذكر فيآنَ بنُدَ النَّسَبَن ليس من عنصر واحد

(١٠٨) والذين قالوا إنَّ العنصر واحد منهم قوم من أصحاب علم الطبيعة: فمنهم قوم من الأطباء، ومن كان منهم من أصحاب علم الطبيعة، قضى بأن الأجسام كلها من عنصر واحد واختلفوا فيه. فقال تاليس: إنه الماء، وقال إيراقيطس: إنه النار، وقال أنكساونس: إنه الهواء، وقال كسونفانس: إنه الأرض. ومن كان من الأطباء، قضى بأن الإنسان من عنصر واحد، واختلفوا أيضا، فقال بعضهم إن الإنسان من الدم، وبعض قال: إن الإنسان ليس هو من عنصر واحد، من ثلاثة أشياء: أحدثها الكون. الثاني اختلاف الأنواع الثالث اختلاف القوى. أما الكون، فإنه أبدا لا يتأثر من واحد، وذلك لأن كون الأجسام البسيطة بنزلة النار والملاء يحتاج فيه لحالته إلى اثنين، أحدهما فاعل والآخر منفعل. وكون الأجسام المركبة من هذه إنما يكون بالمراج، والأمر في المراج
occur by temperament; and it is quite obvious that temperament cannot result from one entity but, rather, must be from more than one. In the case of diversity of forms and species, they could not differ were they not formed from differing things. The diversity of faculties also indicates a diversity of sources.

(21) A person is most red in childhood and in springtime. He is most yellow in youth and in summertime. In middle age and in autumn, he is most black, and in old age and wintertime, most white.

(22) There are two ways that we might know that man is composed of the four elements. First, there are things in him that so nearly resemble the four elements that they might almost be the elements themselves. Thus, when we see something like bone in the body—something that is heavy, coarse, cold, and dry—we say that there is earth in man. When we see something formless, flowing, moist, and cold, like phlegm, we unhesitatingly say that there is water in man. When we place our hands on the body, we feel heat coming from it that is stronger than the heat of the air; and from this we judge that there is fire in the body. We also see winds in the body and judge that there is air in it.

(23) Second, the body is nourished only by the four elements, and the thing from which something is nourished and from which it grows also gives it its structure. That is because the thing that increases in some measure, when it is receptive to increase and growth, is something similar to that on the basis of which the increase occurs.

52. L 11.14–16; K 1:494–95; G* 122–23: Galen mentions that blood—and, with it, the whole body—is, at various times, black, yellow, red, or white, giving these facts as evidence that blood is also different in different people. This is further evidence that the body is not composed of a single substance.

53. L 5.15–25, 11.3–5; K 1:452–54, 494–95; G* 66–68, 120: Galen is actually arguing almost the opposite: that, since the different tissues are never completely cold and hard, hot and soft, or the like, none can come to be from a single humor.

54. L 5.25–31; K 1:454–56; G* 68–70: An elaboration of Galen’s reference to the growth of seeds into plants and trees as evidence that the elements constitute the body. Another allusion to the food chain appears at L 14.1–3; K 1:506–7; G* 136–38, quoting Hippocrates, On the Nature of Man 6, who is mainly interested in its relevance to purgation. Galen points out its relevance for understanding nutrition, and the epitome develops and systematizes the argument.
في العناصر

بين أنه ليس هو من واحد بل أكثر من واحد، وأما اختلاف الصور والأنواع فإنه ماكات الأنواع والصور تختلف لولا إن بانها من أشياء مختلفة.

وأما اختلاف القوى فهو يدل على اختلاف الأصول.

(21) الإنسان يكون في سن الصبي وفي وقت الزمن أشد حمره، وفي سن الشباب وفي وقت الصيف أشد صفرة، وفي سن الكهول ووقت الخريف أشد سوادا، وفي سن الشيخوخ ووقت الشتاء أشد بياضا.

وقد قدم أن الإنسان مؤلف من الأرعا العناصرتين وجهين، أحدهما أن فيه أشياء نظرا للأرعة العناصرية أن تكون التي العناصر بإبعادها، وذلك أولا يرى في البدين شيئا تقياداً كيماً بارداً باباً بمنحه العالم. فقول إن في الإنسان أرض، ونرى في البدين شيئاً متحلاً نسيلاً رياً بارداً بمنحه البلع، فقول من هذا قول بانه إن في الإنسان ما، وإذا وضعنا إيدينا على البدين أحسنا منه بحرارة تفرح حرارة الهواء. ففضي عليه من هذا أن فيه ناراً، ونرى في البدين أيضا رياحا. ففضي بأن فيه هواء.

(22) والوجه الآخر من أن البدين إنما يحتوي من الأرعة العناصر والشيء الذي منه يحتوي الشيء، ففيه أيضاً منه، وهذا أن كان الشيء الذي يزيد في البدي قريبه للترد والدأ هو شيءشبه بالشيء الذي صار. هذا

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Therefore, it is clear that the structure and subsistence of this thing that is receptive to increase can come only from something having the subsistence and structure of what increases in this thing. Take, for example, a tree whose diameter is one cubit and which then increases and grows, by means of earth and water, until it reaches a diameter of two cubits. I say that the structure and subsistence of the first cubit is also from earth and water because, if the second cubit is no different in any way from the first cubit and if the second cubit is from earth and water only, then the first must also be from earth and water. We may also learn that bodies are nourished by the four elements in the following way. Plants subsist in ways corresponding to the four elements, since they cannot subsist by earth without water, nor by water without earth. It therefore follows that plants come from earth and water. However, combining earth with water results only in clay, so it therefore follows that there must be something in plants other than earth and water. The only simple bodies other than earth and water are fire and air. Therefore, the subsistence of plants also specifically requires these two elements, in addition to earth and water, since we have seen clearly that plants cannot survive without contact with air and the heat of the sun in such a way as to demonstrate that they require nourishment from these two also. Therefore, we have thus proven that plants are nourished by the four elements. Animals are nourished by plants, and man is nourished by animals and plants. It thus follows that man is also composed of the four elements.
زيادةً عليه، فالنور واضح أن بنيه هذا الشيء القابل للزيادة وقوامه إذا هو من الماء، الذي منه قوم ذلك الشيء الزائد في هذا وثبت. مثلّ أن شجرة كانت مقدماً رذاعة واحداً، ففيت إدوارها، والتربة والماء حيثّ صارت ذراعين. أقول إن بنيه الذراع الأول وهو قوامها، إذا كان أيضًا من الأرض والماء، وذلك أنه إن كانت الذراع الثانية غير مماثلة للذراع الأول في شيء، والذراع الثانية إما هي من الأرض والماء، فالنور، إنّه هي من الأرض والماء، وقد نظم أن الأبدان إذا تتذكّي من الأربعة المناصرة من هذا الوصف، وهو أن النباتات إذا قوامه بالأربعة المناصرة، إذ كان لا قوام له بالأرض دون الماء ولا بالماء دون الأرض. فيجب من ذلك أن يكون النبات من الأرض والماء، ولكن ميقات الأرض للماء إنما تحدث عنها. فيجب من ذلك أن يكون في النبات شيء آخر غير الأرض والماء، ولم يستعد الأرض والماء من الأجسام البسيطة، فينثال الأغلاب والهواء. فيجب أن يكون قوام النبات إنما هو بهذين بعد الأرض والماء خاصة إذا ذاك قد زرع عيبًا أن النبات لا مثات له دون لناه الهواء وأنه يتعلق من نفس أهة منه، إلى الأغتذاء من هذين أيضًا، فالنبات على ما يبتغيته من الأربعة المناصرة، والحيوان يبتغيه من النبات، والإنسان يبتغيه من الحيوان ومن النبات. فحصل من ذلك أن الإنسان أيضًا مؤلف من الأربعة المناصرة.

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:ADMSY ٣٣٤  |  DFUY ٣٣٣  |  DSY ٣٣٣  |  تمثيل: R2 ٣٣١
الأول: بالأرض والأرمل  |  بالأرض والأرمل: R ٣٣٥  |  بالأرض والأرمل:DY ٣٣٥  |  فعل هذا من أنه
: A1 ٣٣٨  |  م٢ ٣٧٧  |  أتى م٢ ٣٧٧  |  عينهما: ADY ٣٣٨  |  أيضًا: فتغذي منه
(24) The names “hot” and “cold” carry two meanings, one being the quality of heat and coldness in the sense that we say that this body’s state is a hot state or a cold state, and the other being the body in which this quality is. However, that quality by which the body is described is either alone in this body, or else it is combined with its opposite. An example of the quality alone is the heat without coldness that is in fire, or the coldness without heat that is in water. Any bodies that are of this sort are said to be in an extreme of heat or coldness, since anything that is completely pure and not combined with its opposite is in an extreme state. Qualities that are mixed with their contraries are, for example, those in all composite bodies. Each of these is described by heat or coldness in one of two senses: either by that which is preponderant in it, or on balance between it and another. An example of preponderance is the body in which there is more heat than coldness; so it is said, in this sense, to be hot. If there is more cold than hot in it, it is said, in this sense, to be cold. As for “on balance,” if a body is compared to another and its heat is found to be more intense than the other’s, it is said in this sense to be hot. If its cold is found to be more intense than the other’s, it is said to be cold.
الفصل السادس

الحرار والبارد

(٢٤) اسم الحرار واسم البارد يجعلان على معنيين: أحدهما كمية الحرارة والبرودة بمئذنة ما، يقول إن هذا الجسم حاله حارة أو باردة، والآخر الجسم الذي فيه تلك الكيفية. إلا أن هذا الجسم إنما أن تكون فيه تلك الكيفية التي يوصف بها وحدها، وإنما أن يكون يخلطهما فيه ضعف هما، أما وحدها فمئذنة الحرارة؟! في النار التي ليس معها برودة وفمئذنة البرودة في الماء التي ليس معها حرارة، وما كان من الأجسام على هذا، فهو يقال إنه في غاية الحرارة والبرودة؟! وذلك؟! أن كل شيء خالص محض لا يخلطهما ضعف، فهو في الغاية. وأما الكيفية التي يخلطهما ضعف فمئذنة ما في جميع الأجسام المركّبة، وكل واحد من هذه توصف بالحرارة والبرودة على أحد وجهين، إنما بالأغلب عليه، وإنما بالمقاسة بينه وبين آخر، وإنما من جهة الأغلب. فإذا كانت الحرارة فيه أكثر من البرودة، فقيل من هذا الوجه أنه حار، وإذا كانت البرودة فيه أكثر من الحرارة قيل من هذا الوجه إنه بارد، وأما من جهة المقاسة، فإذا قيس بجسم آخر، ووجد أشد حرارة منه، فقيل من هذا الوجه أنه حار، أو وجد أشد برودة منه، فقيل إنه بارد.
(25) When Hippocrates says that living bodies are compounded from the hot and the cold, we need not understand him to mean by that these qualities; for the qualities are not bodies, and the element must be of the same genus as the thing of which it is an element.\footnote{L 8.1–10; K 1:476–79; G a 96–100; Hippocrates, \textit{On the Nature of Man} 3: Since Hippocrates often refers to qualities rather than elements, Galen claims that he is referring to the dominance of a particular quality and is not confusing sensible qualities with material elements.} From this it follows that, since the living bodies are corporeal bodies, their element is not merely a quality without matter. Instead, the quality is simply the principle and form\footnote{\textit{Naw}, which in later philosophical Arabic invariably means “species,” must obviously be translated here as “form.” The more usual philosophical Arabic term for the material form would be \textit{ṣūrah}.} of the sensible corporeal body. When he says “this body,” he should also not be understood to be referring to the one that is said to be hot or cold preponderantly or on balance, because the corporeal bodies to which this attribute applies are infinite in number, while the elements must necessarily be finite. The reason is that, if they were infinite, then generation by means of them could never be completed, since the infinite can neither be cut off nor delineated. Instead, we must understand him to mean the corporeal bodies that are in the extreme of heat, coldness, moisture, and dryness. These are four corporeal bodies: fire, air, water, and earth.
في المناصر

(2) فإذا قال إبراهيم: "إن الأبدان مركبة من الحرار والبارد، فليس ينبغي أن نفهم عنه أنه يريد بذلك الكيفية لأن الكيفيات ليست أجساماً"، والمناصر جانس للشيء الذي هو لعصر، فيجب من ذلك إذ كأن الأبدان أجساماً. فأن لا يكون عنصرها كبيئة لس لها هيول، بل إنما الكيفية رأس ونوع للجسم. المحسوس، ولا ينبغي أيضًا أن نفهم عنه أنه يريد قوله هذا الجسم الذي يقال إنه كذلك على طريق الأغلب أو على طريق المقايسة. لأن الأجسام التي هي على هذه الصفة لنهائية لها، والمناصر ينبغي أن تكون متاحة، وذالك إنها إن كانت غير متاحة لم يتم بها كون. لأن ما مالا النهاية له لا يقطع ولا يجاز. فلكن ينبغي أن نفهم عنه أنه يريد بهذه الأجسام التي هي في الغالبة من الحرارة والبرودة والزروة والبوسه. وهي أربعة أجسام، النار والهواء والبارد والأرض.
(26) The states of bodies alter either with respect to themselves or with respect to something external. Their alteration with respect to something external is, for example, moving from place to place. Their alteration with respect to themselves is of two kinds: one in which its substance remains in its current state and the other in which its substance does not remain in its current state. The alteration that does not allow the substance of the living bodies to remain falls outside the scope of medicine; and only the alteration that does allow the substance of living bodies to remain in its state falls within the scope of living bodies as they are of concern to medicine.

<Alteration of quality and quantity>³⁹

(27) This alteration is of two kinds: one in quantity and the other in quality. Alteration in quantity is of two kinds, one in which something in the body diminishes, and the other in which something in it increases. If something has been diminished in the body, the physician must increase something else there that is similar to what was diminished in order to replace it. Because the body is compounded from the four elements, the food by which its increase occurs might well also need to be compounded from the four elements. For that reason, the body is not nourished by elements, which are simple—neither water, nor air, nor

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³⁸. L 9.6–7; K 1:482; G* 104: Galen is distinguishing substantial change from other sorts of bodily change. This passage provides a clearer analysis of the concepts.

³⁹. L 7.1–11; K 1:473–76; G* 91–95: Galen observes that bodies change in two ways: by alteration of the quality of their substance and by loss of substance. Medical treatment—usually meaning treatment by drugs—reduces excesses of particular qualities and replaces qualities that were lost. Food replaces the substance that was lost. Drugs and food differ only in that food is intended to replace the same substance that was lost, whereas drugs are intended to change a quality. Thus, in some circumstances, something can be both a drug and a food.
الفصل السابع

حالات الأبدان

(26) وحالات الأبدان تتغير إما من قبل أنفسها وإما من قبل شيء من خارج، وتغيرها من قبل شيء من خارج يكون بنزول الانتقال من موضع إلى موضع، وأما تغيرها من قبل أنفسها فيكون على وجهين. أحدهما وجدها باقي على حاله، والآخر وجدها ليس باقي على حاله. ويتغيرُ الذي لا يبقى معه جوهر الأبدان، ليس يدخل فيهما يعني به الطِّب من أمرها، فأما الذي يتغير، فهو الذي يبقى معه جوهر الأبدان على حاله، فهو الذي يدخل فيهما يعني به الطِّب من أمر الأبدان فقط.

تغير في الكيفية والكينية

(27) وهذا التغيير من صنفنا. أحدهما في الكينية والآخر في الكينية. أما التغيير في الكينية، فعلى ضرورته، أحيانًا أن ينقص من الأبدان شيء، والآخر أن يزيد فيه شيء، وإذا نقص من الأبدان شيء، فنقضي للطيب أن يزيد فيه مكان ما نقص منه شيء، شبيه به. ولا أن الأبدان مركب من الأربعة العناصر قد، ينعي أن يكون الغذاء الذي به تكون الزيادة فيه مركبة أيضًا من الأربعة العناصر، ولذلك صار الأبدان لا يلتزدي من العناصر، وهي سبُسية. لا من الماء ولا من الهواء ولا من الأرض.
earth, nor fire. On the other hand, if something increases in the body, the physician must\(^{60}\) find a way to decrease it by evacuation. Alteration of quality is, for example, what happens to the body when it becomes hot or cold. When that happens to it, the physician must consider what to do. If there is no great alteration, the patient is to be treated with a drug that will convert what has been altered and bring it toward its opposite—though not to the extreme of the quality that it has, but only inclining the body moderately away from its usual nature. Thus, if the body has inclined away from its usual state toward cold, it is to be treated with pepper or pellitory. If the body has inclined toward heat, it is to be treated with lettuce or barley water. If, however, the body is greatly altered, it must be treated with a remedy that changes and transforms it to the extreme opposite of what it was. Thus, if it has become cold, we heat it with fire; and if it has become hot, we cool it with water.

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\(<\text{Instruction}>\)

(28) There are two courses of instruction based on the \emph{stoicheia}—which is to say, the elements.\(^{61}\) The first method starts with the completion and end of the thing in imagination and goes back until it reaches its source and beginning. The second method begins from the source and beginning of the thing and goes until it reaches its completion and end. The first of these two methods of instruction is called conversion

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\(^{60}\) Some MSS read: “might need to.”

\(^{61}\) Though both of these methods are used in On the Elements, they are not discussed theoretically; but see The Small Art, intro.; K 1:305–7; G\(^a\) 3–7, and its epitome, pp. 50–56, paragraphs 1–9, above. The epitome of The Small Art, p. 56, paragraph 9, says that On the Elements uses the method of synthesis. The discussion here may be occasioned by Galen’s criticism of Athenaeus’s failure to observe rigorous logical method; see L 9.20; K 1:486; G\(^a\) 108–9.
ولا من التأر، فما إذا راد في البدين شيء، ينبغي للطبيب أن يحتال في تقليصه بالإسفناغ، وأما التغير في الكيفية، فيكون بمثله ما يعرض للبدين إذا هو ضيق أو برد. ومتى عرض له ذلك، ينبغي أن ينظر، فإن كان لم تغير تغيرا شديداً، ينبغي أن يبدا بدواء يقلبه ويجلبه إلى خلاف ذلك من غير أنه يكون في الغالب من الكيفية التي هي له. لذا يكون منها في حذ معادل لمقدار ميل البدين عن طبيعته، فإن كان البدين قدم من حاله إلى البر وودة كانت مداواته بالقفل أو بالعقرقا. وإن كان قد مال البدين إلى الحرارة، كانت مداواته بالحص ويكشك الشعر، وإن كان البدين قد تغير تغيراً شديداً، ينبغي أن يبدا بدواء يقلبه ويجلبه إلى خلاف ما هو عليه مما هو في الغالب، فإن كان قد برزت ثمانين من البدين، وإن كان قد خضن بردنه بالماء.

التعليم (28)
من التعلم المبني على أمر الأسقفات، وهي المناصر له سبليان، أجهدها المسلم الذي يبتكر من منتهى الشيء، وقام به في الفحم ورجع حتى ينها إلى أصله ومبدأ، والثاني المسلم الذي يبتكر من أسفل الشيء، ومبدأه وينتهى إلى تمامه وغايته، والطريق الأول من هذين التعليمين يقال له الفص 78، القليل بمثله.

في المناصر
and analysis—as, for example, when we say that tissues are compounded from humors, humors from nutriments, nutriments from plants, and plants from the four principles, by which I mean the elements. The second method is called synthesis, as when we say that plants are from the four elements, nutriments are from plants, humors from nutriments, tissues from humors, organs from tissues, and the entire body from organs.
ما يقول إن الأعضاء المتشابهة الأجزاء مركبة من الأخلاط والأخلاط من الأغذية، والأغذية من النباتات والنباتات من الأربعة الأركان. أعطي المناصر.
والطريق الثاني يقال له التركيب مميزًا ما يقول إن النبات يكون من الأربعة المناصرات والأغذية من النباتات والأخلات من الأغذية والأعضاء المتشابهة الأجزاء من الأخلاط والأعضاء المركبة من الأعضاء المتشابهة الأجزاء وجميلة البعد من الأعضاء المركبة.

DMFSY ٣٨٥
(29) All the Ancients agreed in affirming that the compound corporeal bodies result from compounding simple elements. Democritus, however, said that the elements remained in the same state unchanged, and compound bodies resulted from them only by the alteration of the states of position, opposition, and shape. Anaxagoras said that there were parts of each of the organs among the elements. Thus, if the parts of bone were separated from among the elements that they were in and then they were rejoined and combined with each other, what would result from them would be bone; and if the parts of flesh were separated from the elements that they were in and then the parts of flesh were joined and combined with each other, what would result from them would be flesh. If these parts were scattered and then combined with the elements, fire, water, earth, and air resulted. This is because Anaxagoras believed that the elements were a mixture of homoeomerous bodies. Empedocles said that the four elements were neither transmuted nor altered and that differing compound bodies resulted from them due to the difference of their composition, not due to alteration or transmutation. Hippocrates, Thales, Heraclitus, and Diogenes said that the compound bodies could only result from the alteration and transmutation of the elements, though Thales and his followers said

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62. L 9.6–19; K 1:482–86; G* 104–8: A clarification of Galen’s argument that the four primary qualities mediate the transmutation of the elements into each other. This stands in contrast to the theories of the Atomists and the various Ionian physicists, who all held, in one way or another, that transmutation involves combining or separating unchanging parts.

63. Anaxagoras thought that the different kinds of things were constituted from tiny fragments of each kind of substance that already existed in the form of scattered particles. See p. 139, n. 21, above.
الفصل الثامن

المكابث

(29) جميع القدماء قد أُرِزَوا وأُجِمِّعوا أن الأجسام المركبة إنما تكون من تركيب العناصر البسيطة. إلا أن ديمتريتس يقول إن العناصر تبقى على حالها لا تتميز وتتجزأ عنها الأجسام المركبة بتيت حالتها في الوضع والتشابه والشكل، وأنكاس غورس يقول إن في العناصر أجزاء من كل واحد من الأعضاء، فإذا فارقت أجزاء العظام العناصر التي فيها واجتمعت والتأتى بعضها إلى بعض صار منها عظم، وإذا فارقت أجزاء الفم العناصر التي فيها واجتمعت والتأتى بعضها بعض صار منها لم، وإذا تفرقت هذه الأجزاء واحتفلت بالعناصر أثار رواية وهو نوح وآخرون، وذلك لأن أدناس غورس يعتقد أن العناصر إنما هي خلط من الأجزاء المشابهة الأجزاء، وابن ياقين يقول إن العناصر الأربعة غير مثقالة ولا متغيرات، وإنما تحدث عنها أجسام مركبة مختلفة من قبل اختلاف تركيبها عن غير تتبؤ ولا استفادة. وإنما وارد ووكأ، وتأمل وإيراقيين وديوجانس يقولون إن الأجسام المركبة إنما تحدث عن تغيير العناصر وسجحتها، إلا أن تأمل وأصاحبه
that the alteration of the elements occurred only by connection and separation. Hippocrates did not say that the alteration of the *stoicheia* occurred by their connection and separation, but, rather, by heat, coldness, moisture, and dryness. Therefore, he posited that it is these qualities that gave reality to the elements. For this reason, the elements were named hot, cold, moist, and dry.
يقولون إنّ تغيير العناصر إما يكون باجتماعها وترقدها، فاما إبراطاً، فليس يقول إنّ تغيير الإسطفاس يكون باجتماعها وترقدها لكنّ لحارة والبرودة والطوية واليوسة. ولذلك جعل المحتاج لأنواع العناصر والبحث لها هذه الكيفت. ولذلك
*عاصفة* العناصر الحارة والبارد والرطب واليابس.
(30) There are different genera of qualities. Some are apprehended by vision; these are the different colors. Some are apprehended by hearing; these are the different sounds. Some are apprehended by smell; these are the different scents. Some are apprehended by taste; these are the different flavors. Some are apprehended by touch; these are a variety of qualities: heat and coldness, moisture and dryness, hardness and softness, lightness and heaviness, density and thinness,\(^65\) roughness and smoothness, solidity and brittleness, and flabbiness and firmness.\(^66\) Some of these qualities do not alter the entire substance of the body, and some have their effect in the entire body. The qualities that do not alter the entire substance of the body are qualities that are seen, that are heard, that are smelled, and that are tasted. Those that are seen are like colors, for they do not alter the whole body, but only the eyes; nor do they alter the entirety of the two eyes, but only the optic spirit. Black, more than any other color, concentrates the optic spirit, while white disperses it. Qualities that are heard have their effect only in the two ears. Those that are smelled have their effect in the two front ventricles of the brain, which they alter to some degree. Those qualities that are tasted mostly affect only the tongue, while in the rest of the body they have either no effect at all or else only a small effect. The

\(^{64}\) L 9.13–17; K 1:484–85; G\(^a\) 106–8: Galen argues that only the four primary qualities—heat, cold, moisture, and dryness—have the capacity to alter substance and other qualities, in contrast to color, sound, scent, taste, or many tactile qualities. The categorization of qualities in these two paragraphs is much more detailed than the one in Galen’s text.

\(^{65}\) That is, thinness in the sense of a thin soup.

\(^{66}\) On Galen’s lists of tactile qualities in other works and their possible sources, see L, p. 198.
الفصل التاسع

الكليات

(3) أنواع الكليات مختلفة. فمنها ما يدرك البصر، وهي الألوان المختلفة.
ومنها ما يدرك السمع، وهي الأصوات المختلفة. ومنها ما يدرك الشؤم، وهي الزوائد.
ومنها ما يدرك المذاق، وهي الطعام المختلفة. ومنها: ما يدرك اللمس، وهي
كليات شئي، هي الحارة والبرودة والرطوبة والحلوة واللبن والعده والحلقة
والقص وكمة الحشوة والملاحة والملاحة والتربة، والهشاشة والزجاوة
والاكتئاب. وعند هذه الكليات لا تحمل جمجمة جوهراً البدن. بعدها يفعل فعله في
جميع البدن. أما الكليات التي لا تكون بها جمجمة جوهراً البدن، فهي الكليات التي
يصر والتي تنتج، والتي نشأ والتي تذاق، وأما التي تصرف بمثلها، الألوان. فإنها
ليس تثير البدن كلها، ولكن العينين فقط، وليس تثير أيضاً حالة كل واحدة من العينين،
لكن تثير منها الزور البارد فقط، فالأسود من جميع الألوان تجمع الزور البارد
والآيت يفرط، وأما التي تجمع فإنها تفعل ما تفعله في الأذنين فقط، وأما التي ينتم
إلى تجعلها في البطن، في المدة من بطن الدهم وتثيرها تثيرها له قدراً. وأما
التي تذاق فإنها إذا مما تجعله في الناس فقط، وأما في سائر البدن، فإنه
إذا أن تكون لا تفعل فيه شيئاً، وإذا أن تفعل فيه فعلً يسير، والدليل على ذلك أن

proof of that is that the body can sometimes sense the alteration that occurs from it. Of the qualities that exercise their effect in the entire body, some have that effect only on the exterior of the body, without the effect reaching the interior of the body—for example, roughness, smoothness, hardness, and softness. Others affect both the exterior and the interior of the body—for example, heat, coldness, moisture, and dryness. We also say that some of the tactile qualities do no more than move the thing, as is the case with heaviness and lightness, while others have some sort of effect in the thing that exercises some influence on it, such as heat and coldness.

(31) This class may be divided in a different way, for it is said that some qualities are primary qualities, the fundamental qualities from which the other qualities are generated. These are four: heat, coldness, moisture, and dryness. The others are secondary qualities generated from the primary qualities. These are the rest of the qualities that are felt, seen, heard, tasted, and smelled. Among the other tactile qualities are density, which is generated from coldness; thinness, which is generated from heat; softness, which is generated from moisture; hardness, which is generated from dryness; solidity, which is generated from moisture; and brittleness, which is generated from dryness. The visible qualities, which are the colors, result from density and thinness; and these two, in turn, result from heat and coldness. That is because density generates blackness, since blackness is the negation of the effect of vision, and its occurrence is from the concentration of the parts of the visible thing. Thus, when a person sees nothing, he thinks that he is

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67. L 9.13–19; K 1:484–85; G a 106–8: The next three paragraphs are a restatement and elaboration of Galen’s argument that only the four primary qualities constitute substances. Galen gives only a few specific examples of secondary qualities generated from the primary qualities.
البدن قد يحس بما يحدث عنها من التغيير، وأماٌ "الكيماويات التي تفعل ما تفعله في جميع البدن. فبعضها تفعل ذلك في ظاهره فقط، ولا يبلغ فعليها إلى باطنها بمزجنة الخشونة والملاسّة"، والصلاة والذين. وبعضها تفعل ذلك في ظاهر البدن وباطنها مما ينتج عن المرحلة والبرودة والزجابة والبيوضة"، وتقول أيضًا إن الكيماويات الملوسمة منها ما هو مركز للمشي، فقط بمزجنة القفي والخفّة"، ومنها ما يفعل في الغثء، فلا يؤثر في

مزجنة الحرارة والبرودة".

(31) وقد يسمى هذا المعنى أيضًا بضرب آخر من القسمة. فقال إن الكيماويات منها كيماويات أول، وهي الأمهات التي عنها تولد الكيماويات الأخر، وهي أربع كيماويات الحرارة والبرودة والزجابة والبيوضة. ومنها كيماويات ثانية مولدة عن تلك "الأول. وهي سائر الكيماويات الملوسمة والكيماويات المصورة" والمملوءة والمزجنة والموضحة. وفما "نادرة". الباصّة، منها الجافة. وتولدها عن البرودة. ومنها السهولة. وتولدها عن الحرارة. ومنها الانتفاخ. وتولدها عن الرياح. ومنها السجابة. وتولدها عن البيت. ومنها النزعة. وتولدها عن الرياح. ومنها الهمشاشة. وتولدها عن البيوضة. ومنها المانعة. وتولدها عن الرياح. وفما "النون. فإنها تابعة للجافة والسعّة. وهباتاً تابعاً للحالة والبرودة. وذاك أن الكيماوية تولد النواد. إذ كان الصمود إنما هو سبب فعل البصر وحدوده يكون عن اجتماع أجزاء الشيء المصروع. ولذلك حتى لم يرب "الإنسان ثقل أن ينظر إلى سواه.

seeing blackness. Thinness generates whiteness because whiteness is the necessitation of the act of vision and its falling upon the visible thing. This results from the opening and spreading apart of the parts of the visible thing so that vision can meet and touch them. The rest of the colors are an intermediate between these two and are mixed from them, since those two are the extremes. The audible qualities are the kinds and species of sound and result from the hardness, softness, largeness, and smallness of bodies. Hardness and softness follow from moisture and dryness. The gustatory qualities are the species of flavors and result from the various species of temperament. The olfactory qualities are the kinds of odors. The odors result from the kinds of temperament and the subtlety and coarseness of the substance.

(32) The four fundamental qualities can be combined as follows: Heat and coldness do not combine. Moisture and dryness do not combine. Heat and dryness combine as fire. Heat and moisture combine as air. Coldness and dryness combine as earth. Coldness and moisture combine as water. A diagram of that:

heat    does not combine with    coldness

combine as air

moisture    does not combine with    dryness

combine as earth

combine as water

combine as fire

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68. Some MSS add: “and the fineness and coarseness of the substance.”
69. One MS reads: “of the air.”
في العناصر

والملاحظة تؤدي البياض لأن البيض إنما هو إجابة "فعل البصر وقواته على الشيء المصور، وهذا تأثير لانتقال أجزاء الشيء المصور وانبساطها حتى يلقاها وفاسها البصر، فأما " سائر الألوان فهي وسط بني بين هذين اللونين مخلوطة منهما إذ كانا هما طرفان. وأنما الكيفيتين المجموعة، فإنهما أصناف الأصوات وأنواعها ورؤية الكيفيات المجموعة، فإنهما أصناف الأصوات وأنواعها.

الرطوبة والليونة، وأما " الكيفيات التي يذاكرة فهي " أنواع الظوم. وهذه تابعة لأنواع الراحة، وأما الكيفيات المشوبة. فهي أصناف الزواج، والزنوج تابعة لأصناز الزواج ورقة الجهر " وغله.

(12) وتأليف الأربع الكيفيات " الأشواط يكون على هذا المثال. الحرارة والبرودة لا تتألفان، والرطوبة والليونة لا تتألفان. الحرارة والليونة تتألف منهما. الثار، والراحة والرطوبة " يتألف منهما الهواء، والبرودة والليونة تتألف منهما الأرض. والبرودة والرطوبة " يتألف منهما الماء. " مثال ذلك:

الحرارة لا تتألف من الرطوبة

البرودة لا تتألف من الليونة

الرياح لا تتألف من الماء

الماء لا تتألف من الهواء

الهواء لا تتألف من الماء
Qualities can be divided in a way more complete and superior to the previous way. Some qualities are fundamental and generative; these are the tactile qualities. Others are generated from the tactile qualities. Some tactile qualities are themselves primary—those qualities from which other qualities are generated but which are not themselves generated from other qualities. There are four of these—which are to say, heat, coldness, moisture, and dryness. Others are secondary and are themselves of two kinds: some generate and are generated, while others are generated but do not generate. Those that are generated but do not generate are qualities such as heaviness and lightness. Of those that generate and are generated, some generate qualities like themselves, and some generate qualities not like themselves. Those that generate qualities like themselves are qualities such as roughness and smoothness; for from smoothness is generated smoothness like it, and roughness, by its nature, generates roughness like itself. Very often, roughness generates smoothness accidentally, in the way that something that chills can do. Qualities that generate qualities unlike themselves are, for example, compression and rarefaction; for blackness, heaviness, and hardness are generated from compression, and whiteness, lightness, and softness are generated from rarefaction. Some of the qualities generated from the tactile qualities are visible, some audible, some olfactory, and some gustatory. One of the visible qualities is whiteness, which is generated from the rarefaction of the parts of the body. Another is blackness, which is generated from the compression of the parts of the body. The rest of the colors that are between these two colors are generated from states that are between these two states. The audible states follow from how hard and soft the bodies are and how large and small their sizes are. The olfactory and gustatory qualities follow from the temperament, in the way that sharpness, pungency, bitterness, and saltiness follow from heat, while constriction, astringency, and sourness follow from coldness. From the balance between the two come sweetness and greasiness.

70. L 9.13–17; K 1:484–85; G* 106–9: Galen is arguing that only the four primary qualities of heat, coldness, moisture, and dryness are primary in the sense that they can directly affect the body as a whole.
(33) والكليات قمة أمّ، وأكل من القصة المتقدمة. وهي أن الكليات منها أميات مولدات، وهي الكليات اللموسية، ومنها متولد من الملوسات. فأما الكليات اللموسية، فإنها كليات أول، وهي الكليات التي يتولد عنها غيرها ولا يتولد هي عن غيرها، وهي أربع، هي الحرارة والبرودة والصياحة وليوسية، ومنها كليات ثانية، وثالثة، فإنها من فناء. منها ما يتولد وتولد، ومنها ما يتولد ولا يتولد. أما التي تولد ولا تولد يعني النقل والخفة. وأما التي تولد وتولد فإنها ما يتولد ويتولد، ومنها ما تتولد أشباهها، ومنها ما تتولد غير أشباهها: "أنا المولة لأشباهها، نقلة الخشونة والملاحة. فإن الملاءمة تتولد"، ملاءة، مثلها. والخشونة تتولد بطبعها خشونة مثلها. وكثير ما يتولد الخشونة بطرق الملاحة، "بينزلاة ما يفيض عبرها. وأنا المولة لأشباهها، نقلة الخشونة وتجزيل، فإن الكتلة يتولد عنها السواد والثلث والصيحة. وتجزيل يولد عنه البياض والخفة واللين". وأنا الكليات المتولدات عن الكليات اللموسية. فنها م بصورة ومها مشوهة ومنها مشوهة ومنها مذهولة: الكليات المصورة منها البياض. وهو يتولد عن تجزيل أجزاء الجسم، ومنها السواد، وهو يتولد عن تكاثف أجزاء الجسم. وسائر الألوان التي تناقص بين هذهين اللونين تتولد عن الحالات التي تجاها بين هائتين اللائتين. وأنا الكليات المشوهة. فهي تابعة لصلاة الأجسام وليها وعظم مقاسها وصغرها. وأنا الكليات المشوهة والكليات المذهولة. فهي تابعة للمرج بنزلة ما يتسع الحاز الحدة والخشونة والمرارة واللموة، ويشبع البارد الماء والعفصة والموضة. ويشبع الاعتدال بينهما لمادة والدموع".
(34) We also say that some of the tactile qualities are specified ambiguously by using the name of the genus that encompasses them. Thus, they are called tactile—qualities apprehended only by the sense of touch and not known by any other sense. Others are not specified by the name “tactile.” The effect of some of the qualities specified by the name “tactile” penetrates the entire substance, both outer and inner. The effect of others extends only to the exterior of the substance. Some have no effect on either the exterior or the interior of the substance. Some of the qualities that are not specified by the name “tactile” are visible, those being the qualities that affect only the sense of vision. Some are audible—those that affect only the sense of hearing. Some are olfactory—those that affect the two front ventricles of the brain, all or most of their effect being there. Some are gustatory—those whose effect is only, or mostly, in the tongue and the upper part of the throat.

(35) The authors of treatises about the elements give different names and titles to their works. Some of them gave their books about the elements the title On Nature, as Parmenides and Melissus did. Some of them gave their books about the elements the title On Substance, as Chrysippus did. Some gave their books about the elements the title On the Nature of Man, as Hippocrates did. Some of them gave their books about the elements the title On the Elements, as Galen did. Aristotle

71. L 9.16–17; K 1:485; G 107–8: This paragraph comments on the end of Galen’s chapter, in which he seeks to prove that all the other qualities of bodies derive from the four primary qualities of heat, coldness, moisture, and dryness. Having shown in the previous lines that the tactile qualities derive from these four primary qualities, and not the reverse, Galen here shows that even though the visible, audible, olfactory, and gustatory qualities are in a sense tactile, they do not themselves alter the substance of the body and thus cannot be primary qualities.

72. L 9.26–30; K 1:487–88; G 111–13: Galen explains why he entitled his book On the Elements According to Hippocrates when Hippocrates’s book was known as On the Nature of Man. Earlier authors tended to use the title On Nature or various other titles when writing about the elements, while later authors consistently entitled such books On the Elements. Galen is following the modern custom. In addition to the authors referred to in the epitome, Galen mentions Asclepiades, Alcmaeon, Gorgias, and Prodicus.
(34) وتقول أيضاً إن الكيفيات الملموسية منها كيفيات تخص على طريق أشتراب الأسماء، باسم الجنس المتشابه؛ عليها. فتدعى الملموسية. وهي الكيفيات التي لا تدرك إلا بحاصلة الأنس ولا يعلم بغيرها"، ومنها ما لا تخص باسم الملموسية، والتي تخص باسم الملموسية منها ما تتخذ فعلها في جميع الجوهر وظاهره وباطنه. ومنها ما لا يجاه وفعله ظاهر الجوهر، ومنها ما لا يفعل لا في ظاهر الجوهر ولا في باطنه. وأما التي لا تخص باسم الملموسية، فنها البصرية، وهي التي تفعل في حاسة البصر وحدها. ومنها المشوبة. وهي التي تفعل في البطن من جذور الدموع، وخاصهة فعلها وأكثر عقباً فيها، ومنها المشوبة: وهي التي فعلها في الفساد وأعلى الحنك فقط وأكثرها: هناك.

"اختلافهم في عناوات كتبهم في العناصر." (35) قد تختلف أصوات الكتب في العناصر في عناوات كتبهم وترجماتهم، فهم من جملة ترجمة كتبهم في العناصر "الكتاب في الطبيعة" بمثل ما فعل بارميانيدس ومايسينس، ومنهم من جملة ترجمة كتبهم فيها "الكتاب في الجوهر" بمثل ما فعل خروسوس، ومنهم من جملة ترجمة كتبهم فيها "الكتاب في الطبيعة الإنسانية" بمثل ما فعل إبراهيم، ومنهم من جملة ترجمة كتبهم فيما الكتب في العناصر" بمثل ما فعل

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ADFY: FS 457 | المستعمل: A: المشترك: A: 
المستعمل: A: المرجع: FS 458 | A: المشترك: A:  
AF: AFM 460 | أكثر: A: A: | A: A:  
R: R: R: A: | A: A: | A: A:  
U: U: U: | A: A: | A:  
A: A: | A: A: | A: A:  
B: B: B: | A: A: | A: A:  
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mentioned the problem of the elements in two places, one of which he entitled *On the Heavens*;\(^\text{73}\) and the other, *On Generation and Corruption*.

\(<\text{Their disagreement about the temperament}>\)\(^\text{74}\)

(36) The Ancients differed about the problem of the temperament. Among them, they had three general opinions: first, Asclepiades’s opinion; second, the Stoics’ opinion; and, third, Aristotle’s opinion. Asclepiades claimed that the temperament arises from the adherence of the indivisible parts to each other. His view is false, because the adherence of the parts to each other is not a temperament but, rather, only contiguity and combination. That is because they are not joined in a true composition but, rather, are joined only by a concatenation that is apparent to the senses. The Stoics maintain that bodies interpenetrate each other. Finally, Aristotle says that bodies are divided into small parts that are then joined to each other, whereupon their qualities entirely mix in such a way that each of the qualities acts upon every other, and each of them receives the effects of the others. Let us disregard the first view, for it does not affirm that there is a temperament, but only that there exists a combination by means of contiguity. That reduces the three opinions to two: one of them the opinion of those who claim that the substances of corporeal bodies interpenetrate each other, and the other

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\(^{73}\) Some MSS add: “and the Universe.”

\(^{74}\) L 9.20–21; K 1:486; G* 108–9: A continuation of the criticism of the Atomists’ theory that substantial change—here, temperament—can result from the combination or separation of unchanged atoms or parts. Galen is grumbling that the Pneumatist Athenaeus bungled his argument against the Methodist Asclepiades, who held a doctrine that was essentially Atomist. Temperament (*mizāj; κρᾶσις*) is specifically the type of mixture from which a new substance results—what we would call a chemical compound—and not simply a mixture of unchanged parts, like powders or grains stirred together; see also pp. 142–43, nn. 30–31, above. Galen also complains that Athenaeus did not refute the objectionable parts of the physical theories of Aristotle and the Stoic Chrysippus—though, as a Pneumatist, Athenaeus would have been aligned with the Stoics. The Stoics, and specifically Chrysippus, held a strictly materialist theory in which *πνεῦμα*, a material spirit, interpenetrated other bodies, giving them their organic unity. This required them to hold that, in a true mixture or temperament, the parts are completely blended, such that every part, no matter how small, is perfectly
جالينوس. فًأًما أرسسطوطليس، فإنه ذكر أراج المناصر في موضوعين. أحدهما جعل ترجمته: "كّاب النّباء"، الآخر جعل ترجمته: "كّاب الكون والفساد".

"اختلافهم في المراج"

(3) قد اختلف المقدّم في أرج المراج وجعلة أزاؤهم في ثلاثة. أحدها رأى أسرقليديز، والآخر رأى الزواقين، والثالث رأى أرسسطوطليس، فأما أسرقليديز، فسؤم" أن المراج يحدث عن لزوم الأجزاء التي لا تجزى بعضها لبعض، وأنا أزاؤهم. فسؤم أن الأجزاء تدخل بعضها في بعض، وأنا أرسسطوطليس: "فبول إن الأجزاء تجزى أجراً صغير، ثم يضاء بعضها بعضًا، وكيفيتها تتمازج بكليهما عند ما تعمل إحدى
من الأجزاء في الأخرى"، وبقي كل واحدة منهما" فعل الأخرى. فيحصل من هذه الثلاثة الآراء إذا عزل عنها الزواي الأول الذي لا، يوجب مراجاً. بل تقول: "على طريق المجاور رآيان"، أحدهما رأى من يرغم أن جواهر الأجزاء يظلط".
the opinion of those who claim that bodies do not interpenetrate each other. Those who hold the first view claim that the corporeal substances interpenetrate each other. This is a principle whose basis is absurd and incoherent and from which, moreover, other absurdities follow. One of them is that the entire universe must be able to enter into a single grain of millet, which would contain it completely. That is because, if it is possible for one body to interpenetrate another, it is possible for a grain of millet to interpenetrate another grain of millet. If it is possible for one grain of millet to interpenetrate another, it must be possible for yet another to do so. This process could continue until the entire universe was divided into grains of millet and all of them had interpenetrated that first one.

(37) Those who hold the second view say that the bodies themselves do not interpenetrate each other, but they are joined to each other when they are divided into small parts. Their qualities affect each other and receive the effects of each other until they come to resemble each other and the whole becomes homoeomerous. However, the whole does not become one with respect to those single parts from which the temperament arises. Instead, it becomes something intermediate between the two. It is still potentially those two single parts from which it actually arose, but is not either one of the two.

mixed with the other components while still preserving its own nature. Critics quoted Chrysippus as saying that a drop of wine could temper the whole sea. The theory also implied that two bodies could occupy the same space, giving rise to the argument against the theory given in the epitome. See von Arnim, *Stoicorum veterum fragmenta*, 2.463–81; Long and Sedley, *Hellenistic Philosophers*, frag. 48A–F; Themistius, *In Aristotelis physica paraphrasis*, 104.9–19; Alexander of Aphrodisias, *De mixtione*, 213–38; Sambursky, *Physics of the Stoics*, 11–17. Despite his criticism of the Stoics, a Stoic-influenced Pneumatic doctrine is central to Galen’s physiology.

75. L 9.33–39; K 1:489–91; G a 113–16: Aristotle believed that temperament occurred through the interaction of qualities; cf. his *On Generation and Corruption* 1.10, where he explains that, although things broken into small parts and mixed together do not merge into each other, their qualities can affect each other, with the larger quantities having a greater effect than the smaller. The whole mixture thus becomes homoeomerous. Galen remarks that Hippocrates does not settle the question of the metaphysical nature of temperament, contenting himself with stating the fact of the phenomenon. Galen, the practical physician, states his tentative allegiance to Aristotle’s position but then reframes it in the context of the preparation of drugs: drugs crushed finely share their medicinal qualities more thoroughly.
بعضها بعضًا، والآخر رأي: من يقول إن الأجسام لا يدخل بعضها في بعض، وأهل القول الأول يزعمون أن الجوانب الجماعية يدخل بعضها في بعض، وهذا أصل مبناه: "يشن لا يفهم"، ويستحب مع ذلك: "شناعات أخرى، أخذها أنه يجب من هذا القول أن يكون العالم كله يدخل في حبة جو ورس يجريه بأجمعه. وذالك! أنه إن كان "يجوز" أن يدخل جسم في جسم، فقد يجوز أن تدخل جا ورسة في جا ورسة، وإن جا زاؤ" أن تدخل جا ورسة في جا ورسة فقد يجوز أن تدخل معها أخرى ولا يزال هذا: حتى يقسم العالم كله جا ورسة"، ويدخل جميعها في تلك الواحدة.

(٣٧) وأما أهل القول الثاني، فقولون إن الأجسام أنفسها لا يدخل بعضها في بعض، لكنهما يضاد بعضهما البعضًا عندما ينتمي أجزاء صغارٍ، فأما كثبتها، فإن عرف بعضها في بعض ويتقلب بعضها فعل بعض حتى تصير شبيهة بعضها بعضًا ؛ ويسير الكل متى لهُ. الأجزاء من أن يكون هذا الكل الواحد؟ من تلك الأجزاء المفردة التي عنها حدث الإرجاء، لكشبيهًا وسطًا فيهما ينتميهما، وهو بالقوة ذانك: الجزآن المفردة من اللذان عنهما حدث ونفعل، ليس واحد منها.
(38) When two natural bodies are in contact, having active qualities and passive qualities, those qualities being opposites, if they are equal in potency or are close to being equal in potency or in magnitude, each affects the other, and each receives the effect of the other. In that case, neither one is transformed into the species of the other, nor is it totally transmuted into the other. Something intermediate is thus generated. This kind of alteration and transformation is called “temperament.” If the two bodies are not equal, but, rather, one of them is more potent and greater in magnitude than the other, while the other is weaker and smaller than the first, then the body that is the weaker of the two and has a smaller magnitude is transformed, corrupted, and changed into the species of the more potent, and the one that is more potent is said to have increased. However, it is not said to have combined or formed a temperament, for food is not said to have combined with the flesh, nor firewood to have formed a temperament with the fire.
الجسمان

(38) متي القيا " جسمان طبيعي لهما كيابيتات فاعلة وكيفيتا متغيرة. وكلا
الكيابيتات احتد. فإنهما إن كنا متكافين في القوة أو قريبين من ذلك في القوة
أو في المقدار، فعل كل واحد منهما في الآخر وبعد كل واحد منهما فعل الآخر.
فلم يقلب أحدهما إلى نوع الآخر، ولم يسمح " إليه غاية الاستحالة، وولد بينهما
شيء وسط. وهذا الصنف من التغيير " والاستحالة يقال له مراح، وإن كان
الجسمان ليسا متكافين " لك أحدهما أقوى من الآخر، وكثر من مقدارا والآخر
أضعف من هذا وأقل " مقدارا منه. فأجسما الذي هو منها " أضعف وأقل
مقدارا يستحيل ويسد وينقل إلى نوع الأقوى "، والذي " هو أقوى " يقال
له " قد تزيد. فاما أنه قد خالط أو قد مازج، فلا، وذاك " أنه ليس يقال إن
الغذا يخلط اللحم، ولا أن الخطب يخلط النار ".
<What is said to be potential>

(39) Some things that are said to be potential are remote, and some are proximate. An example of the remote is when it is said that a child is potentially knowledgeable about grammar, or that water is potentially fire. An example of what is proximately potential is when it is said that a sleeping grammarian is a grammarian, or when it is said that pitch and sulfur are potentially fire. Some of the elements of the body are general, prior in nature, and remote from sensation. These are the ones that we mentioned previously. Others are specific, prior in sensation, and proximate; these are the tissues. Still others, the humors, are intermediate between these two classes. Because of that, we need to mention the humors first of all and only then undertake to mention the proximate elements.
الفصل العاشر

(٣٩) الآشياء، التي يقال إنها بالقوة، والقوة صبيح العالم بالقوة، وإن الله بالقوة نار، وأما القيم فهمزلة ما يقال إن القوة من الله، وإن الله بالقوة نار. وفي الزمن، والكبريت إنها بالقوة نار. عناصر البدن منها عائمة متقدمة في الطبق بعيدة عن الهواء. وهي التي ذكرناها فيما تقدم. ومنها خاصية متقدمة عند الحسن قرب. وهي الأعضاء المتصلة به الأجسام، ومنها وسط فيما بين هاتين الطبقتين، وهي الأخلاط. ومن أجل ذلك ينبغي لنا أن نذكر أولئك هذه، ثم نأخذ في ذكر العناصر القريبة.

[العنصيرات]

إلى: DFU ٥٣٦ | DFU: الأشياء | DFU: د | R٠٥٨
AF: DFU | DFU: الشيء من الأشياء | DFU: ع | R٥٣٤
(40) Difference of opinion has also occurred concerning the humors, for one group said that the structure and composition of the living body was from a single humor, while another group said that it was from several humors. Some of those who said that it was from only one humor claimed that it was from blood only; some of them said that it was from yellow bile; some of them said that it was from black bile; and some of them said that it was from phlegm. Among those who said that the body was made up of several humors were Hippocrates and his disciples, for they said that the makeup and composition of the body were from blood, phlegm, and the two biles. If you examine these five theories, you will find that three of them are false and implausible. Those are the opinions of those who claimed that the body was composed of yellow bile, those who claimed that it was composed of black bile, and those who claimed that it was composed of phlegm. That is because life depends on heat and moisture, and in none of these three humors are both combined, for yellow bile is dry, phlegm is cold, and black bile is cold and dry. The opinion of those who held that the structure and composition of the body were from blood alone is plausible but is not true. The opinion of those who thought that the body was composed of the four humors is plausible and, in addition, is true.
الفصل الحادي عشر

"اختلافهم في الآخلاق"(1)

(٤٥) وقد وقع في أمّ الرواّي اختلافًا في الرأي. وذلك أنّهم قَالَوْا إنّ بنية البدن وقوامه من خلط واحلي وقومٍ قَالَوْا إنّه من آخلاق كثيرة. فَامّا الذين قَالُوْا إِنّهُ من خلط واحلي، فَهُمُّن فِي زِمَّ، فْيَنَهُنَّ من الدم وحده، ومنهم من قَالُوْا إنّهُ من للنار. فأُمّا الذين قَالُوْا إِنّهُ من آخلاق كثيرة، فِيْنَهُنَّ إنّهُ من الدم والبلغم والرباط. وهذه الخمسة الآراء إذا امكثت وجدت ثلثة منها: وهي "رأى من يَزْمَّ: أنّ البدن مركب من الصفراء، ومن يَزْمَّ أنّهُ مركب من النحاس، ومن يَزْمَّ أنّهُ مركب من البلغم كاذبة لا مَقْتِع فيها". وذلك "أنّ الحياة إنّما تكون بالحرارة والرطوبة، وليس من هذه الثلاثة الآراء واحد يّجتمع فيهما. إِنّمَا الصفراء، بَيْسَةِ البلغم باردًا، والسُّواد باردًا بِاِبْسِه، وأُمّا رأى من يَزْمَّ أنّ بنية البدن وقوامه من الدم وحده، فهو رأى مقتع إلاّ أنّه ليس يّجتمع، وأُمّا رأى من يَزْمَّ أنّ البدن مركب من الأربعة الآخلاق، فهو رأى مقتع، وهمع هذا حكّ.

(٧٠)
(41) Those who claimed that the structure and composition of the body were from blood alone asserted their opinion by offering as convincing proof an argument from physics and the evidence of the senses.\(^{79}\) They first offered a physical argument in proof of this. They said that the substance of the animal was by motion, and imparting motion was something specific to heat and conformable with it, while ease of motion was something specific to moisture. Since this was the case, the substance of the animal was dependent on heat and moisture. Therefore, the animal must come from the matter in which heat and moisture are predominant. Since that was so, neither yellow bile nor black bile nor phlegm was suitable to be that from which the substance of the animal came. Rather, it could come only from blood, for blood was hot and moist and the qualities that predominated in it corresponded to frequent motion. Nonetheless, it also contained coldness and dryness, by which it could thus have stability and solidity and not have the highest degree of liquidity, which would not have been stable at all. Since that was the case, the body came to be from blood alone.

(42) As further proof, they then said that if two corporeal bodies came into contact and it happened that the potency of one was equal to the potency of the other, the one could transform the other\(^{80}\) and a temperament would be generated from the two.\(^{81}\) If one of them dominated the other, the dominant one would transform the one dominated and convert it into its own species, so that the latter would become an increase in the first. When the body becomes larger by means of a nutriment, the body is stronger than it was. Were that not the case, the body would have been transformed into the species of the nutriment, rather than the nutriment being transformed into the species of the

\(^{79}\) L 14.1; K 1:506–7; G* 136–37: Galen says that the opinion of those who held that the generation of the fetus is from blood alone is reasonable. However, he maintains that Hippocrates understood nature better and that his view—that the fetus is generated from all four humors—is actually the correct view. The arguments cited in the epitome in favor of the generation of the fetus from blood are not given in Galen’s *On the Elements*.

\(^{80}\) One early MS reads: “will not transform the other.” Several other MSS add: “and will be transformed from it.”

في المناسر

(4) الذين يرغبون أن بنيت البند وقوامه من الدم وحده يثبتون بذلك ويتون
 فيه بحجة القناعة من القياس على مجرى الكلام في الطبقات ومن الحسن. أما من القياس الطبيعية. فأول ما احتوى به هذا. قالوا إن جوهر الحيوان إنا هو بالحركة. والفرنك هوشيء خاص بالحرارة ملامح لها وسهولة المزاج خاصة بالحرارة، وإذا كان الأمر على هذا. جوهر الحيوان إنا هو بالحرارة والرطوبة. لماذا إذن؟ الغالب
عليها الحرارة والرطوبة. هي التي ينبغي أن يكون منها الحيوان. وإذا كان ذلك كذلك. فلا المرة الصفراء ولا المرة السوداء. ولا البلغ يعرف أن يكون منه جوهر الحيوان. لكل الدم وحده لأنه حار رطب. والأغلب عليه الطبيعة المكافية للحرك الكبيرة. وفيه مع هذا نورا وأبوسية يكون له بذلك ثبات وجود. ولا يكون في غاية إطلاق سبب لا يثبت. وإذا كان ذلك كذلك فكونه البند إذن إذا
هو من الدم.

(24) ثم احتوى بعد ذلك. قالوا إن كل جسمين يتمزقا. فيما إن كانت قوة كل
واحد منهم مساوية لقوة الآخر. يجلس الواحد منهما الآخر. ويتولد عنهما
مرجع. وإن كان أحدهما قاهر للآخر أتمنى. الفائز للهور. وأقبله إلى
نوعه. فصار زيادة فيه. والغذاء لما كان يسري به البند صار البلدن أقوى منه.
ولولا ذلك لكان البلدن يستحيل إلى نوع الغذاء. ولم يكن الغذاء يستحيل إلى نوع

اللغة العربية
body. Since all of this is the case, the composition of the body was from neither yellow bile nor black bile nor phlegm, but from blood only. This is because yellow bile is many times hotter and drier than the body. It is therefore more powerful than the body because of the intensity of its heat and because it is dry, the body being moist and the dryness being more powerful than the moisture of the body. Black bile is much colder and drier than the body, for which reason the body would be unable to transform and convert it to itself. Indeed, it would be more likely that the black bile would transform and convert the body. Phlegm is also much colder and more moist than the body. However, blood is similar in its temperament to the body, though it is less hot and more moist than the body. In both respects, it is weaker than the body. This is how they went about proving that the body was from blood by using an argument from physics.

(43) They argued from sensation using three things: first, generation; second, nutriment; and, third, that which is evacuated from and retained in the body. With respect to generation, they argued that we could see that it was blood that was deposited in the womb and from which the embryo came and that semen was of the nature of blood. Neither black bile nor yellow bile nor phlegm is deposited in the womb. The argument they gave concerning nutriment was that we could plainly see that the body was nourished from blood alone, since blood was the only one of the humors that the organs drew to themselves to take nourishment from. The organs forcibly repelled the other humors from themselves as they would repel a foreign body to which they were averse. That is why we see that even though the gallbladder, unlike
البدن. وإذاً كان الأمر على هذا، فلابد ن لا يسمى الأوبة من مرة صفراء ولا من مرة سوداء ولا من بلغم. لكن من الدم فقط، وذلك لأن فيّرة الصفراء أسفل حارة ويوسية من البدهن بأضعاف كثيرة. فهي لذلك أقوى من البدهن لتشذة حراتها ولا بذلها ببساطة. والبدن رطب والبادب أسود وأقرب من الرطب. والمرة السوداء أقرب من البدهن كبير وأبدي منه. ولذلك ليس يستطيع البدهن أن يجبلها ويلتهبها، بل هي أقوى أن يجبله ويلتهبه. واللغام هو أيضاً أبدي من البدهن وأقرب منه كثيرة. وأما الدّم فإنّه شبيه في مراجعة البده. وهو مع هذا أقل حارة منه وأكثر رطوبة منه. فهو للأمرين جميعاً أضعف من البدهن. فهذا ما أختصّب به على طريق القياس من الطبع.

(64) وأما من الحرب فاختبأ في ذلك كلّة أشياء. أقدّها الكون، والآخر الغذاء، والثالث ما يستفرع من البدهن يحتسب فيه. أما من الكون. فأختصّب أن قالوا فإنّه يمتّن إلى الشيء الذي يقع في الأرحام. ويبعد منه البدهن إنيّا هو الدّم والمنى الذي من طبيعة الدّم. فليس يقع في الأرحام عندّ البدهن، ولا واحد من المرتين ولا البلغم. وأما في الغذاء فأختصّب أن قالوا إذا نجد عياناً أن البدهن إنيّا يغتنذي من الدم فقط، وذلك أن الأعضاء إنيّا تجذب إلى إلّا من الأخلات يغتنذي به الدّم وحده. وأنا سائر الأخلات. فهي تدفّعها عن نفسها وتقدّف بها كأنّ تقدّف بالمنى لمغتذى المنى. ولذلك قد تجذب المرارة فضاً من غيرها

| A 577 | يذاعا: FY | وذ: FUY |
| D 569 | من مرة | من مرة |
| DFMSUY 534 | الطيب | DFMSUY 534 |
| DMSY 542 | أن | FU 561 |
| AF 580 | إله | DMSY 542 |
| F 586 | وما يختصّب | DY 585 |
| RF 588 | وما يختصّب | DY 585 |
| A 584 | وليس | ADMSUY 588 |
| R 590 | الكون اللّدود | A'R 590 |
| R 594 | وحده | AFU 593 |
| : FSU 592 | ما يختصّب | FSU 592 |
| : RSY 561 | بذلك | : رف | AFR 595 |
| : يذاعا: FY | وذه | AFR 595 |

المرأة
other organs, attracts yellow bile to itself, it is not nourished by it. This
is indicated by, among other things, the fact that there are blood vessels
distributed through the body of the gallbladder by which it is nourished.
Likewise, the spleen attracts black bile to itself but is not nourished by
it. Instead, it is nourished by the blood that is mixed with it. The proof
of that is that if this blood is purified and separated out from the black
bile, it will reject the black bile and expel it from itself to the mouth of
the stomach, as it does anything else that is not beneficial to it. Since
this was the case, it could be known that the rest of the humors were
superfluities consequent on the creation and generation of blood in the
same way that making wine results in scum, which is analogous to yel-
low bile, and dregs, which are analogous to black bile. This is the argu-
ment they gave for it based on nutriment. Finally, they had an argument
based on the excretion of what was excreted from the body and the
retention of what was retained in it. They explained that the retention
of the blood was necessary by nature and its excretion was unnatural.
However, it was necessary by nature to excrete each of the others—the
two biles and phlegm—and that to retain them was unnatural and harmful. Jaundice resulted from retaining yellow bile, and can-
cer and leprosy from retaining black bile. If phlegm was retained, its
retention harmed the stomach and intestines.

(44) Those who said that the structure of the body originated from
the four humors explained their view by three things: first, the diversity
of organs; second, the diversity of the blood; and, third, the excretion of
من الأعضاء وإن كانت تجذب إلى المرأة الصغيرة، فليس تسعتي بها، وما يدّل على ذلك أن عروقًا يجري فيها الدم، يغرق في جرم المرارة وتغذوه، وكذلك الخليل أيضاً، فإنّه: "تجذب إليه المرأة السوداء، ولكنها" لا تسعتي منها، بل إنما تسعتي من الدم المخاط للها، والدليل على ذلك أنه إذا أصبه هذا الدم وميزه بفصله من المرأة السوداء قذف بالمرارة السوداء ودفعها عن نفسها إلى فم المعدة كما يدفع الثدي الذي: "لا ينفع به، وإذًا، كان الأمر على هذا فقد علم أن سائر الأحلام إذا هلي فضول لا زمة لولد الدم وكونه بنزلة ما يلزم في كرن الشراب من تولده الإنذار الذي هو نظير المرأة الصغيرة والذري الذي هو نظير المرأة السوداء، وهذا ما احتفّوا به المنذة، وأما من استمراره يستغرق من البذن واحتباس ما يستحبس فيه، فاستمرار بإن قلوا إن الدم احتباسه شيء، واجب في الطبع، واستمراره شيء خارج عن الطبع، وأما: المرارة، والبلغم فاستمراره كل واحد منهما واجب في الطبع نافع، واحتجاسه خارج عن الطبع ضار، فلمرة الصغراء إذا احتبست حدث عنها البرقان، والسوداء إذا احتبست حدث عنها السرطان والجذام، والبلغم إذا احتبست أضر احتباسه بالمعدة والأمعاء. 

(4) قالوا: فإن بنيت البذن من الأربعة الأحلام بنيوا ذلك من ثلثة أشياء، أحدها اختلاف الأعضاء، والآخر اختلاف الدم والتالث استمرار ما
what is excreted from the body.\textsuperscript{82} With respect to the diversity of organs, they said that each of the organs was nourished by a humor whose temperament was approximately similar to its temperament. Some organs were cold and moist, such as the brain; some were cold and dry, such as bone; some were hot and dry, such as the lungs; and some were hot and moist, such as flesh. Thus, it was clearly the case that flesh would have to be nourished by a humor that was hot and moist—a description that applies only to pure blood. Bone could only be nourished by a humor that inclines toward cold and dryness—an attribute existent in the humor belonging to the genus of black bile. The brain could only be nourished by a cold, moist humor—an attribute existent in phlegm. The lungs could only be nourished by a hot, dry humor—an attribute existent in yellow bile. With respect to the diversity of the blood, they argued that milk appears superficially to us to be a single thing, yet it is compounded from diverse substances. Part of it is water, part cheese, and part butter. In the same way, there is something coarse in blood, analogous to dregs; something dense, analogous to black bile; something else subtle and reddish, analogous to a red bile; and something white, analogous to phlegm. For this reason, blood has various states of color and composition corresponding to the difference of ages, the difference of times of the year, the difference of the animal’s temperament, and the difference of the temperament of the body. With respect to the excretion of what is excreted from the body,\textsuperscript{83} they argued that, when a person takes a purgative drug to excess, we see that the

\textsuperscript{82} L 11.3–15; K 1:494–97; G\textsuperscript{a} 120–23: The epitome gives an expanded restatement of the argument from On the Elements. Galen mentions an alternative theory that the fetus was generated by blood and that the various tissues were generated by separating out the harder, moister, hotter, and cooler parts of the blood. However, he thinks it is more natural to suppose that blood contains the other humors from the beginning, as is indicated by the diversity of blood encountered by the physician.

يستغرق من البطن، أما من "اختلاف الأعضاء"، فإنهم قالوا: "إن كل واحد من الأعضاء، إنما يشتري من خلال مزاجه شهية تربة على الزيت. وكانت الأعضاء بعضها ببعض في "مزية الدماغ"، وبعضها ببعض في "مزية العظام". واختلاف حازم، رتبة، بعضها "مزية الدماغ"، وبعضها "مزية العظام"، فتألَّف منها أن لكل إنسان يشتري من خلال مزاجه شهية تربة. وهذه الصنفة، إنها للذين يشتريون من خلال مزاجهم، والذين ينتمون إلى علف الدم درد. والكشف". نظرية" المزية.

وشيء آخر يضيق، يصعب إخراجه من الحفرة من جهة الجزء الداخلي، وشيء آخر من جسم البلغم، وذللك صار من الدم مختلف الحالات في لونه، وفي قوامه بحسب اختلاف الأسنان وحسب" اختلاف أوقات السنة وحسب اختلاف مزاج الديوان وحسب اختلاف مزاج البدن. وأن من "استغرقما يشتري من البطن. فإنهم قالوا إذا أخذوا نزى الذهاب للمسيل إذا أخذوا إنسان فافترق بصاحبه السهال حتى

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purgative acts on the person who has taken it until he has excreted all of that humor in his body to which the particular drug is specific. After that, it expels another humor that that drug is not intended to purge, and he dies.\textsuperscript{84} Since that is the case, it is clear that the body needs all four humors to remain in health.

(45) The color of the blood\textsuperscript{85} is known from the color of the outside of the body and by its appearance during bloodletting.

\textless The rest of the drugs\textgreater \textsuperscript{86}

(46) If a purgative drug is administered and its purgative effect is excessive, the first thing to be expelled by the purgation will be the humor for which that purgative is specific. After that, the finest and most responsive of the remaining humors will be expelled, followed by the grosser and more difficult humors. Finally, blood, the humor most closely associated with nature, will be expelled. For example, if we were to give a drug that purges yellow bile, the first thing that it would expel would be yellow bile. After that, it would expel phlegm, then black bile, and finally it would expel blood. If we were to administer a drug that purges phlegm, the first thing that would be expelled would be phlegm, then yellow bile, then black bile, and finally blood. If we were to administer a drug that purges black bile, the first thing it would expel would be black bile; then after that it would expel yellow bile, then phlegm, and then finally it would expel blood. Each of the purgative drugs first attracts the humor that it specifically purges from the cavities of the

\textsuperscript{84} A gloss in one MS reads: “That drug will not cause the excretion of the other humor until all of the humor for which that drug is specific has been excreted.”

\textsuperscript{85} L 11.15–16; K 1:497; G\textsuperscript{a} 122–23.

\textsuperscript{86} L 13.12–15; K 1:504; G\textsuperscript{a} 133; Hippocrates, \textit{On the Nature of Man} 6. This account of the effects of excessive purgation comes from Hippocrates.
يستغرق ما في بدنة من الخلط الذي ذلك الدواء مخصص بإسهاله وخرج بعده
خلط آخر ليس من شأن ذلك الدواء إسهاله ماتم، وإذا كان الأمر على هذا فقد
تين أن البند يحتاج في البقاء على السلامة إلى المناخ الأرزة.

(٤٥) لون الدم يحرف من لون البشرة من خارج ومن زينته إذا استغرق فيصل العرق.

باقي الأدوية (٤٦)

(٤٦) إذا سقي الدواء المسهل، فأطرع عمله في الإسهال، كان أنه أول شيء يخرج بالإسهال الخلط الذي ذلك الدواء مخصص بإسهاله. ثم يخرج بعده أرق الأخلات البارقة وأسهالها إجابة، ثم يبعث ذلك أغلظ الأخلات وأشدها عسرًا، وفي آخرالأخلاط يخرج بعدها كله أخص الأخلات بالطيب، وهي الدم. مثل ذلك
أن إذا سقينا دواء يسهل المرة الصفراء كان أول شيء يخرج مع صفراء، ثم يخرج بعده بلغم، ثم مرة سوداء، وفي آخرالأخلاط يخرج الدم، وإن سقينا دواء يسهل البلغم كان أول شيء يخرج البلغم، ثم يخرج بعده مره صفراء، ثم مرة سوداء، ثم
في آخرالأخلاط يخرج المزة، وإن سقينا دواء يسهل المرة السوداء كان أول شيء يخرج مرة سوداء، ثم يخرج بعدها صفراء ثم بلغم، وفي آخرالأخلاط يخرج الدم، وكل واحد من الأدوية المسهلة يجذب في أول الأمر الخلط الذي هو.
hollow organs. After it has cleansed all of that humor located there, it will harshly attract the humor specific to it from the substance of the original organs. It is the violent harshness of this attraction that extracts the other humors that it is not specific to from the organs, along with the humor that it is specific to. However, it will first attract and extract from the organs the other humor that is easiest to lead out, is least resistant and quickest to respond to it, and is least natural there. After that, it will expel what is less responsive and more natural there, and in the end it will expel what is most natural, which is blood.

<The division of the elements>^87

(47) There are two kinds of elements. Some have qualities that remain in their natural state, and others have qualities that diverge from their natural state. The elements that are in their natural state are those that are existent in nature—such as fire, by which there is life, and elemental water, on which life is also based. The elements whose qualities diverge from the natural state are those in which the qualities peculiar to them have become excessive and thereby destroy life—for example, ice, in which the coldness has become excessive, and burning fire, in which heat has become excessive. The same is true of the humors, for some of them are elemental and natural. These humors

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^87. This paragraph consists of various observations about the elements and humors, most not closely connected to Galen’s text.
في العناصر

خصوصية بإسهامها من تحفيز الأعضاء المجاورة. ثم إنه بعد ذلك إذا استُخلص ما هناك من ذلك الخلط اجتذب ما في جذور الأعضاء الأصلية من ذلك الخلط الذي هو خصوصيةً "ب اجتذابً عنيفًا. ونشد اجتذابه وعنه يُنزع ً" منها مع الخلط الذي هو خصوصية به الخلاط الذي ليس خصوصية بها إلا أن أول شيء يُجذب به ويتزع منها أسهلها "القيادتها" وأكثرها مرونة "وأسرعها إجابًا وأقلها خصوصية" بالطبيعة. وهذه أسرعها إجابًا وأبدوها عن القرب من الطبيعة، وفي آخرناً مرحلاً بالطبيعة، وهو الدلَّ.

تقسيم العناصر  "(١٤٧)

العناصر صنفان، فإنها عناصر كيميائياً باقية على الحال الطبيعية، ومنها عناصر كيميائيا خارجة عن الحال الطبيعية. أما تلك الكيميائيا على حال الطبيعية، فهي العناصر التي الموجودة في الطبع بمخللات النار التي تكون بها الحياة والما..  "العناصر" الذي هو أيضاً ما تكون به الحياة، وأنا التي كيميائيا خارجة عن الحال الطبيعية. فهي العناصر التي قد أُفْتِ في الكيميائيا التي هي خصوصية بها، فهي لذلك مفسدة للحياة بمخلل الجيد الذي قد أُفْت في البر ولهيب النار الذي قد أُفْت في الحرارة، وكذلك الأمر في الخلاط، فإنها عناصرية طبيعية.

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are moderate, sweet to the taste, and nourishing to bodies, like those of them that are mixed in the blood. That is because a nutriment is sweet insofar as all of its parts are sweet to the taste. Those humors that are mixed in the blood we call yellow bile, black bile, and phlegm. Others of them are unnatural. These are the excesses of those qualities conformable to nature. Whatever is like this does not nourish but, rather, is repelled and expelled from the body as something to which the body is averse. When it is retained, it harms and corrupts the body. Whatever is like this\textsuperscript{88} is never sweet. Yellow bile of this sort is bitter, black bile is sour and astringent, and phlegm is sour or salty.

(48) If blood or semen is deposited in the womb, nature separates it.\textsuperscript{89} That portion of it that is coarse, cold, dry, and inclining toward black bile becomes matter for the generation of the bones. That portion of it that is cold, moist, and phlegmatic becomes matter for the generation of the brain. That portion of it that is hotter and more moist becomes matter for the generation of flesh. That portion of it that is hottest and driest becomes matter for the generation of the lungs.

\textsuperscript{88} Some MSS read: “Whatever is of this genus.”

\textsuperscript{89} L 11.6–7; K 1:495; G\textsuperscript{a} 120–21: Galen is speculating about the means by which the embryo is formed.
وهيا معتدلة حلوة المذاق تذيد الأذان بمنزلة ما هو خالط منها للدم، وذلك لأن كل غذاء فهو حلو، مقبل أن جميع الأعضاء حلوة الطعم، وهذه الأخلات المخاطبة للدم تمكن نسبيها مرّة صفراء وسوداء وملكلها. ومنها خارجة عن الطبع، وهي إفراط تلك الكيفيات الملايأة للطبيع، وما كان كذلك فليس يفدو، بل يدفع وينجز عن البدن بمنزلة الماء المنافق، ومثل احتمس أضر بالبدن وأفسده، وليس من هذا شيء له حلاوة بل مرّة الصفراء من هذا الجنس مرّة السوداء حامضة عنصرة، والبلغم حامض أو ماح.

(84) وإذا وقع الدم في الأرحام أو المنى ميزته الطبيعة فصار ما هو منه غليظ برداء رسائل إلى السواء مادّة لكون العظام وما هو منه برد رطب بلغى مادّة لكون الدماغ وما هو منه أشدّ حرارة وروطّة مادّة لكون اللحم وما هو منه أشدّ حرارة وبيسا مادّة لكون الرئة.
(49) Opinions differed about purgative drugs. In general, there were two opinions. One was the opinion of Hippocrates, who believed that every purgative drug attracted the humor to which it was specific. The other was the view of Asclepiades, who thought that each purgative drug generated the humor that it purged. This second opinion is open to refutation in two ways. First, we find that it is difficult to treat someone phlegmatic with drugs that purge yellow bile, and they may actually harm him, whereas he can easily be treated with drugs that purge phlegm, and these are beneficial to him. On the other hand, it is difficult to treat the one who is dominated by yellow bile with drugs that purge phlegm, and these may actually harm him, whereas it is easy to treat him with drugs that purge yellow bile, and these are beneficial to him. Second, we find that, after a purgative drug has cleansed the humor to which it is specific, it then expels another humor to which it is not specific. This implies one of two things: first, the potency of the

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90. L 12.1–8; K 1:499–500; G a 125–28: Galen attributes to Asclepiades the theory that a purgative drug does not draw out the humor but rather converts what is in the body into something else, thus neutralizing that humor. By this account, all evacuations would be the same.
91. Some MSS read: “The Ancients.”
92. A gloss in one MS reads: “This man [Asclepiades] believed that the purgative drug for yellow bile converts whatever humor is existent in the body into yellow bile and then purges it. Since scammony is hot and dry, it converts the humor existing in the body, thus making the body hot and dry. This results if what is excreted is yellow bile. If this were the case, then, after a suitable drug caused something to be purged, we would find relief, because two humors would never be in our bodies to cause us to suffer pain.” Cf. Galen, On the Natural Faculties 1.15, where the subject is discussed at greater length.
"اختلافهم في الدواء";

(42) قد اختلف الروأين في الدواء المسهل، وحصولهما رأيان. أحدثهما رأي إبراهيم الذي يعتقد أن كل واحد من الأدوية المسهلة إذا يجرين الحال الذي هو مخصوص به، والآخر رأي أصبيباً ذاائي الذي يظن أن كل واحد من الأدوية المسهلة إذا يجرين الحال الذي يسهل، وهذا الراي يتسم من وجهين: أولاً، أنهما ناديت عن كان البصل عليه البصل يصير إسهاله بالأدوية التي تسهل الخلط الصفراء وضعت به. ويسهل الأمر في إسهاله بالأدوية التي تسهل البصل ويسهل بها. ومن كان البصل عليه الخلط الصفراء عصر إسهاله بالأدوية التي تسهل البصل ويفتح بها. والوجه الآخر ناديت الدواء المسهل إذا استطاع الخلط الذي هو مخصوص به أخرجه بعدة خلطات، أما ما ليس هو مخصوص به، ولا بد في ذلك من أحد أرمين. وإما أن تكون

drug might decline, weakening until it disappears—in which case it would very likely not be able to expel anything, since it would be unable, in this circumstance, to generate anything, its potency being lost. The other possibility is that its potency continues. If it continues, the purgative must continue to expel that which it had been expelling since the beginning. 93 You cannot say that it was hot in the beginning and so generated yellow bile and, after that, changed back and so began to generate phlegm. If it did, its temperament would be entirely transformed, and it would cease to be purgative, since we do not find a cold purgative drug. However, it is utterly unacceptable for you to say that the purgative drug acquires differing temperaments in the body, each of which is opposite to its counterpart in this degree—in such a way that, at one time, it becomes hot and dry while it is purging yellow bile and, at another time, becomes cold and wet when it is purging phlegm, then becomes cold and dry when it is purging black bile, eventually becoming once more hot and moist when it is purging blood. 94

93. A gloss in one MS reads: “One must know that the drug that purges a humor does not cause it all to be excreted, for the humors are continually in the body and merely increase and decrease there. The drug attracts due to the correspondence between it and the humor.”

94. A gloss in S: “This refutation is directed against the opinion of Asclepiades that the patient finds relief in excretion in general. Were this true, when we treated someone with a drug that purges yellow bile, it would be harmful, not helpful, since a harmful humor remains as it was.”
قوة الدواء قدّ: خارج ومضعفت وبطلت فلا ي ينبغي لهم، حيث أن يخرج شيء
إذ كان لا يقدر عن هذه الحال أن يولد وقوته قد بطلت. وإما أن تكون قوته باقيه.
وإن: كانت باقيه فينغي: أن يخرج ما لم ينزل بجره منذ أول الأمر، فإنه ليس
يجوز لك أن تقول إنه كان أولاً حراراً، فكان يولد الصفراء، وبعد ذلك يرد فصار
يولد البلغم لأنه إن كان مراجه قد استنال هذه الاستفالة كلها، فقد بطل من أن
يكون مسيماً لا تيس نجد دواء مسيلة باردًا، مع أن هذا شنعاً منكر جدًا أن تقول
إذن الدواء السهل يكتسب في البدن أمرًا، كل واحد منهم من الخلاف.
صاحب في هذا الحال، فيصير مرة حارًا بإنساء عند إسهاله للصفراء ومرة باردًا رطباً
عند إسهاله للبلغم، ثم يصير باردًا بإنساء عندما يسهل المرارة السوداء، ويرفع في
آخره مر فيصير حارًاً رطباً عندما يسهل الدم.

في المناصر

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(50) The humors in the body are in two locations. Some of them are contained in the cavities of the blood vessels. These are the first to be attracted by purgative drugs, which happens easily and quickly. Others are in the very substances of the primary organs. The purgative drugs attract these humors once they have cleansed those that are in the vessels. The strength and severity of the attraction draws not only the humor for which the purgative drug is specific, but also another humor to which the drug is not specific; and this too is purged.96

95. L 14.5–6; K 1:508; G^a 139–40: Galen mentions that excessive purgation draws the humors out of the substances of the organs, thus destroying the body.

96. A gloss in one MS reads: “No one should say that there is only one humor; rather, the organs differ with respect to the difference of the effect of heat on it. Thus, in the part of the humor in which the heat acts more strongly, ripening and hardening, bone results. Flesh results from what is less than that. This is why bodies differ. We say that the difference of the effect of heat in a single thing is not due to the effect of diverse substances. Those who think that there is only one humor think that the cause of our differing complexions is that we are always in an unnatural state. Galen refuted their view and asked, in shock, ‘Do you think that there is any time when it is in a natural state? Why is it not in a natural state all the time? That which is manifest in us is only blood.’ It is due to these difficulties that Galen said that the theory of humors is convincing but not known inductively.”
الفصل الرابع عشر

موضوع الأخلاط

(٥٠) الأخلاط من البدن في موضوعين. فبعضها في تجنيف العروق محصورة، وهذه هي أول شيء يجتذبه الأدوات المسهلة بسهولة وسرعة، وبعضها في نفس جواهر الأعضاء الأصلية. وإذا اجتذبت الأدوات المسهلة هذه الأخلاط عندما يستنفف ما في العروق منها جذبً، بشدة اجتذابها وعنفها مع الحلط الذي يذو إملاك في السهل مخصوص بإسهالة. خلقت، آخر، ليس ذلك الدواء مخصوص به. فأسهل...

ADFMY ٩٩١ | إذا: F | DMSY ٨٩٢ | إذا: F | R٢ ٦٨٧


Fu ٠٤ | وأسهله: R٢٣ ٦٠٠ | Fu ٠٤ | وأسهله: R٢٣ ٦٠٠ | Fu ٠٤ | وأسهله: R٢٣ ٦٠٠

٨٩١ | إذا: F | DMSY ٨٩١ | إذا: F | R٢ ٦٨٧


٨٩١ | إذا: F | DMSY ٨٩١ | إذا: F | R٢ ٦٨٧

The end of the Alexandrian epitome of Galen’s book

*On the Elements*

*According to the Opinion of Hippocrates*

in the form of commentary and summary,

translated by

Ḥunayn ibn Isḥāq⁹⁷
تمت جمعه كتاب جالينوس في المناصر
ترجمة: حنين بن إسماعيل

في المناصر

تمت جمعه كتاب: AM 725 | على رأي إبراهيم:
+ بالإسكندرانيين لكتاب F 726 | على رأي إبراهيم:
+ وما عن جمعه الإسكندرانيين: R
+ والخفيص في المهام: نقل: A 728 | والخفيص:
+ والإسطفاطات على رأي إبراهيم: S: M 728 | إسماعيل:
+ جماع الإسكندرانيين: DY
+ رحمه الله: F: - إسماعيل:
+ وكتب سلام بن صالح بن خضر بن إبراهيم المعروف معلم: شفراعم في خمس يوم من
+ تشرين الآخر سنة ست ألف وسبع مائة وتسعة وأربعون لا بوا آدم عليه رحمه الله من دعا [كذا]
+ قول به الأم: رحمة
+ والخفيص وحمده.
+ عوض به نجاة أخرى: وضح حسب الطاقة والخفيص: U
+ الحير: ولهب العقل ومعاني
Appendix 1:
Greek and Islamicate Physicians

Few of the ancient and medieval physicians and philosophers referred to in this book are household names. As in the underlying works of Galen, the epitomes mention various ancient physicians and philosophers by name; Galen, indeed, is our most important source of information for the doctrines of Hellenistic physicians. The individuals mentioned in connection with the composition of the epitomes are even more obscure. The following are the ancient physicians mentioned in the text of the epitome of On the Sects, including a few names given only in certain manuscripts or mentioned elsewhere in the text. I have also included those mentioned in historical sources in connection with the composition of the epitomes and a few Islamicate physicians (most of whom are actually Christians) who appear in the historical documentation of the epitomes or in the manuscripts. In most cases, I have given references only to standard reference sources, notably Pauly-Wissowa and its recent updates (RE, BNP), The Complete Dictionary of Scientific Biography (CDSB), Dictionnaire des philosophes antiques (DPA), The Encyclopaedia of Islam (EI), and Geschichte des arabischen Schriftums (GAS). Readers needing access to primary sources can easily trace them through these references.

Acron of Agrigentum (fifth century BCE). Physician, contemporary and fellow-townsmen of Empedocles. Later Empiricists traced the origin of their school to him. He was known to Islamicate physicians through quotations as an authority on dietetics and as the first in the succession of physicians between Parmenides and Plato the Physician. BNP 1:113; DPA 1:50–51; GAS 3:22; RE 1:1199.
Agnellus of Ravenna (sixth century CE). Obscure medical teacher and writer to whom a Latin commentary on Galen’s *On the Medical Sects* is attributed, as well as commentaries on *The Pulse for Teuthras* and *Therapeutics for Glaucon*. BNP 1:345; see p. xl and n. 28 above.

Akīlāʾus. A variant spelling in one source for Archelaus. See above, p. xl, and below, s.v. “Archelaus.”

Alcmaeon of Croton (fl. early fifth century BCE). Mentioned by Galen in *On the Elements* as the author of a work entitled *On Nature*. He had a theory of opposites similar to that of the Pythagoreans and was interested in natural phenomena, medicine, and the functioning of the senses, though it is not clear whether he was a physician himself. Except for references in Aetius’s doxography, he was unknown to the Islamic world. BNP 1:454–55; CDSB 1:103–4; DK 24; DPA 1:116–17; KR 232–35; RE 2:1556.

ʿAlī ibn Riḍwān (998–1061). A distinguished but self-taught and argumentative physician in Fatimid Egypt; his famous dispute with Ibn Buṭlān concerned the merits of learning from books without a teacher. He followed Galen closely and had an impressive knowledge of ancient medicine and science. Several of his works, notably a commentary on *The Small Art*, were translated into Latin, where his name was given as “Haly Abenrudian.” CDSB 11:444–45; EI, s.v. “Ibn Riḍwān.”

Anaxagoras of Clazomenae (500–428 BCE). Presocratic philosopher and one of the Ionian physicists. He lived and taught in Athens from 461 to 431, until he was tried for impiety and exiled. He taught a theory that accepted Parmenides’s denial of material change by claiming that the material universe consists of an infinite number of tiny particles of each of the simple kinds of things—“homoeomerous seeds.” He was known to the Islamic world through references in doxographical sources. BNP 1:656–57; CDSB 1:149–50; DK 59; DPA 1:183–87, supp. 751–59; KR 362–94; RE 2:2076–77, supp. 1:78, supp. 12:28–30.

Anaximenes of Miletus (sixth century BCE). Presocratic philosopher and Ionian physicist who held that the primal element was air, identified with soul, which condensed in stages to wind, clouds, water, earth, and stone. He was said to have been a student of Anaximander or Parmenides. He was known to the Islamic world through doxographies and is mentioned as a teacher of Pythagoras. BNP 1:661–62; DK 13; DPA 1:192–93, supp. 761–65; KR 143–62; RE 2:2086–98, supp. 1:78, supp. 12:69–71.
Angeleuas (before 600). An otherwise unknown physician quoted on the anatomy of the bladder by Stephanus in his commentary on Galen’s *Therapeutics for Glaucon*. He was perhaps the Anqīlāʾus of the Arabic sources or, less plausibly, Agnellus of Ravenna. See p. xl above.

Anqīlāʾus (ca. sixth century). Mentioned by all the sources as one of the compilers of the Alexandrian epitomes, and by three as the leader of the group. His name is also given as Nīqālāʾus (Nicholas). Ibn al-Qīṭṭī gives a biography of him that contains little that could not have been inferred from the epitomes. See pp. xxxix–xl and s.v. “Angeleuas” above.

Apollonius. Three Empiricist physicians. Though the epitome of *On the Sects* refers to “Apollonius,” the pseudo-Galenic *Introduction to Medicine* refers to “the two Apollonioi,” by which is certainly meant Apollonius of Antioch, known as “the Empiricist,” and his son Apollonius Byblas, “the bookworm,” both of the second century BCE. The former carried on a dispute with the Herophilian physician Zeno on “characters.” *DPA* 1:282–84; *RE* 3:149, no. 101. There was also a first-century-BCE Empiricist, Apollonius of Citium, whose book on joints survives and whose Empiricism is attested by his contempt for Herophilian anatomy. *BNP* 1:881–82; *RE* 3:149, no. 102.

Archelaus (ca. sixth century). One of the Alexandrian epitomists, whose name is given as “Arkīlāʾus” or “Akīlāʾus.” He cannot be identified with certainty but may be the author of an extant Greek commentary on Galen’s *On the Sects* and/or a work on urine quoted in Islamic sources. Ullman, *Medizin*, 83.

Aristotle (384–322 BCE). Greek philosopher, student of Plato, and major influence on the later medical and scientific tradition, particularly through his theory of the four primal qualities and four material elements.

Arkīlāʾus (ca. sixth century). One of the Alexandrian epitomists. Despite suggestions that this name is a duplication of Anqīlāʾus or is derived from the name of the Italian city of Aquilea, this clearly represents “Archelaus.” See “Archelaus” and pp. xxxix–xl above.

Asclepiades of Bithynia (first century BCE). Advocate of a theory of medicine based on the flow of corpuscles through pores. Though his theory was later adapted by the Methodists, he himself is more properly classified as a Rationalist. He was famous for his mild treatments using such means as diet, massage, light exercise, and bathing and was the first Greek physician to achieve major success in Rome. He was

*Athenaeus of Attaleia* (fl. first century). The founder of the Pneumatic school of medicine, which applied Stoic ideas about materialism and *pneuma* to medicine. His works are lost, but he is cited often by Galen and Oribasius. He was little known in the Islamic world. *BNP* 2:244–45; *CDSB* 1:324–25; *DPA* 1:643–44; *GAS* 3:56–57; *RE* 4:2034–36.

*Chrysippus of Soli* (ca. 280–205 BCE). Third leader of the Stoic school whose extensive and systematic writings—all lost apart from fragments—standardized Stoic thought and were probably responsible for the success of the school into the Roman imperial period. The Stoic and Chrysippean doctrine of the *pneuma*, an all-pervading spirit composed of fire and air, was his most important contribution to medical thought. He is frequently criticized by Galen. *BNP* 3:288–93; *CDSB* 20:122–23; *DPA* 2:329–65; *RE* 6:2502–509, supp. 12:148–55.

*Democritus of Abdera* (ca. 460–370 BCE). With his teacher Leucippus, the founder of ancient atomism. His student Nausiphanes was the teacher of Epicurus, whose atomism carried on Democritus’s ideas. He held that the universe was composed only of indivisible atoms and void. Differences among physical objects are to be explained by the sizes, shapes, and arrangements of atoms. The Islamic world knew him as an Atomistic philosopher through the doxographies and as an alchemist and physician, with several books on each subject being attributed to him. *BNP* 4:267–69; *CDSB* 4:30–35; *DK* 68; *DPA* 2:649–716, supp. 765–73; *GAS* 3:23; *KR* 400–426; *RE* 9:135–40, supp. 12:191–223.


*Diodorus Cronus* (fl. ca. 300 BCE). Megarian philosopher, best known for devising the “Master Argument,” dealing with the problem of future contingents. De Lacy’s Greek edition of Galen’s *On the Elements*,

Diogenes of Apollonia (fl. ca. 440–430 BCE). A very late Ionian physicist who, like Anaximenes, held that the primal element was air. The author of one or four books on nature, he is probably the Diogenes cited by Galen as the author of a systematic treatise on the causes and remedies of diseases. Arabic sources mention a Kitāb al-aghdhiyah (book of nutriments), as well as various philosophical positions derived from the doxographies. He is not to be confused with Diogenes of Sinope, the Cynic, who was also known to the Islamic world. BNP 4:448–49; DK 64; DPA 2:801–802; GAS 3:47–48; RE 9:765–76, supp. 12:233–36.

Dogmatic school. See Rationalist school.

Empedocles of Agrigentum (ca. 490–430 BCE). Sicilian philosopher who was the first known exponent of the four material elements of earth, air, fire, and water, which he combined with two active principles: love and strife. He was well known in the Islamic tradition as one of the five pillars (asāṭīn) of philosophy and appears both in biographical dictionaries and doxographical sources. BNP 4:943–47; CDSB 4:367–69, 20:395–98; DK 31; DPA 3:66–88; KR 320–61; RE 10:2507–12, supp. 12:141–48.

Empiricist school. A medical sect founded around 260 BCE by Philinus of Cos, a student of Herophilus. The Empiricists stressed the role of medical experience in treating disease and denigrated the role of scientific understanding of the causes of disease. Galen disapproved of their theories, though he was often more respectful of them in practice. Nutton, Ancient Medicine, 146–50; RE 10:2516–24. See pp. 23–24 above.

Epicurus of Samos (342–270 BCE). Though best known for his ethical hedonism, he is relevant here as an advocate of atomism and a medical theory based on it. Though his name appears in the doxographies, the Islamic world knew little of him. BNP 4:1071–84; CDSB 4:381–82; DPA 3:154–81; RE 11:133–55, supp. 11:579–652.

Erasistratus of Ceos (ca. 304–ca. 240 BCE). A physician in Cos and Alexandria, one of the most important physicians of antiquity. Among the few pre-modern physicians to have done human dissection, he also performed vivisection, though it is not clear whether on animals or condemned

Galen of Pergamon (129–ca. 216). The most important physician of antiquity. The son of a prosperous architect, Galen studied medicine in Pergamon, Smyrna, and Alexandria. He then practiced in Pergamon, Rome, and elsewhere, eventually becoming a court physician. In addition to his extensive writings on medicine, he also wrote on logic and philosophy; his philosophical sophistication is evident throughout his medical writings. He was an advocate of Hippocratean medicine at a time when Empiricists and Methodists were in the ascendant. Despite his belligerent attitudes towards rival schools, he seems also to have drawn on them extensively. His reputation grew steadily after his death until, in late antiquity, his works largely supplanted those of other medical schools—except, as was the case with Hippocrates, when they were recommended by Galen himself. He was very well known in the Islamic world, with long entries in the biographical dictionaries of physicians and philosophers. A large number of his works (and some spurious works) were translated into Arabic; many survive, including some now lost in Greek. BNP 5:654–61, supp. Dict. 275–80; CDSB 5:227–33, 21:91–96; DPA 3:440–466; GAS 3:68–150; RE 13:578–91.


Gorgias of Leontini (fl. second half of fifth century BCE). A sophist and teacher of rhetoric in Athens, now best known as the eponym of a dialogue of Plato. Galen mentions his treatise entitled On Being or On Nature, in which he sought to prove that nothing existed and, that if something does exist, it is unknowable and, therefore, incommunicable. BNP 5:933–35; DK 82; DPA 3:486–91; RE 14:1598–619, supp. 4:710.

Heraclides of Erythrae (fl. late first century). A follower of Herophilus known mainly through citations in Galen. He composed at least seven books on Herophilean medicine and was one of the first commentators on Hippocrates’s Epidemics. He is mentioned unambiguously in The Small Art and Agnellus’s lectures on The Medical Sects.

**Heraclitus of Ephesus** (fl. ca. 500 BCE). A philosopher whose central theme was the role of logos, an all-encompassing reason that orders the universe. Though best known now for his paradoxical dicta, the doxographers were interested in him as an advocate of the view that fire, which he held was the physical counterpart of logos, was the primal element. He was not well known to the Islamic world, though he appears in doxographical materials. *BNP* 6:176–78; *CDSB* 6:289–91; *DK* 22; *DPA* 3:573–627; *KR* 182–215; *RE* 15:504–8, supp. 10:246–326.

**Herophilus of Chalcedon** (ca. 330–260 BCE). A student of Praxagoras who spent most of his career in Alexandria, where he perfected his knowledge of anatomy through human dissection. Apart from anatomy, he is known for a new classification of the subject matter of medicine, later adopted by Galen in *The Small Art*, that divides it into matters related to health, matters related to disease, and matters related to neither—the last including therapeutics, surgery, and diet. He was known to the Islamic world, if at all, through citations in Galen and the doxographies. *BNP* 6:274–76; *CDSB* 6:316–19; *GAS* 3:52–53; *RE* 15:1104–10, supp. 8:179; von Staden, *Herophilus*.

**Hippasus of Metapontum** (fifth century BCE). A Pythagorean philosopher who appears in the doxographies as an advocate of the view that fire is the primal element, though his actual interests, so far as they are known, seem to have been mainly mathematical. Ancient tradition claims that he was expelled from the Pythagorean school for revealing its secrets. He was unknown to the Islamic world apart from the doxographies’ reference to fire. *BNP* 6:339–40; *DK* 18; *DPA* 3:753–55; *RE* 16:1687–88.

**Hippocrates of Cos** (ca. 460–377 BCE). The semimythical “Father of Medicine” and, by Galen’s account, the founder of the Rationalist School of medicine. About seventy works attributed to him survive, many or most of which are clearly not authentic. Similar doubts attach to his ancient biographies. He is mentioned as a great physician by both Plato and Aristotle, but little more than that can be known with certainty. Much of the traditional view of Hippocrates is
based on Galen’s interpretations of his works. However, it is clear that Galen is projecting his own views back on Hippocrates, as can be seen by a comparison of Hippocrates’s *The Nature of Man* with its supposed commentary, *On the Elements*. *BNP* 6:354–63; *CDSB* 6:418–31, 21:321–26; *DPA* 3:771–90; *GAS* 3:23–47; *RE* 16:1801–52, supp. 3:1154, supp. 6:1290–1345, supp. 12:486–96.

**Hippon of Samos** (fl. mid-fifth century BCE). A Pythagorean with medical interests, he is best known for holding that the primal element is water. He was led to this view by physiological considerations, thus making his notion of primal water quite different from Thales’s. Aristotle dismisses him as unworthy of mention. He seems unknown in the Islamic world. *BNP* 6:372; *DK* 38; *DPA* 3:799–801; *RE* 16:1889.

**Ḥunayn ibn Isḥāq al-ʿIbādī** (808–873). Probable translator of the Alexandrian epitomes and the most important medieval translator of Greek texts into Arabic. As an Iraqi Christian, he knew both Arabic and Syriac and is said to have learned Greek during two years of intensive study. His importance rests on the large number of Greek texts that he translated—directly into Arabic and Syriac, and into Arabic via Syriac—and the sophistication of his translation techniques in comparison to his predecessors. He was particularly interested in medicine, and his auto-bibliography of his translations of Galen survives. He was assisted in his translation work by his son Ishāq and his nephew Hubaysh ibn Hasan. Bergsträsser, *Neue Materialien*; Ḥunayn ibn Ishāq, “Risālah”; *CDSB* 7:24–26, 15:230–49; *EI*, s.v. “Ḥunayn b. Ishāq”; *GAS* 3:247–56; Meyerhof, “New Light.”


**Ibn Buṭlān, al-Mukhtār ibn al-Ḥasan** (d. 1066). Christian physician and theologian of Baghdad. A leading student of Abū’l-Faraj ibn al-Ṭayyib, he was a learned, well-traveled, but somewhat difficult man. He is best known now for his controversy with the Egyptian physician ʿAli ibn Ridwān and his *Taqwim al-ṣiḥḥah*, a manual of medicine in the form of tables that was translated into Latin. *EI*, s.v. “Ibn Buṭlān”; *CDSB* 2:619–20; Schacht and Meyerhof, *Medico-Philosophical Controversy*. 
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*Ibn al-Nadīm* (c. 995 or 998). A bookseller in Baghdad who wrote the Kitāb al-fihrist, a catalog of all books in Arabic known to the author. The book is the most important source of information on works translated from Greek into Arabic. *EI*, s.v. “Ibn al-Nadīm.”


*Ibn Rushd / Averroës* (1126–98). Philosopher and legal scholar best known for his commentaries on Aristotle. He also wrote a medical textbook, al-Kullīyāt, and summaries (talkīṣ) of Galen’s works, a number of which survive, though they were better known in Latin and Hebrew in Europe than in the Islamic world. *CDSB* 12:1–9; *EI*, s.v. “Ibn Rushd.”


*Ibn al-Ṭayyib, Abū'l-Faraj* (d. 1043). Christian philosopher and physician in Baghdad. He wrote commentaries on or abridgments of a number of Hippocrates’s and Galen’s works, including most of those in the Alexandrian curriculum. Among others, Ibn Buṭlān and al-Yabrūdi were his students. *EI*, s.v. “Ibn al-Ṭayyib,” *GAS* 3: passim.


*Ion of Chios* (ca. 480–423 BCE). Poet and philosopher of Pythagorean bent. In addition to plays, he wrote a prose philosophical work entitled *The
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Triad, in which he argued that there were three elements and that the virtues of each thing were threefold. *BNP* 6:907–8; *DK* 36; *DPA* 3864–66; *RE* 18:1861–68; see pp. 138–39, no. 20, above.

*Iṣḥāq ibn Ḥunayn* (d. 910). The son of the famous translator, Ḥunayn ibn Ishāq. Like his father, he knew Arabic, Syriac, and Greek; and some thought his Arabic style was better than his father’s. He mainly translated philosophy, mathematics, and astronomy, though he did translate a few works of Galen and wrote some medical works of his own, including a short chronological history of medicine. *CDSB* 7:24–26, 15:236–37; *EI* 2, s.v. “Iṣḥāq b. Ḥunayn”; *GAS* 3:267–68.

*John of Alexandria* (poss. fl. first half of seventh century). Late Alexandrian medical writer mentioned as one of the authors of the Alexandrian epitomes. Islamic sources refer to him as Yahyā al-Nahwī, thus confusing him with the more famous John Philoponus. Commentaries in the Alexandrian style on works of Hippocrates and Galen attributed to him survive in Greek, Latin, and Arabic. *BNP* 6.897; *RE* 18:1800; see p. xli above.

*John the Grammarian* (fl. mid-seventh century). Bishop of Alexandria at the time of the Muslim conquest of Egypt according to the famous (but certainly false) account of the destruction of the great library. He is known in Arabic as Yahyā al-Nahwī and is thus conflated with the famous sixth-century philosopher and the medical writer John of Alexandria. It is not clear that there was such a person. *EI*, s.v. “Yahyā al-Nahwī.” See pp. xxxvii–xxxviii, xl–xli above.

*John Philoponus* (ca. 490–ca. 570). A Christian natural philosopher and commentator on Aristotle, one of the possibly three individuals conflated in Arabic sources under the name Yahyā al-Nahwī. He was very well known in the Islamic world, both through biographies and doxographies and through translations of his works, some of which survive in Arabic. *BNP*, s.v. “Philoponus”; *CDSB* 7:134–39, 22:51–53; *EI*, s.v. “Yahyā al-Nahwī”; *GAS* 3:157–60; *RE* 18:1764–95.

*Leucippus* (5th century BCE). A poorly documented Atomist philosopher and the teacher of Democritus. He was said to have written a book entitled *The Great System of the Universe*. Even in ancient times, he was known entirely through the writings of Democritus and the comments of early critics like Aristotle. He was known to the Islamic world through doxographies. *BNP* 7:447–48; *DK* 67; *DPA* 4:97–98; *KR* 400–26; *RE* 13:2264–77.
Marinus (poss. sixth century). One of the Alexandrian epitomists. He is known only from two Arabic lists of the epitomists. There is no other information on him in Arabic sources, and he cannot be convincingly identified with anyone known from Greek sources. See pp. xli–xlii above.

Melissus of Samos (fl. ca. 440 BCE). A monist who held that the universe was one, unchanging, and infinite. He took Parmenides’s doctrine that only Being is and drew the conclusion that the universe must be infinite in space and time, since limit would imply nonbeing. He was disliked by Aristotle and those influenced by him. He is probably the only philosopher ever to win a naval battle, having commanded the Samian fleet that defeated the Athenians in 441. BNP 8:635–36; DK 30; DPA 4:391–93; KR 298–306; RE 19:530–32.

Menemachus of Aphrodisias (first century). Methodist physician of whom little is known beyond a few citations in Galen and Oribasius. RE 15:838.

Menodotus of Nicomedia (fl. ca. 125). A prominent Empiricist physician and skeptical philosopher. MSS A and M of the epitome of On the Sects list him as a Methodist, though in fact he was an active polemicist against the Methodists. Perhaps his name was added from another source and misplaced. BNP 8:695; DPA 4:476–82; GAS 3:56; RE 29:901–16.

Methodists (ca. first to fifth (?) century). A school of medicine founded by Thessalus of Tralles and said to have been based on the earlier theories of Asclepiades and Themison. The Methodists analyzed diseases in terms of “communities” and common features of diseases and believed that diseases reflected either restricted or excessive flows within the body. They were notable for their antitheoretical bent and their comparatively gentle treatments. Galen’s savage attacks on them, reflected in the epitomes, has affected most later evaluations of them, but recently scholars have begun to reevaluate them more favorably. BNP 8:801–2; Nutton, Ancient Medicine, 187–201; RE supp. 6:358–73.

Mnaseas (fl. late first century). An obscure Methodist physician known to us through a few citations in Galen and several other late medical writers and to the Muslims through citations of a Kitāb al-qawābil, “Book of Midwives [?]” GAS 3:56; RE 30:2252–53.
Mnesitheus of Athens (fl. late fourth century BCE). Mentioned in MSS A and M as a Methodist, but actually a Hippocratic physician who predated the Methodists by several centuries and who should thus be listed as a Rationalist. He was best known for writings on dietetics and known to the Arabs through citations with his name usually garbled, sometimes in the form Minīthānūs al-Qadīm, “the elder,” to distinguish him from Mithīnānūs al-Thānī, “the second,” by whom is meant Mnaseas. BNP 9:102; GAS 3:51–52; RE 30:2281–84.

Oribasius or Oreibasius of Pergamon (ca. 320–400). A pagan iatrosophist and the personal physician of the Emperor Julian the Apostate. He is of particular importance because his surviving work contains extensive extracts from the works of earlier physicians. Five works were attributed to him in Islamic sources, and quotations from some of them survive in the works of Arabic authors—who, however, knew nothing else about him. BNP 10:203–5; CDSB 10:230–31; DPA 4:800–4; GAS 3:152–54; RE 7:797–812.

Palladius of Alexandria (sixth century). An otherwise unknown iatrosophist known to have written commentaries on Hippocrates and Galen. The Islamic world knew him as the author of a commentary on Hippocrates’s Aphorisms and as one of the compilers of the Alexandrian epitomes. BNP 10:393; GAS 3:161–62; RE 36.2:211–14. See p. xlii above.

Parmenides of Elea (fl. ca. 475 BCE). Presocratic philosopher who held an extreme form of monism in which reality was one, unchanging, and finite, a view known to the Islamic world through Aristotle and the doxographies. Islamic sources also mention him as a physician. BNP 10:537–40; CDSB 10:324–25; DK 20; KR 263–85; RE 36.3:1553–59.

Paul of Aegina (fl. 640). A physician in Alexandria known mainly for his seven-book manual of medicine. This work was based on Oribasius’s much larger medical encyclopedia and, in Hunayn’s translation, was widely cited by Islamic authors as his Kunnāsh. The Arabic tradition knows five other titles, one of which survives in Hebrew translation. BNP 10:635–36; CDSB 10:417–19; GAS 3:168–70; RE 36.3:2386–98.

Philinus of Cos (mid-third century BCE). He broke with his teacher Herophilus to found the Empiricist school, asserting that the causes of disease could not be known and rejecting the use of the pulse in diagnosis. He was unknown to Islamicate scholars except as a name in a list of Empiricist physicians. BNP 11:22; CDSB 10:581; RE 38:2193–94.
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**Philotimus or Phylotimus of Cos** (late fourth century BCE). A student of Praxagoras and thus a Rationalist in the Galenic classification of medical schools. He was known to Islamicate scholars through citations of his work on dietetics. GAS 3:52; RE 39:1030–32.

**Plato** (ca. 427–348 BCE). Eminent Greek philosopher, much respected by Galen. He was known in the Islamic world as a medical authority through a summary by Galen of the medical doctrines of the *Timaeus*. Islamic authors also knew of a “Plato the Physician,” said to have been a teacher of Galen, whose book on cauterization seems to be extant in Arabic. GAS 3:48–49.

**Pneumatic School** (first to second century). Medical school founded by Athenaeus in opposition to the Methodists. Its teachings were a combination of Hippocratic medicine and the doctrine of *pneuma* of the Stoics, apparently as transmitted by Posidonius. Two other major medical writers belonged to this school: Archigenes of Apamea and Claudius Agathinus. BNP 11:433–34; Nutton, *Ancient Medicine*, 202–6.

**Praxagoras of Cos** (late fourth century BCE). Possibly the teacher of Herophilus. He wrote widely, developing a system with eleven humors, but was probably most influential as an anatomist. BNP 11:782–83; CDSB 11:127–28; RE 44:1735–43; Steckerl, *Fragments of Praxagoras*.

**Prodicus** (ca. 450–400 BCE). Sophist and teacher of oratory who appears several times in Plato’s dialogues and is mentioned by Galen in *On the Elements* as the author of a work entitled *On Nature*. BNP 11:930–31; DK 84; RE 45:84–89.

**Pythagoras** (fl. ca. 500 BCE). Semilegendary founder of the Pythagorean school. He and his school were said to hold that the elements were numbers—in particular, the numbers one through ten—and that there were thus ten elements. He was well known to the Islamic world as one of the five “pillars” of philosophy. There were also two pseudepigraphic Arabic medical works attributed to him. BNP 13:276–87; GAS 3:2022; RE 47:171–209, supp. 10:843–64.

**Rationalist school.** Also known as the Dogmatic school. The school of medicine to which Galen assigns those physicians, beginning with Hippocrates, who believed it was necessary to understand the inner state of the body in order to maintain health and treat illness. It was not an organized school but rather a retrospective categorization of physicians sharing a common medical epistemology. BP 4:612–13; RE supp. 10:179–80. See pp. xlvi, 10, 30–34 above.
Rāzī, Abū Bakr al- / Rhazes (ca. 854–925 or 935). Iranian physician with unconventional philosophical views. His most important medical work was al-Ḥāwī fī al-ṭibb, which contains citations and quotations from many sources now lost, many of them Greek, as well as al-Rāzī’s own observations. He also wrote a critique of Galen’s views entitled al-Shukūk ʿalā Jālīnūs (Doubts concerning Galen). CDSB 11:323–26; EI, s.v. “al-Rāzī, Abū Bakr”; Encyclopaedia Iranica, s.v. “Ḥāwī, al-.”

Ruḥāwī, Isḥāq ibn ʿAlī al- (fl. second half of ninth century). Author of at least five medical works, of which only a work on medical ethics survives. GAS 3:263–64; al-Ruḥāwī, Medical Ethics.

Serapion of Alexandria (late second century BCE). The second major Empiricist, later known best as a pharmacologist. His works are lost apart from citations in Galen and other late authors. RE 2.4:1667–68.

Sextus Empiricus (fl. late second century). The well-known skeptical philosopher. He was also a physician, but his works on medicine are lost. In his Outline of Pyrrhonism 1:236–41, however, he praises the Methodists as being closer to Skepticism than the Empiricists of his own day. BNP 13:370–72; CDSB 12:340–41; RE 2.4:1667–68.


Socrates (ca. 470–399 BCE). Athenian philosopher and teacher of Plato. He appears in the epitome as an advocate of the view that there are three elements. See p. 140 and n. 26 above.

Soranus of Ephesus (early second century). A major Methodist physician, best known now for his surviving work on gynecology, though it is clear from surviving citations in the works of Galen and others that he was rivaled only by Galen as a medical authority in later Roman times. He was known to Islamicate scholars through citations, lists of ancient doctors, and a book on enemas, evidently extracted from a larger Greek work on therapeutics. BNP 13:653–55; CDSB 12:538–42; DPA 4:476–82; GAS 3:61; RE 2.5:1113–30; Ullman, Medizin, 76–78.

Stephanus of Athens (ca. 600). Author of two surviving commentaries on works of Hippocrates and another on a work of Galen. He is possibly to be identified with one or more others of the same name: a philosopher active in Alexandria around 580 who wrote on Aristotle’s logic, an Athenian who taught philosophy in Constantinople around

**Stoics** (fourth century BCE–third century CE). Hellenistic philosophical school whose importance for medicine was its materialistic physics, its conception of *pneuma* (spirit), and its theories of scientific inference. Though the Stoics were most naturally associated with the Pneumatic school of medicine and were often criticized by Galen, it is clear that they had a great influence on various Rationalist theories of medicine. BNP 13:852–57; Hankinson, “Stoicism and Medicine.”

**Thales of Miletus** (fl. first half of sixth century BCE). Traditionally the first true philosopher, though little is known about him with certainty. Though various scientific, astronomical, and mathematical discoveries are attributed to him, the doxographers and later Muslim scholars knew him mostly for his theory that water was the primal element. BNP 14:360–62; DK 1; KR 74–98; GAS 4:45; RE 2.9:1210–12, supp. 10:930–47.


**Theodosius** (sixth century?). One of the Alexandrian epitomists, according to two of the sources. He has not been otherwise identified.

**Thersites.** A Greek soldier at Troy, malformed in body and character, who became a symbol of ugliness in Greek literature. BNP 14:556; RE 2.10:2455–71. See p. lxviii and p. 67, n. 52.

**Thessalus of Tralles** (first century). Probably the true founder of Methodistism. He taught that all disease could be explained, and thus easily diagnosed and treated, by some combination of states of constriction and looseness of the bodily pores. He was more or less unknown to the Islamic world. BNP 14:578–79; Pigeaud, “L’introduction,” 587–99; RE supp. 11:168–82.

**Xenophanes of Colophon** (ca. 570–467 BCE). One of the earliest Greek philosophers. He is best remembered for his interesting critique of the anthropomorphism of traditional Greek religion. The doxographers, probably incorrectly, say that he held that the primal element was earth; more likely, he thought that the primal elements were earth
and water. The Islamic world seems to have been largely unaware of him. BNP 15:819–22; DK 21; KR 163–81; RE 2.18:1542–62.

Yabrūdī (or Bīrūdī), Abū’l-Faraj Jirjis ibn Yūḥannā ibn Sahl al- (eleventh century). A Syrian Orthodox Christian physician who worked in Damascus. He was a student of Abū’l-Faraj Ibn al-Ṭayyib and was known for his copies of and commentaries on medical works, especially those of Galen. IAU 2:140–43.

Appendix 2: The Three Schools of Medicine

Greek names, especially those of more obscure figures, are often corrupted in Arabic translations from Greek, the Arabic texts citing those translations, and the Hebrew and Latin texts dependent upon Arabic sources. The list of prominent Greek adherents of the Empiricist, Rationalist (or Dogmatist), and Methodist schools of medicine as found in the introduction to the epitome of *The Medical Sects* has not escaped this fate; I have not bothered to record all the variations of dotting and the like found in my six manuscripts. These lists obviously represent a Late Antique trope preserved with more or less fidelity in various Greek, Latin, and Arabic texts.

The list of members of the three schools as found in our text is essentially identical to that of two other works: Yaḥyā al-Naḥwī’s *talkhiṣ* of *The Medical Sects* and a set of Latin lectures on *The Medical Sects* by one Agnellus of Ravenna (see table 4). Closely related is the list of names from the pseudo-Galenic *Introduction to Medicine* (*Eisagōgē Iātros*), which I have translated below. Another commentary on *The Medical Sects* by one John of Alexandria gives a somewhat different list, as does the list of Empiricists in Ibn Abī Uṣaybiʿah, most of whose names are indecipherable. The one major textual difficulty with regard to these lists involves the list of Methodists, where MSS A and M, which were both copied around 1240 from an exemplar originating in the circle of Ibn al-Tilmidh, add two names, Menodotus and Mnesitheus, and give the names in a slightly different order. This variant list can safely be disregarded since the version I give is supported by all the other MSS and by the versions of Yahyā and Agnellus. Moreover, Menedotus was an Empiricist who actively opposed the Methodists, and Mnesitheus a Hippocratic of the fourth century BCE, well before the founding of the Methodist school.
Table 4: Members of the three medical sects

The numbers refer to the order in which the names are given in each list.

<table>
<thead>
<tr>
<th>Alexandrian Epitome of The Medical Sects, para. 4</th>
<th>ps.-Galen: Introduction to Medicine</th>
<th>Ibn Abi Uṣaybi’a Yahyā al-Naḥwi, Talkhīṣ al-Firaq</th>
<th>John of Alexandria</th>
<th>Agnellus of Ravenna, Lectures on De Sectis</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Empiricists</em>: أَخْتَابُ الْفَجَارِبُ</td>
<td><em>Empirikoi</em>: Ἐμπειρικοί</td>
<td><em>Empirikoi</em>: Ἐμπειρικοί</td>
<td><em>Empirikoi</em>: Ἐμπειρικοί</td>
<td><em>Empirikoi</em>: Ἐμπειρικοί</td>
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<tr>
<td>1. Acron of Agrigentum Ἀκραγαντῖνος</td>
<td>1. Ἀκρὼν Ἀκραγαντῖνος</td>
<td>1. Ἀκρὼν Ἀκραγαντῖνος</td>
<td>1. Acron Cacrantinus</td>
<td>1. Acron Cacrantinus</td>
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<tr>
<td>Ἀντίοχεεις</td>
<td>πατήρ τε καὶ υἱός, Αντιοχείς</td>
<td></td>
<td>senior et Apollonius junior</td>
<td></td>
</tr>
<tr>
<td>Alexandrian Epitome of The Medical Sects, para. 4</td>
<td>ps.-Galen: Introduction to Medicine</td>
<td>Ibn Abī Uṣaybi‘a, Talkhīṣ al-Firaq</td>
<td>John of Alexandria</td>
<td>Agnellus of Ravenna, Lectures on De Sectis</td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>----------------------------------</td>
<td>---------------------------------</td>
<td>------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>7. All unidentifiable</td>
<td>All unidentifiable</td>
<td></td>
<td></td>
<td></td>
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</table>

**Rationalists / Λογικοὶ / أخصاب القياس**

<table>
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<tr>
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</thead>
<tbody>
<tr>
<td>2. Diocles of Carystus Διοκλῆς ὁ Καρύστιος</td>
<td>2. Διοκλῆς ὁ Καρύστιος</td>
<td>2. Diocles</td>
<td>2. Diocles</td>
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<td>---------------------------------------------------</td>
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</tr>
<tr>
<td>5. Erasistratus of Chios and Alexandria</td>
<td>5. Ἐρασίστρατος Χῖος</td>
<td>4. Erasistratus</td>
<td>5. Erasistratus</td>
</tr>
<tr>
<td>All unidentifiable</td>
<td></td>
<td>7. Leufastus</td>
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<tr>
<td></td>
<td></td>
<td>9. Galienus</td>
<td></td>
</tr>
</tbody>
</table>

**Methodists / Μεθοδικοί / أعضاءِ الجيل**

<p>| 1.Themison of Laodicea                            | 1. Θεμίσων τῆς Συρίας                  | 1. Themison                           |
|                                                   | 1. Themison de Laodicia                |                                       |</p>
<table>
<thead>
<tr>
<th>Alexandrian Epitome of The Medical Sects, para. 4</th>
<th>ps.-Galen: Introduction to Medicine</th>
<th>Ibn Abi Uṣaybiʿa, Talkhiṣ al-Firaq</th>
<th>John of Alexandria</th>
<th>Agnellus of Ravenna, Lectures on De Sectis</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Thessalus of Tralles</td>
<td>2. Θεσσαλός ὁ Τραλλιανός</td>
<td>2. Θασσός</td>
<td>2. Thesalus</td>
<td>2. Tessalus de Roma</td>
</tr>
<tr>
<td>6. Antipatrus Antípatros; forming a subsect</td>
<td>5. Τούσιος</td>
<td>5. Τούσιος</td>
<td>5. Τούσιος</td>
<td>9. Avidianus</td>
</tr>
</tbody>
</table>
The Rationalist sect was led by Hippocrates of Cos, who was also its founder and the one who first established the Rationalist sect, then after him Diocles of Carystus, Praxagoras of Cos, Herophilus of Chalcedon, Erasistratus of Chios, Mnesitheus of Athens, and Asclepiades of Cian in Bithynia, which is also called Prusias.

The Empiricist sect was led by Philinus of Cos, who breaking first with the Rationalist sect sought occasions to dispute with Herophilus, whose student he had been. Wishing to lead their own sect that would nonetheless be older than the Rationalist sect, they claimed that it had been founded by Acron of Agrigentum. After Philinus there was Serapion of Alexandria, then the two Apolloniuses, father and son, of Antioch. After them was Menodotus and Sextus, who brought it to perfection.

Methodism was founded by Themison of Syrian Laodicea, who had acquired from Asclepiades the Rationalist what he needed to devise the Methodist sect. It was then perfected by Thessalus of Tralles. After them were Mnaseas, Dionysius, Proclus, and Antipatrus. Forming their own faction within it were Olympiacus of Milesia, Menemachus of Aphrodisias, and Soranus of Ephesus. Moreover, some, like Leonidas of Alexandria, combined the sects, while others were eclectics, such as Archigenes of Syrian Apamea.
Appendix 3:
The Structure and Terminology of the Eye in the Epitome of The Small Art

Galen, as one of the glosses correctly remarks, does not give an account of the anatomy of the eye in the passage corresponding to para. 40 of the epitome of The Small Art. The epitomist’s attempt to do so is not a masterpiece either of anatomy or clarity, but with one major problem it is accurate so far as it goes. He explains that the eye is composed of two layers, ṭabaqāt, of solid material—“cloaks,” to use the ancient term—and three fluids, ruṭūbāt, or humors (not to be confused with akhlāṭ, the four humors). He does not mention the optic nerve or, properly speaking, the retina, which he has confused with the sclera.

The eye is divided into two parts separated by the lens, which the epitomist properly treats separately. The larger back portion of the eye, the eyeball, is a spherical sack of transparent jelly called vitreous humor, “a fluid resembling liquid glass.” He says that the sack within which it is contained has two layers, the inner “resembling a placenta,” the choroids; and the outer “resembling a net,” the retina. In fact, it has three layers: the outermost being the sclera, the white of the eye, a tough white sack of material; the middle being the choroid, which contains blood vessels; and the innermost being the retina, a continuation of the optic nerve. It may be that the epitomist uses the term “net-like” for the sclera because of its attached muscles, but more likely this is either a case of error in manuscript transmission or the blunder of a fellow iatrosophist lacking practical knowledge of anatomy. A gloss in several of our manuscripts points out that his usage of “retina” differs from the usage of Ḥunayn, who does indeed have it right (see Ḥunayn ibn Ishāq, Ten Treatises on the Eye, Arabic pp. 74–75, English pp. 4–5). Ḥunayn notes that there is disagreement among anatomists over the number of layers
comprising the eye, based not so much on disagreement about the anatomical structure as on issues of which elements should be combined and which should be seen as distinct (Arabic pp. 80–81, English pp. 10–11).

The following is a list of the terms used for the parts of the eye, arranged in the order we know them from modern anatomy with the terms used and parts identified by the epitomist along with Hunayn’s more complex and accurate account.

The modern term is given first, followed by Galen’s Greek term, as given in Meyerhof’s edition of the ten treatises. E: term used in Epitome. Ḥ: term used in Ḥunayn, Ten Treatises.

Parts of the eyeball from the outside in

• Sclera, σκληρὸς χιτών, lit. “hard tunic,” the white of the eyeball: E: al-ṭabaqah al-shabīhah bi-al-shabakah, lit. “the layer resembling a net,” the term normally used for the retina, probably an error on the part of the epitomist; Ḥ: al-ṭabaqah al-ṣalbah.

• Choroid, χοριοειδὴς χιτών, a layer carrying blood vessels; E: al-ṭabaqah al-shabīhah bi-al-mashīmah, “the layer resembling the placenta”; Ḥ: al-ṭabaqah al-mashīmah.

• Retina, ἀμφιβληστροειδὴς χιτών, the light-sensitive inner coating of the eyeball; E: omitted; Ḥ: al-ṭabaqah al-shabakīyah. The epitomist either did not know this feature or confused it with the sclera. Its function was not known to Ḥunayn, who did however understand it as an extension of the optic nerve.

• Vitreous humor, υαλοειδὲς υγρόν, the transparent jelly contained in the eyeball; E: al-ruṭūbah al-shabīhah bi-al-zujāj al-dhāʾib, “the fluid resembling liquid glass”; Ḥ: al-ruṭūbah al-zujājiyah.

The anterior of the eye, from the front to the back

• Conjunctiva, ἐπιπεφυκὼς χιτών, a clear membrane covering the white of the eye; E: ififājuqūs; Ḥ: al-ṭabaqah al-multaḥamah, lit. “the connecting layer.”

• Cornea, κερατοειδὴς χιτών, a transparent portion of the eyeball allowing light to reach the lens; E: al-ṭabaqah al-shabīhah bi-al-garn, “the layer resembling horn,” because it is thin, white, and translucent; Ḥ: al-ṭabaqah al-qarniyyah.
• **Aqueous (or albuminoid) humor**, ὠοειδὲς ὑγρόν, the fluid filling the anterior chamber of the eye between the cornea on the outside and the lens and iris on the inside; E: *al-ruṭūbah al-shabīhah bi-bayāḍ al-bayḍ*, “the fluid resembling egg white; Ḥ: *al-ruṭūbah al-bayḍīyah*.

• **Uvea**, στραφυλοειδὴς or ῥαγοειδὴς χιτών, the iris, which is the colored part of the eye and acts as an aperture; and the ciliary body, which is the hidden part of the iris; E: *al-ṭabaqah al-shabīha bi-al-ʿinaba*, “the layer resembling a grape,” due to its dark color; Ḥ: *al-ṭabaqah al-ʿinabīyah*.

• **Zonula**, ἀραχνοειδὴς χιτών, a network of fibers controlling the shape and focus of the lens; E: omitted; Ḥ: *al-ṭabaqah al-ʿankabūtīyah*, “the cobweb layer.”

• **Lens (or crystalline humor)**, κρυσταλλοειδὲς υγρόν, the transparent body focusing light on the retina; E, Ḥ: *al-ruṭūbah al-jalīdīyah*, “the ice-like layer.”
Arabic-Greek-English Glossary

The following glossary records the English equivalents that I have used in the translations of these three texts. In general, I have recorded the English renderings of all Arabic words with a technical or semitechnical sense. Where possible, I have added what I believe to be the original Greek word of which the Arabic is a translation. Since I do not have the original Greek text—only the Galenic text that the epitomes are commenting on—I cannot always know the underlying Greek word. In some cases, it is very clear: ʿunṣur represents the Greek στοιχεῖον. In many other cases, however, the text of the epitome is not closely linked to Galen's text—most commonly, adding examples to clarify Galen's statements. Kharbaq aswad (black hellebore) is mentioned as an example but is not in Galen’s text, and while there are several Greek words for hellebore or its use found in Galen’s surviving works, I do not, in fact, know which one was used in the Greek version of the epitome. Moreover, there are cases where someone—presumably the translator but possibly the epitomist—has replaced remedies given by Galen with remedies current in his own time. Therefore, with only a few exceptions, I have given the Greek only when the word occurs in one of the three texts of Galen in a context that makes it reasonably plausible that it is the word translated in the epitome. Finally, the Greek word is not necessarily the same part of speech as its Arabic equivalent—a Greek noun corresponding to an Arabic verb, for example. Thus, the Arabic and English terms here are not necessarily direct translations of the Greek.
<table>
<thead>
<tr>
<th>English</th>
<th>Arabic</th>
<th>Greek</th>
</tr>
</thead>
<tbody>
<tr>
<td>needle</td>
<td>بِلَونَة</td>
<td>ἐπὶ τὸν</td>
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<tr>
<td>stagnant</td>
<td>اَجَامِ</td>
<td>ἀκόρμον</td>
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<tr>
<td>second</td>
<td>ἕτερος</td>
<td>ἀκόρμον</td>
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<td>posterior</td>
<td>ὀπίσθιος</td>
<td>Μοιρώ</td>
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<td>—</td>
<td>ἀζώμ</td>
</tr>
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<td>device</td>
<td>ὁργανόν</td>
<td>ὀργανόν</td>
</tr>
<tr>
<td>ear</td>
<td>οὖς</td>
<td>ὀς</td>
</tr>
<tr>
<td>earth</td>
<td>γῆ</td>
<td>ἡγή</td>
</tr>
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<td>στοιχεῖον</td>
<td>ἑπιστεῖον</td>
</tr>
<tr>
<td>finger</td>
<td>δάκτυλος</td>
<td>δάκτυλος</td>
</tr>
<tr>
<td>source, principle</td>
<td>ἀρχή</td>
<td>ἀρχή</td>
</tr>
<tr>
<td>licorice</td>
<td>—</td>
<td>—</td>
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<tr>
<td>to remove surgically, extirpate</td>
<td>ἀφαίρεσις</td>
<td>ἀφαίρεσις</td>
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<td>viper</td>
<td>ἕχιδνα</td>
<td>ἕχιδνα</td>
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<td>ἐπιπεφυκώς</td>
<td>ἐπιπεφυκώς</td>
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<td>ἐπιλογισμός</td>
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<td>ἐσθίειν</td>
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<td>sweet melilote</td>
<td>—</td>
<td>—</td>
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<td>στεφάνη, στεφανιαῖος</td>
<td>στεφάνη, στεφανιαῖος</td>
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<td>to be combined</td>
<td>τὸ δρᾶν ἄλληλα</td>
<td>τὸ δρᾶν ἄλληλα</td>
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<tr>
<td>composed</td>
<td>κεκράσθαι</td>
<td>κεκράσθαι</td>
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<td>to experience; to be hurt, suffer</td>
<td>πάσχειν, πάθος, ἀλγεῖν</td>
<td>πάσχειν, πάθος, ἀλγεῖν</td>
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<tr>
<td>state; entity</td>
<td>πράγμα</td>
<td>πράγμα</td>
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<tr>
<td>relating to health</td>
<td>υγιεῖνός</td>
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<td>relating to disease</td>
<td>νοσώδης</td>
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<td>ἀναλογισμός</td>
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<td>Arabic</td>
<td>Greek</td>
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<tr>
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</tr>
<tr>
<td>generating females</td>
<td>θηλυγόνος</td>
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</tr>
<tr>
<td>testicles</td>
<td>ορχεις</td>
<td>أنثى</td>
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<tr>
<td>man, person</td>
<td>ανήρ, ανθρώπος</td>
<td>إنسان</td>
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<td>human (adj.)</td>
<td>ανθρώπινος</td>
<td>إنسان</td>
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<tr>
<td>future</td>
<td>μέλλων</td>
<td>ما يستألف</td>
</tr>
<tr>
<td>defect, disorder</td>
<td>σφάλμα, κακία</td>
<td>ألم</td>
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<td>occurrence of a disorder</td>
<td>ἁμαρτάνειν</td>
<td>حدث من الآفة</td>
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<td>στόμα</td>
<td>أثداء</td>
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<td>instrument, tool</td>
<td>ὀργανον, ὀργανικός</td>
<td>آلية</td>
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<tr>
<td>instrumental; organic; functional (of organs)</td>
<td>ὀργανικός</td>
<td>آلي</td>
</tr>
<tr>
<td>primary</td>
<td>πρότερος</td>
<td>أول أو أول</td>
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<tr>
<td>now</td>
<td>νῦν</td>
<td>الآن</td>
</tr>
<tr>
<td>which thing it is</td>
<td>—</td>
<td>أي شيء هو</td>
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<tr>
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<td>βαραχώδης</td>
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<td>crisis</td>
<td>κρίσις</td>
<td>كریس</td>
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<td>vapor, smoke</td>
<td>ἀτμός</td>
<td>بخار</td>
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<td>to be dispersed</td>
<td>—</td>
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<td>principle, basis; beginning</td>
<td>—</td>
<td>مبدأ</td>
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<td>body, living body</td>
<td>σῶμα</td>
<td>بدنة</td>
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<td>بيت</td>
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<td>ψυχρός</td>
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<td>τὸ ψυχρόν, ψυχρότης, ψυχρότερος, ξείς ψυχροτέρα</td>
<td>برد. برودة</td>
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<tr>
<td>easily cooled</td>
<td>εὐψυκτος</td>
<td>إسراج البرودة</td>
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<td>difficult to cool</td>
<td>δύσψυκτος</td>
<td>عسر قبول البرودة</td>
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<tr>
<td>English</td>
<td>Arabic</td>
<td>Greek</td>
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<tr>
<td>feces; cf. مَلْث, which some MSS use in its place</td>
<td>بْرَاز</td>
<td>διαχώρημα</td>
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<td>بْسِط</td>
<td>ἐξάπλωσις</td>
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<td>بْسِط ابِنْاط</td>
<td>—</td>
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<td>بْسِط</td>
<td>ἀπλοῦς</td>
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<td>بْصَر</td>
<td>ὅψις</td>
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<td>to see</td>
<td>بْصَر</td>
<td>—</td>
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<td>seen</td>
<td>بْصَرِيَّة</td>
<td>ὁρατός</td>
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<td>بْصَرُ</td>
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<td>بْصَرِ ابِنْطا</td>
<td>—</td>
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<td>visible</td>
<td>بْصَرْ بِاِصْرَة</td>
<td>ὁρατός; πρός τὴν ὄψιν</td>
</tr>
<tr>
<td>to have sexual intercourse</td>
<td>بْصَرْ بِالمَصْصُور</td>
<td>ἀφροδίσια</td>
</tr>
<tr>
<td>beans</td>
<td>بْصَرْ بِالمَعْلُوم</td>
<td>κύαμος</td>
</tr>
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atom | ἄτομος
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body, corporeal body | σῶμα
fingertip | —
belch | ἐρυγή
sour belch | ὀξυρεγμιώδης
curly | σύλλος
desiccate, dry | ξηραίνειν
eyelid | —
higher rank | ἄξιωμα
therapy | θεραπεία
crystalline | κρυσταλλοειδές
lens (of eye) | κρυσταλλοειδὲς ὑγρόν
to clean | ῥυπτικός
ice | κρύσταλλος
solidified; solidity | στερεός
to concentrate; to bring together | συνάγειν
epitome | σύνοψις
sexual intercourse | συνοοσία
frequent sexual intercourse | αφροδισιαστικός
to be joined | σύγκρισις
combination, concentration | σύγκρασις
beauty | κάλλος
community (of diseases) | κοινότης
pleurisy | —
to avoid | ἀποστροφή, ἀποχωρῆσαι
genus | γένος
generic | —
 unknowable | ἄγνωστος
good quality, ease | —
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able to be affected, changeable, to accept effects
unchanging
occurrence
to drop down
skill
heat
hot
pungency
pungent
to inflame; consume
caustic (of drugs)
motion, exercise
setting in motion, exercising
requiring exercise
motor
moving
unmoving
grief
sensation
sense organ
to sense
not having sensation
sensory
sensible; perceptibly
envy
comeliness
well formed
appetite
gloss
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alum  στυπτηρία
sclera, white of the eye  σκληρός χιτών

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division | διαίρεσις | قِصَّة
---|---|---
crust | — | قِشرة
squamous | κροτάφιος | قَشْرِي
flake off | — | اَشَقَرَة
windpipe | ἀρτηρία, τράχυς | قَصِّدَة، الزَّهْرَة
moderation | — | أَصْصٌ
extreme | — | أَصْصٌ
leaness | ὀλιγόσαρκος | قَضِيَافَة
lean | ὀλιγόσαρκος | قَضِيف
to cut | κόπτειν, τομή, τμητικός | قُطَّع
to be cut | κόπτεσθαι | اَنْقِطَع
concave | σμός | مَفْعُورٌ أَقِلِ
less | βραχύς | قَلِب
heart | καρδία | قَلِب

to transform, convert | — | انْقِلَاب
transformation | μεταπίπτειν | قَلِب
eradicate | ἔλκειν | قُطَّع
block | ἔπέχειν | مَفْعُورٌ قُهْرُ، اَنْقِهْر
plausible | ως εἰκότα γεγυνωσκότων | مَفْعُورٌ مَفْحُورُ
to fall victim to | νικᾶσθαι | قَهْر

dominant | — | مَفْقُورٌ مُقَهْرُ
dominated | — | مَفْقُورٌ مُقَهْرُ
concavity | κοιλότης | تَنْقِصُ
tar | — | تَنْقِصُ
curvature, bowing | — | تَنْقِصُ
bowed | — | تَنْقِصُ
book | βιβλίον | مَقَالَة
colon | κάλον | مَقَالَة
colon | κάλον | قَالِمٌ قَوْلُون
posture | — | قَالِمٌ قَوْلُون
to oppose; to counteract | νικᾶν, ἀντιπράττειν | قَوْلُمُ، قَالِمٌ قَوْلُون
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usually | ἐπὶ τὸ πολὺ
abundant; multiple | πλῆθος, πολὺς
gum tragacanth | —
to condense, be compressed | συγκρινεῖν, χεῖσθαι
density | τὸ πυκνόν
dense | πυκνός, παχύς
collyrium | —
blackness (of eye) | μέλας
turbidity | οὐ καθαρὸς
false | ψευδής
cranes | —
fracture | κάταγμα
sluggishness | —
barley water | —
repletion, surfeit | βαρόνειν
without surfeit | ἄλυπος
equal | ίσος
to sate | ἀρκεῖν
universal | καθόλου
rabid dog | κύων λυττῶν, λύττα
discussion, views | —
quantity | ποσότης
insufficient | ἀτελής
firmness | τὸ παχύ
soothsaying | —
soothsayer | —
to come to be, coming to be, generation, genesis | γίγνεσθαι, γένεσις
cauterization | διὰ πυρὸς
quality | ποιότης
having qualities | ποιότητα δεδεγμένον
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*Note: The same word in different languages is often repeated for emphasis.*
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<td>—</td>
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<td>—</td>
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</tr>
<tr>
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<td>—</td>
<td>smoothness</td>
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</tr>
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<td>Greek</td>
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| to look; to investigate      | نظر
| investigation                | نظر
| investigation                | نظر
| prognosis                    | سابق النظر
| acuity                       | جودة النظر
| to debate                    | تأخر
| to debate                    | استظف
| to cleanse                   | نظمام
| arrangement                  | نظمام
| recuperation, convalescence  | إعاش
| inflation                    | اتفاخ
| to penetrate                 | فقد
| to penetrate                 | منفذ
| orifice                      | منفر
| averse to                    | نفس
| to breathe                   | نفس
| respiration, breath          | نفس
| soul                         | نفس
| soul of itself               | نفس
| breath                       | نفس
| psychic                      | نفس
| to help                      | نفس
| benefit                      | نفس
| beneficial                   | نفس
| unprofitable                 | نفس
| uses                         | نفس
| gout                         | نفس
| flaw, deficiency             | نفس
| lack, deficiency             | نفس
| conversion                   | نفس
| (method of investigation)    | نفس
| falls short                  | نفس
| point                        | نفس

<table>
<thead>
<tr>
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| ἐρευνᾶν, εὑρίσκειν         | نظر
| εὑρίσκειν                    | نظر
| πρόγνωσις                     | سابق النظر
| ἀμφισβητεῖν, διαβάλλειν       | جودة النظر
| ἐκκενοῦν                       | تأخر
| τάξις                        | استظف
| ἀναληπτικός, ἀναθρεπτικός     | إعاش
| διατείνασθαι                   | اتفاخ
| συντετραίνει                     | ضع
| ἐκροή                        | منفر
| αὐτόματος                    | نفس
| πνεῦμα                        | نفس
| ψυχή                           | نفس
| ψυχικός                      | نفس
| όφελλειν                      | نفس
| χρεία                        | نفس
| χρήσιμος                      | نفس
| ἀχρηστός                     | نفس
| χρεία                        | نفس
| ἐνδεία                       | نفس
| λεπτός, λείπειν              | نفس
| ἀπολειπόμενος                 | نفس
| —                            | نفس

**Conversion**

- **Investigation**
  - αναληπτικός, ἀναθρεπτικός
  - διατείνασθαι
  - συντετραίνειν

- **Orifice**
  - ἐκροή

- **AVERSE TO**
  - αὐτόματος

- **Respiration, Breath**
  - ἀναπνοή

- **Soul**
  - ψυχή

- **Psychic**
  - ψυχικός

- **Benefit**
  - χρεία

- **Beneficial**
  - χρήσιμος

- **Unprofitable**
  - ἀχρηστός

- **Respiration, Breath**
  - ἀναπνοή

- **Soul**
  - ψυχή

- **Psychic**
  - ψυχικός

- **Benefit**
  - χρεία

- **Beneficial**
  - χρήσιμος

- **Unprofitable**
  - ἀχρηστός

- **Respiration, Breath**
  - ἀναπνοή

- **Soul**
  - ψυχή

- **Psychic**
  - ψυχικός
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<td>تقل</td>
<td>ἀλλοιωτικός, μεταβαίνειν, μετοχέτευσις</td>
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<td>نقل إلى ما هو مشابه به</td>
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orientation, position
formal syllogism
place
subject, substratum
sperm ducts
according with, analogous
to be in agreement
incidence (technical term of the Empiricists for a natural or chance occurrence of a medical effect)
most suitable
moment
at the present moment
season
at some particular time
to take care
to generate, procreate
procreation of females
procreation of males
fertile; generative
dryness
dry
arm
jaundice
slight
by a little
wakefulness

θέσις
σχῆμα συλλογιστικόν
tόπος, χωρίον
بذل, το κοινῇ πάσιν
σπερματικά ἀγχεία
σύμφωνος
ὁμολογεῖν
περίπτωσις
χρόνος
ἐν τῷ νῦν
ἔρα
πρόσκαιρος
προνεῖσθαι
γόνυμος
χείρ
ικτεριᾶν
βραχύς
οὐ πολὺ
ἐγρήγορσις, γρηγορεῖν
ξηρότης, ἕξις ξηροτέρα, τὸ ξηρόν
ξηρός, ξηρότερος
χείρ
ικτεριᾶν
βραχύς
οὐ πολὺ
ἐγρήγορσις, γρηγορεῖν
Bibliography

Editions and translations of *On the Medical Sects for Beginners*, *The [Small] Art of Medicine*, and *On the Elements According to the Opinion of Hippocrates* used in the preparation of this edition and translation

Works of Galen are normally referenced by the page numbers of the edition of Karl Gottlob Kühn, the indispensable—if erratic—nineteenth-century Greek edition and Latin translation of most of Galen’s surviving works in twenty-two volumes. As it happens, all three of the works epitomized in this volume appear in Kühn’s edition but have more recent Greek editions and modern English translations. Ḥunayn ibn Ishāq’s Arabic translations of all three works have been edited by Muḥammad Saлим Ṣālim.


*On the Elements According to the Opinion of Hippocrates.* The Greek editions of Kühn in Galen, *Opera omnia*, 1:413–508, and Helmreich, *Galeni de elementis ex Hippocrate*, have been supplanted by Phillip De Lacy’s edition and English translation, *On the Elements According to Hippocrates*, which includes both the Kühn and Helmreich paginations. The edition of Ḥunayn’s Arabic translation is Galen, *Kitāb Jālīnūs fī al-ḥiṣqāt ʿalā raʾy Ibbuqrāṭ*, edited by Muḥammad Salim Sālim. References in the notes to Galen’s original text read thus: L 1.1; K 1:413; G* 9, meaning paragraph 1, sentence 1, of De Lacy’s edition; volume 1, page 413, of Kühn’s edition; and page 9 of Sālim’s Arabic edition.

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The index contains all significant proper names, all Greek words including all Greek words in the glossary, and significant English terms. While there is not an index of citations, classical and medieval Arabic authors cited in the notes are indexed by the author and sometimes also by title. Arabic words mentioned in the English text are indexed, but not Arabic words in the glossary.

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About the Editor

**John Walbridge** is professor of Near Eastern languages and cultures at Indiana University Bloomington. He earned his PhD from Harvard University in 1983 and pursues research in Islamic philosophy and Islamic intellectual history with an emphasis on the cultural role of philosophy and science.
A Note on the Types

The English text of this book was set in Baskerville, a typeface originally designed by John Baskerville (1706–1775), a British stonecutter, letter designer, typefounder, and printer. The Baskerville type is considered to be one of the first “transitional” faces—a deliberate move away from the “old style” of the Continental humanist printer. Its rounded letterforms presented a greater differentiation of thick and thin strokes, the serifs on the lowercase letters were more nearly horizontal, and the stress was nearer the vertical—all of which would later influence the “modern” style undertaken by Bodoni and Didot in the 1790s. Because of its high readability, particularly in long texts, the type was subsequently copied by all major typefoundries. (The original punches and matrices still survive today at Cambridge University Press.) This adaptation, designed by the Compugraphic Corporation in the 1960s, is a notable departure from other versions of the Baskerville typeface by its overall typographic evenness and lightness in color. To enhance its range, supplemental diacritics and ligatures were created in 1997 for exclusive use in this series.

The Arabic text was set in Naskh, designed by Thomas Milo (b. 1950), a pioneer of Arabic script research, typeface design, and smart font technology in the digital era. The Naskh calligraphic style arose in Baghdad during the tenth century and became very widespread and refined during the Ottoman period. It has been favored ever since for its clarity, elegance, and versatility. Milo designed and expanded this typeface during 1992–1995 at the request of Microsoft’s Middle East Product Development Department and extended its typographic range even further in subsequent editions. Milo’s designs pushed the existing typographic possibilities to their limits and led to the creation of a new generation of Arabic typefaces that allowed for a more authentic treatment of the script than had been possible since the advent of moveable type for Arabic.