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Dyskrasia

(De Inaequali Intemperie)

Elsa García Novo (ed.)

GALEN

ON THE ANOMALOUS DYSKRASIA
(De inaequali intemperie)

EDITIO MAIOR

EDITION, TRANSLATION AND COMMENTARY

BY

ELSA GARCIA NOVO

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To Miguel Esteban Sr. & Jr., who are no more

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2. INTRODUCTION

A. THE SOURCES FOR THE TEXT

1. THE GREEK MANUSCRIPTS

L Florence, Laurentianus gr. 74.5, XII c., 129^v-132^v. The two older manuscripts¹ were written by Ioannikios and his Italian colleague, in the middle or second half of the XIIc.² According to N. Wilson, the Laurentianus was written by the "Italian colleague" on Spanish paper:³ it is 290 by 192 mm.⁴ in size, consists of 187 f., and contains for the most part treatises by Galen.⁵ The ms. was probably written in Constantinople.⁶ The palaeography is not an easy one:⁷ the endings are abbreviated and a good number of ligatures are used throughout.

It presents some corrections *s.l.* by the first hand:

P. 146,18 ἀνωμάλου δυσκρασίας] ἀνωμαλίας κρασίας L, δυσ *s.l.*

P. 150,6 τρόπος ἔσται] ἔσται ὁ τρόπος L^{a.c.}, *corr.* L^{s.l.}

P. 152,15 τὸ *pr.* L^{s.l.}

P. 154,17 δὲ καὶ] ἤτοι L^{s.l.}

1 *Vide infra*, ms. P.

2 N. Wilson: A mysterious Byzantine scriptorium..., and Aspects of the transmission of Galen..., dated them to the last quarter of the XII c., but see Ch. Brockmann, below, note 40. The catalogue of Bandini (A. M. Bandini, *Catalogus*, vol. II, cols. 51-53), dated the ms. in the XIVth c.

3 Cf. p. 449, in: N. G. Wilson, *Ioannikios and Burgundio*.

4 Description in V. Nutton, *Gal. De praecognitione*, CMG V 8, 1, p. 17, and bibliography in *Gal. De propriis placitis*, CMG V 3,2, p. 18, note 1.

5 According to Bandini (*Catalogus*, vol. II, cols. 51-52): *De element.*, *De temp.*, *De nat. fac.*, *De subst.*, *De animi dign. et cur.*, *De usu resp.*, *De praecog.*, *De sect. ad eos*, *De inaeq. intemp.*, *De tumor. praet. nat.*, *De ther. ad Pison.*, *De ther. ad Pamphil.*, *De antid.*

6 For the location of the Scriptorium in Constantinople see N. G. Wilson (*A mysterious*, pp. 172-174, and *Ioannikios and Burgundio*, pp. 448-449), and specially Brockmann, below, note 40. The location in Italy was considered by Wilson as well (*Scholars of Byzantium*, London 1983, pp. 207-208, and p. 112 in H.-G. Nesselrath, ed., *Einleitung ...*, pp. 104-116), and some others: P. Canart (pp. 151-152 in *Le livre grec en Italie méridionale sous les règnes normand et souabe: aspects matériels et sociaux*, *Scrittura e Civiltà* 2, 1978, pp. 139-157), G. Cavallo (pp. 214-215 in: *La trasmissione scritta della cultura greca antica in Calabria e Sicilia*), A. M. Ieracci Bio (p. 172 of *La trasmissione della letteratura medica greca nell'Italia Meridionale fra X e XIV secolo*, in A. Garzya, ed., *Contributi alla cultura greca nell'Italia Meridionale*, Naples, 1989, pp. 133-257), and J. Irigoien (p. 23 of: *Les plus anciens manuscrits grecs de médecine de l'Italie méridionale: origine et influence*, in: *Dalla medicina greca alla medicina salernitana: percorsi e tramiti*, Salerno 1999, pp. 15-24).

7 Bandini, *ibid.* col. 53: "Characterere vale contracto, ac per compendia exarato."

P. 154,17 τὸ] τῷ L^{s.l.}

P. 170,2 παρὰ om. L, restituit L^{s.l.}

There are some *marginalia* in Latin probably written by Burgundio of Pisa,⁸ as Wilson points out.⁹ If that is the case, 1193 would be the *terminus ante quem* for the manuscript. D. Béguin¹⁰ has pointed as *terminus ante quem* 1184-1185, when Burgundio translated from it the περὶ αἰδέσεων with the title De heresibus his qui introducuntur. This copy has been considered the best in several treatises by G. Helmreich and others.¹¹ Nutton¹² and Ph. de Lacy¹³ have noticed several scribal errors and corrections.

T Miland, Trivultianus 685. In the Bibliotheca Trivultianae Mediolanensis, a paper ms. (bombycinus), 212 by 162 in size, ca. 230 f., dated by Wilson to the end of the thirteenth century or to the beginning of the next.¹⁴ It contains only Galen's works.¹⁵ The treatise is written on 77r-79v, 82r-83r, after De bono habitu, which ends on f. 77r l.5. Some of the folios or quaternions were misplaced when the codex, once the folios were numbered, was bound. The description in Martini's catalogue is not completely accurate.¹⁶ Several editors of

⁸ Burgundio lived ca. 1110-1193. R. Durling, (Burgundio of Pisa's translation of Galen's ΠΕΡΙ ΚΡΑΣΕΩΝ, p. xx), checked several Greek ms. containing De complexionibus, and considered that the Greek exemplar for Burgundio's translation was the parent of this Laurentianus (he followed the previous date for L, the xiv century). The actual date makes very probable the use of this ms. by Burgundio. Durling has reviewed the text of De temperamentis in this ms. L, and points out some errors of transcription by Helmreich (Gal., De temperamentis). According to Durling (Burgundio ... De complex. p. xx), the Greek mss. containing De temperamentis "can be divided into two families, L representing the first, and MN(O)TV the second (b)." Marcianus gr. 275=M. Vaticanus gr. 282, s. xv=N.. Trivultianus 685, s. xiv=T. Marcianus...=V. Two of the Latin mss (C,D) "include textual changes clearly made in the light of Greek variants found in as yet unidentified MS belonging to the **b** family".

⁹ See Wilson, p. 173, of: A mysterious Byzantine scriptorium.

¹⁰ See p. 36 of Sur la méthode de travail suivie dans la préparation de l'édition alpine des Opera omnia de Galien (1525): analyse du De sectis ad introducendos, in: Storia e ecdotica dei testi medici greci, A. Garzya (ed.), Naples 1996, 31-42. Cf. as well N. Wilson, New light on Burgundio of Pisa", in: St. it. fil. class., 3rd. s., IV 2, 1986, 117-118.

¹¹ Cf. Helmreich (Gal., De temp., p. III). The editor also mentions this manuscript as the best testimonium for Gal. De elem. (Erlangen 1878, p. VIII), De sectis and De nat. fac. (Scripta minora, III, pp. III, V). See De Boer in Gal. De propr. dign. et curat., De animi ... dign. et curat., CMG V 4, 1.1, p. V, and V. Nutton, Gal. De praecog., CMG V 8,1, pp. 17-18, and Gal. De propr. plac., CMG V 3,2, p. 18. Ph. de Lacy, in Gal. De elem., CMG V 1,2, pp. 11-12.

¹² CMG V 8,1, pp. 17-18.

¹³ CMG V 1,2, pp. 11-12.

¹⁴ Cf. Wilson, Aspects, p. 60.

¹⁵ De temp. (mut. ad in.), De nat. fac., De opt. corp. nost. const., De bono hab., De inaeq. intemp., Ad Glaucanem de med. meth., In Hipp. de vict. acut. comm., In Hipp. Prorrh. I comm.

¹⁶ E. Martini, Catalogo di Manoscritti Greci esistente nelle Biblioteche Italiane (Vols. I 1, I 2, II, Mailand 1893, 1896, 1902), repr. Indici e Cataloghi, XIX, Rome vol. I, 1967, pp. 377-381.

Galen describe this ms.¹⁷ The writing is even, and the use of abbreviations does not prevent an easy reading. The text is not accompanied by *marginalia*.

There are scarce corrections *s.l.* by the same hand:

P. 150,11 μὲν *pr. om.* TU, *add.* T¹ *s.l.*

U Modena, Mutinensis gr. 109. A paper ms., 280 by 215 mm, XIV-XV century, in the Estense Library of Modena, ff. 73v-78r.¹⁸ The book has 82 f. and is written by two hands (3-68 and 69-82). In f. 1v and 2r is written Γεωργίου τοῦ Βάλλα, but the inscription is deleted in f. 1, and Ἀλβέρτου πίου καρπαίων ἄρχοντος κτήμα is written instead. In 1500 Alberto Pio di Carpi acquired most of the collection of Giorgio Valla; in 1564, when Pio di Carpi (by then Cardinal Rodolfo Pio di Carpi) died, the Greek and the Oriental mss. were acquired by the Duke of Ferrara, and they now belong to the Estense Library of Modena.¹⁹ The treatises²⁰ by Galen in this ms. are as follows: Ad Glauconem libri I-II (incomplete), De sectis, De optima corp. nos. const., De bono hab., De inaeq. in temp. The last three treatises are written in the Trivultianus in the same order.

Scarce corrections:

P. 150,20 δέρεμα] ῥεῦμα U, *secl. et scrip.* δερ U¹

D Oxford, Bodleianus 709 sive Laudianus graecus C 57, nunc 58, a velum ms., containing the treatise in ff. 202v-208r. It was written by Δημήτριος Δαμιλᾶς²¹ in the second half of the XVth century,²² and contains 364 ff. The

17 G. Helmreich, Galeni De temperamentis..., p. IV: "Huic (Laurentiano 74.5) paulum cedit bonitate codex Trivultianus 685". Galeni De elem. (Erlangen 1878, p. VIII), De nat. fac. (Scripta minora, vol. III, Leipzig 1893, p. V), Galeni in Hipp. de victu acut., CMG V 9,1, pp. xxx-xxxi. H. Diels, Gal. In Hipp. Prorrh. I commm. III (CMG V 9,2), p. x.

18 Description in V. Puntoni, pp. 453-454 of Indici dei codici greci della Biblioteca Estense di Modena, in: Studi Italiani di Filologia Classica, IV, 1896, 379-536, reprinted in Ch. Samberger, Catalogi codicum graecorum qui in minoribus bibliothecis italicis asservantur in duo volumina collati et novissimis additamentis aucti. Vol. primum accuravit Ch. Samberger, indicem adiecit D. Raffin, Lipsiae 1965.

19 See P. Landucci Ruffo, Le fonti della «Medicina» nell' Enciclopedia di Giorgio Valla, in: Giorgio Valla tra scienza e sapienza, V. Branca, ed., Florence 1981, 55-68, and G. Cardenal, Cronologia della vita e delle opere di Giorgio Valla, *ibid.*, 93-97.

20 For the text of Cassius Iatrosophista's Problemata in this ms., see A. Garzya and R. Masullo, I Problemi di Cassio Iatrosophista, introd., ed., transl. by, Naples 2004, p. 15.

21 This scribe worked in Mailand, Florence and Rome: among his clients, the Medici and the Vatican Library. He was related to Konstantinos Laskaris, and worked with Demetrios Chalkondyles. Cf. E. Gamillscheg, D. Harlfinger, Repertorium der griechischen Kopisten, 800-1600. 1. Teil. Handschriften aus Bibliotheken Grossbritanniens. A. Verzeichnis der Kopisten, Vienna 1981, p. 68.

22 H. O. Coxe, Bodleian Library. Quarto catalogues. I. Greek Manuscripts, (1853), reprinted with corrections by R. Barbour, N. Wilson, Oxford 1969, p. 539, col. a. It belonged to David Paraeus, and afterwards to Samson Johnson. The catalogue did not include De i. i.: the reference is handwritten. A David Paraeus (1548-1622) was a German Calvinist whose commentary on Revelations was translated into English in 1644.

writing is good. It contains Galen's works.²³ The explicit of *De inaequali intemperie* is wrong: it repeats the τέλος of the preceding one (τέλος τοῦ τρίτου λόγου περὶ κρᾶσεων). The next book is *De facultatibus naturalibus*. G. Helmreich²⁴ considers the alikeness of this ms. and the Vaticanus 282: "they are not good copies, but from time to time they preserve the right readings."²⁵

D presents some corrections *s.l.*:

P. 156,6 λυόμενον] -ης D^{s.l.}

P. 152,16 ὑπάρχουσι MU: ὑπάρχει LP D^{s.l.}: ὑπάρχον D^{l.l.}, *expunx*. D^{l.}: ὑπάρχ V

P. 156,20 ἅπαν, ὁδός TPU et D^{p.c.}: ἅπαν, εἶδος D^{a.c.} V: ἐπάνοδός ἐστιν LM

P. 162,2 περὶ μὲν τούτων ἕτερος λόγος *scrips. bis* PDV, *et add.* ἂν εἴη, *sed postea expunxit* P *et indicat* D

V Vatican City, Vaticanus graecus 282, a fifteenth²⁶ century paper ms., 294 by 209 in size and consisting of III plus 452 folios.²⁷ The treatise is on ff. 46v-50r. As in the former ms., the explicit of *De temp.* is repeated at the end of *De inaequali intemperie*. Both ms. contain Galen's *De elem.*, *De temp.*, *De inaeq. intemp.*, *De fac. nat.*, *De cris.*, and *De dieb. decret.*, in the same order.²⁸

M Venice, Marcianus graecus 282. In the Biblioteca Nazionale Marciana there is a vellum²⁹ ms., 330 by 225 in size, consisting of IV plus 213 folios, writ-

²³ De loc. aff., De elem., De temp., De inaeq. intemp., De fac. nat., De cris., De dieb. decret. R. Durling (Linacre and ...) considered that Thomas Linacre translated *De temperamentis* from this ms. See below.

²⁴ Cf. *De temp.*, pag. VIII.

²⁵ Concerning *De temp.*, Helmreich (ibid. IX) guesses that one of them was the exemplar of the Aldine edition. For *De elem.*, de Lacy (CMG V 1,2, p. 13) considers that the immediate source of the Aldine is unknown, but those two manuscripts are closely related. According to Alexanderson (*De crisibus*, pp. 41-42) the text of *De crisibus* in the Bodleianus is copied from V (Vat 282). This is also the case for *De elem.* (de Lacy, CMG V 1,2, pp. 13-14.) As for *De nat. fac.*, Helmreich (SM III, 1893, p. VI) considers them *gemelli*, and for *De temp.* (p. VIII): "Oxonien si millimus est Vaticanus 282".

²⁶ See Devresse, *Le fonds grec de la Bibliothèque Vaticane des origines à Paul V*, Vatican City 1965, pp. 58, 94, 131, 348. This ms. appears catalogued ca. 1472.

²⁷ I. Mercati, P. Franchi de Cavalieri, *Codices Vaticani graeci*, I, Rome 1923, repr. Modena 1980, pp. 384-391. Cf. also Helmreich, *De elem.*, p. xi; Alexandersson, *De cris.*, pp. 18, 41-43. Helmreich, *De fac. nat.*, SM III, p. vi. Helmreich, *De temp.*, p. viii. Ph. de Lacy, *Galen De elem.*, CMG V 1,2, p. 12. More bibliography in P. Canart, V. Peri, *Sussidi bibliografici per i manoscritti greci della Biblioteca Vaticana*, Vatican City 1970, p. 404. The ms. also contains Aetius Amidenus, libri VI-XVI; cf. p. 251 in A. Garzya, *Problèmes relatifs à l'édition des livres ix-xvi du Tetrabiblon d'Aetios d'Amida*, REA 86, 1984, pp. 245-257.

²⁸ *De elem.*, *De temp.*, *De inaeq. intemp.* and *De fac. nat.* are written as well in the Laurentianus.

²⁹ See E. Mioni, *Bibliotheca Divi Marci Venetiarum codices Graeci manuscripti*, Vol. I, *Thesaurus antiquus*, Rome 1981, pp. 405-406, and M. R. Formentini, *I codici greci di medicina nelle tre Venezie*, Padua 1978, p. 13. A complete description and bibliography in Zanetti 136. Diels I, 28, 60, 71, 73 74, etc. Editors: B. Alexanderson, I. Heeg, K. Koch, I. Mewaldt, W. de Boer, I. Marquardt, G. Helmreich.

ten by Georgius Trivizias³⁰ for Cardinal Bessarion³¹ ca. 1468-1472. The treatise is on ff. 201r-203v: the ink has nearly disappeared in some of the folios. It is preceded by Galen's *De parvae pilae*, and followed by *De opt. corp. hum. const.*, *De bono habitu*³², *De sectis*.³³ This codex is one of the volumes of the Galen's collection copied for Bessarion or assembled by him: 275-288.³⁴ They contain nearly the whole *Corpus Galenicum*. It was included in the 1474 inventory of the Republic of Venice, which referred to the mss. included between 1468 and 1472.³⁵

As for the models of this ms., M. R. Formentin explains that it comes from several exemplars;³⁶ in fact the scribes for Bessarion did not copy whole codices, but just the treatises missing from the Collection. I. Heeg³⁷ points out that the scribe in this ms. avoids hiatus, changing when necessary the word order. There are many other references to this ms. in Galen's editions.³⁸

P New Haven, Beinecke Library (Yale), ms. 1121, olim British Library, Phillipps 4614,³⁹ XII^m c.,⁴⁰ ff. 54r-57v. It belonged to the collection of Sir Thomas

30 For the activity of this Bessarion's scribe, see E. Mioni, pp. 309-312 in: *Bessarione scriba e alcuni suoi collaboratori*, *Miscellanea Marciana di studi Bessarionei*, Padua 1976, 263-318. The scribe is *Τοῦβιζίας Γεώργιος* (Venice), known as George the Cretan. Bessarion himself (died 1472) did not write on this copy.

31 According to Formentini (I codici, p. 50) the scribes of Bessarion utilised the Laurentianus gr. 74.5 as exemplar to copy *De elementis*, *De temperamentis* and *De facultatibus naturalibus* on the Marcianus gr. 275, and nine other treatises on Marc. 281 (see *ibid* 13)

32 Those two treatises precede *De inaequali intemperie* in the Trivultianus and the Mutinensis, and follow it in the Phillipps, as it happens in the Marcianus.

33 The ms. contains the following treatises (CH, Galen and Pseudo-Galen), (Mioni.... *ibid.*; Formentin 13): *Puero epilep.*, *De morb. temp.*, *Hipp.: De genit.*; Galenus: *De cris.*, *De dieb. decret.*, *In Hipp. prognost.*, *De febr. diff.*, *De san. tuend.*, *In Hipp. de nat. hom.*, (PseudoGal.) *De affect. ren. insid. dignot. et cur.*, (Gal.) *De tremore*, *De marcore*, *De atra bile*, *De parvae pilae*, *De inaeq. intemp.*, *De opt. corp. nost. const.*, *De bono habitu*, *De sectis ad tirones*. In relation with *De sectis*, D. Beguin ("L'édition Goulston...", *RHT* xix 1989, 341-349 and *Sur la méthode... de l'édition alaine... de Galien: analyse du De sectis ad introducendos*), remarks that the Aldine edition has been made on this ms. as basic text, with the aid of Paris. suppl. gr. 35 (xvi c.), a copy from the Laur. 74.5.

34 See Formentin, *I codici greci...*, p. 48. Cf. the list of Galenic or pseudogalenic works written in the Marciani graeci mss., in pp. 52-69.

35 For this and many other details of the ms., see L. Labowsky, *Bessarion's Library and the Bibliotheca Marciana*, Rome 1979.

36 *De crisibus* comes from a lost copy. In *Hipp. Progn.* and *De nat. hom.*, the model is very close to the Vat. Reg. 173. Bessarion ordered the scribe to copy again on 282 *De sanitate tuenda*, which had been poorly copied on 276 (Formentin, *I codici...* pp. 50-51).

37 See I. Heeg, *Galen in Hippocratis prognosticum*, CMG V 9, 2.

38 References in W. de Boer, *De atra bile*, CMG V 4, 1.1, p. x and note 9; de Lacy, CMG V 4, 2 p. XV; Helmreich, CMG 9,1 p. xii; CMG 9, 2, p. xxv. On the other hand, the Marcianus and the Laurentianus are the only mss. mentioned by Ackermann for the treatise (vol. I, lxxix K).

39 I have kept my old siglum P, because the news of the transfer from London to New Haven only arrived when editing was finished.

40 Christian Brockmann, in *Textkritische Überlegungen zu Ioannikios als Schreiber von*

Phillipps (Cheltenham, U.K.),⁴¹ and it was bought by the Fenwick Trust and deposited on loan to the British Library. At present it belongs to the Beinecke Library. This manuscript is *mutilus* both *in initio et in fine*, and presents a poor condition. It is around 290mm by 230mm⁴² in size, and consists of 156 folios. It contains only Galen's treatises.⁴³

It was written by three hands. The main scribe, Ioannikios,⁴⁴ copied the folios 1-9, and 14-106⁴⁵ on Spanish paper.⁴⁶ He wrote *De inaeq. intemp.* on ff. 54^r-57^v, after *De fac. nat.* (ff.15^v-54^r)⁴⁷ and before *De optima corp. nos. const.* (ff.57^v-60^r).⁴⁸ The ms. was written at the middle of the XIIth. c.⁴⁹ The palaeography

Galen- und Aristotelestexten (B. Atsalos und N. Tsironi, edd., Actes du VIe Colloque International de Paléographie Grecque (Drama, 21-27 septembre 2003), Athens 2008, Vol. I, pp. 895-922 (Vol. II, plates 1-22), dated Ioannikios to the middle of the XII c. and located him in Constantinople.

41 Cf. *Catalogus librorum manuscriptorum in bibliotheca D. Thomae Phillipps Bt. A. D. 1837*, impressus typis Medio-Montanis mense Maio 1837, reprinted with an Introduction by A. N. L. Munby, London 1968; T. C. Skeat, *The Catalogues of the Manuscript Collections*, London 1953, p. 22; A.N.L. Munby, *Phillipps Studies. I. The Catalogues of Manuscripts and Printed Books of Sir Thomas Phillipps. Their Composition and Distribution*, Cambridge 1951, and *The Dispersal of the Phillipps Library*, Cambridge 1960; J. M. Olivier, *Répertoire des bibliothèques et des catalogues des Manuscrits grecs de Marcel Richard*, 3d. ed., Brepols 1995, p. 216.

42 My description. All the folios have been cut on the edges because they were very damaged.

43 *De temp.* II-III (the beginning of book 2 is missing), ff.2r-15r. *De fac. nat.* (ff.15v-54r; f. 53 is missing). *De inaeq. intemp.* (ff. 54r-57v). *De optima corp. nost. const.* (ff.57v-60r). *De bono habitu* (ff. 60r-61r). *De diff. respir.* (ff. 62r-106r). *Ad Glauc.* (107r-140v), et *De aliment. fac.* (ff. 141r-156; f. 156 *mutilus ad finem*)

44 Jean Irigoin et Brigitte Mondrain identified the scribe as Ioannikios on the photographs that I presented at the Colloquium *Storia e ecdotica dei testi medici greci*, Naples, 1997. Cf. now Ch. Brockmann, *Philologische Annäherungen an Chirurgie und Anatomie. Beobachtungen an Galens Kommentar zu Hippokrates, De articulis*, in: *Aertze und ihre Interpreten*, pp. 61-80, p. 65 and note 15.

45 A second hand wrote the folios 10-13, and a third copied 107-154 and 156. A description of the ms. in pp. 175-176 of my: *Les scholies marginales au traité de Galien De inaequali intemperie dans le ms. Phillipps 4614*, in: *Storia e ecdotica...*, eds. A. Garzya, J. Jouanna, 1999, pp. 175-183. More details in my: *Un texte byzantin inédit sur la scène de Galien et Glaucon (De locis affectis, 8,361,12 -366,5 K)*, in: *Les Textes Médicaux Grecs...*, ed. A. Garzya et alii, 2003, pp. 135-148.

46 In 2001 I sent a description of the paper, made by P. Perez Cañizares in London, to Professor Irigoin, who certified its Spanish origin.

47 Both the Laurentianus and the Phillipps contain *De temp.* and *De fac. nat.*, besides *De inaequali intemperie*. For *De aliment. fac.*, cf. Helmreich, CMG V 4,2, p. xxxv.

48 As for the likenesses in the contents of the mss., LPT contain: *De temp.* (mut. in in.), *De nat. fac.*, *De inaeq. intemp.* Both P and T contain *De temp.* (libr 2-3), *De nat. fac.*, [P: *De inaeq. intemp.*], *De optima corp. nos. const.*, *De bono habitu*, T: *D.i.i.*, (not in T *De diff. respir.*), *Ad Glauconem*, (not in T *De aliment. fac.*). [Both mss. have lost the first folios, where the beginning of *De temp.* should be]. This data is important in order to research the history of the transmission for those groups of treatises.

49 Wilson, *Aspects...*, p. 59, dated it to the last quarter of the XIIc., but see now Brockmann, note 40.

is very difficult. The text is good,⁵⁰ but curiously enough it does not belong to the same family as the Laurentianus, written in the same Scriptorium. On the folios written by Ioannikios we twice found a monocondylium by Κωνσταντῖνος Ξανθόπουλος, who is mentioned as a landowner in Smyrna in 1283.⁵¹

The text was corrected by the scribe himself, who in many cases wrote the "right" letters on the wrong ones, not simply over them; sometimes the earlier text can be read, but it is often impossible to guess. The *autopsia* of the manuscript does not always permit distinguishing the previous ink from the one used when correcting, because the first is not homogeneous.

On the other hand the scribe also includes words or sentences *supra lineam*. Some of them are variant readings, but the use of γρ(άφεται) (examples in f. 55r, l.2, l. 6, l.9, l.14) is (as usual) uneven. Some are short explanations, but a number of them are long sentences that begin *supra lineam* and enter the right margin, or begin on the left margin and enter the text. It is not always easy to tell a variant reading from other possibilities. And it would be important, because the corrections are introduced at the same time as the variant readings and the commentaries. All of these additions are only too well integrated. Along with this complicated picture, the copy presents *scholia* (see below, Indirect Tradition).

A 2. THE SYRIAC AND ARABIC TRANSLATIONS

Cristina Alvarez Millán, Elsa García Novo

1. The Syriac translation.⁵²

The translator into Syriac was Ayyūb al-Ruhāwī (Job of Edessa), who died ca. 832, having translated 39 Galen's treatises.⁵³ Our text is not extant, but Ḥunayn ibn Ishāq (808-873)⁵⁴ mentions it in his *Risāla*, nr. 52.⁵⁵

50 For the kind of copies used by the scribe, and his way of copying (he was "le bon copiste"), see pp. 146-147 of my *Un texte byzantin inédit...* in: Garzya et alii, ed., *Les Textes Médicaux Grecs...*, pp. 135-148.

51 The document in: F. Moklosich, I. Müller, *Acta et diplomata graeca medii aevi*, Vol. IV, Vienna 1871, pp. 265-266; for the date, cf. F. Dölger, p. 306, and n. 3 of: *Chronologisches und Prosopographisches zur byzantinischen Geschichte des 13. Jahrhunderts*, in: BZ XXVII, 1927, 291-320. Cf. *Prosopographisches Lexikon der Paläiologenzeit*, ed. E. Trapp, H-V. Beyer, E. Kislinger, Vienna 1986, s.v.

52 For the Syriac translations of Galen's work, cf. G. Strohmaier, *Der syrische...*, ANRW II, 37.2, pp. 1997-2007.

53 See R. Degen, pp. 143, 163 of: *Galen im Syrischen: Eine Uebersicht über die syrische Ueberlieferung der Werke Galens*, in V. Nutton ed., *Galen: problems and prospects*, Cambridge 1981, 131-166. According to G. Strohmaier, this Job of Edessa belongs to the second Syrian "Galenrezeption", where Ḥunayn is placed as well (*Der syrische ...*, ANRW II, 37.2, p. 2001).

54 For Ḥunayn, see Bergsträsser, *Ḥunayn ...*, and *Neue Materialien ...* Cf. also *Dictionary of Scientific Biography*, vol. XV, Suppl. I, pp. 230-249 (A. Z. Iskandar), and *The Encyclopaedia of Islam*² III, pp. 578-581 (G. Strohmaier).

55 Translated by G. Bergsträsser, *Ḥunayn ...*, p. 23. Ḥunayn understood Syriac as well

2. The Arabic translation.

The treatise was not included in the Alexandrian Canon.⁵⁶ The Arabic version,⁵⁷ entitled *K. fī Sū' al-mizāj al-mukhtalif* (ك. في سوء المزاج المختلف), was done by Ḥunayn himself some time between 858 and 873.⁵⁸ It is important to stress that Ḥunayn had notice of some 129 treatises by Galen,⁵⁹ most of which he had translated into Syrian and/or Arabic. Ḥunayn's expertise on our author was outstanding. He translated directly from the Greek,⁶⁰ and gathered as many manuscripts as he was able to for any other of Galen's books, in order to get as sound a text as possible: he used to choose one manuscript that he compared with the others, writing on it the convenient corrections, much the same way as the Byzantine themselves.⁶¹ It is obvious that the Greek manuscripts read by him were written in uncial letters, dating from the IX c. or earlier (*ante quem* 873).

Concerning our treatise, he stated that it consisted of just one book, and he mentioned that he had just one manuscript with the Greek text, which he had not had time to read. He goes on: "Afterwards I translated it [the treatise] for Abū l-Hasan Ahmad ibn Mūsā".⁶²

Al-Ya'qūbī mentioned this treatise in a list dated ca. 872⁶³ under the title *al-Mizāj ar-radī' alladī laisa yastawī*,⁶⁴ probably an older translation.

3. The manuscripts.

The Arabic version of Ḥunayn is found in the following manuscripts:

because he belonged to the Christian church of the Nestorians. See Strohmaier, ANRW 37.2, p. 2002.

56 Cf. the Alexandrian Canon in Ullmann, *Die Medizin ...*, pp. 65, 343, and V. Nutton, *Medicine in Late Antiquity and the Early Middle Ages*, p. 87 in: L. I. Conrad, M. Neve, V. Nutton, R. Porter, A. Wear, *The Western Medical Tradition, 800 B.C. to A.D. 1800*, Cambridge 1996, pp. 71-87.

57 For the reception of Greek culture by the Arabians, see D. Gutas, *Greek Thought*. For the translations of Galen's works into Arabic, see F. Sezgin, *G.A.S.* III, pp. 67-140, and M. Ullmann, *Die Medizin...*, pp. 35-68. For the *Summaria Alexandrinorum*, see now Jawāmi' al-Iskandarāniyyīn. / *The Alexandrian Compendium of Galen's Works*, Translated by Ḥunayn ibn Ishāq (d. 873), Parts I-II, ed. F. Sezgin, 2001; and P. Pormann, *The Alexandrian Summary (Jawami') of Galen's On the Sects for Beginners: Commentary or Abridgment?* in: P. Adamson (ed.), *Philosophy, Science, and Exegesis in Greek, Arabic and Latin Commentaries*, Bulletin of the Institute of Classical Studies, Supplement 83, London, 2004, vol. II, pp. 11-31.

58 See Sezgin, *G.A.S.*, III, p. 75.

59 Strohmaier, ANRW, pp. 1994-1995.

60 For the level of the translations, see D. Gutas, *Greek Thought...*, pp. 136-141.

61 Strohmaier, *Galen in Arabic ...*, 190-191, and ANRW p. 2005.

62 Bergsträsser, *ibid.*, and *Neue Materialien ...*, p. 12. Sezgin, *G.A.S.*, III, pp. 108-109.

63 See Sezgin, *G.A.S.*, III, p. 25.

64 Cf. Klamroth, *Über die Auszüge aus griechischen Schriftstellern bei al-Ja'qūbī*, in: *Zeitschrift der Deutschen Morgenländischen Gesellschaft* 40, 1886, p. 630; see Sezgin, *G.A.S.*, III, p. 109.

E El Escorial, Real Biblioteca del Monasterio, MS 848/2, f. 48b-53b, Magri-bi writing, VIII/XIV, paper.⁶⁵

S El Escorial, Real Biblioteca del Monasterio, MS 879/2, f. 41b-46a, Magri-bi writing, VII/XIII, paper.⁶⁶

A Istanbul, Ayasofya, MS 3593, 48a-51b, Oriental writing, V-VI/XI-XII c.⁶⁷

[Y] Istanbul, Süleymaniye, MS⁶⁸ 3631, 27a-34a, VIII/XIV c. This copy includes a summary of Galen's text written by Thābit ibn Qurrah.⁶⁹

L Lisbon, Academia das Ciencias, MS Vermelho 292-293, f. 45r-50v, Oriental writing, VIII/XIV^m c., paper.⁷⁰ The copy of *De inaequali* begins with p. 150,11 of our Greek version.⁷¹

65 [Diels, xiv c.] Sezgin, G.A.S., III p. 109; Ullmann, *Die Medizin ...*, p. 39; H.P.J. Renaud, *Les manuscrits arabes de l'Escorial décrits d'après les notes de Hartwig Derenbourg*, Tome II, Fasc. II-III (*Médecine et Histoire Naturelle, Sciences Exactes et Sciences Occultes*), Paris, P. Geuthner, 1941, T. II, fasc. 2, p. 55. It appears between K. al-Mizaj = *De temperamentis*, and K. Jalinus fi l-quwa al-tabi'iya = *De naturalibus facultatis*. This ms. includes these three works by Galen, and was copied by Muhammad b. Ahmad b. Muhammad in Murcia (South-Eastern Spain). The writing of this copy seems to be the same one as that in Escorial, MS 874, which contains the Arabic translation of Galen's *De temperamentis*, and K. fi l-Ustuqusat 'ala ra'y Buqrat = *De elementis*. The two manuscripts also seem to have been in the possession of a common owner.

66 Ullmann, *Die Medizin...*, p. 39; H. P. J. Renaud, *Les manuscrits arabes de l'Escorial...*, II 2, p. 91. This manuscript just contains *De Temperamentis* and *De inaequali intemperie*. Cf. Diels (xiv c.).

67 Ritter-Walzer, *Arabische Uebersetzung griechischer Ärzte in Stambuler Bibliotheken*, Berlin 1935, p. 813. Sezgin, G.A.S., III, p. 109. Not mentioned by Diels.

68 We were not able to obtain a copy of this manuscript.

69 Sezgin, G.A.S., III p. 109. Not mentioned by Diels. An Arabic summary of the treatise, written by the Syrian Thābit ibn Qurrah (d. 901), is included in this ms. Istanbul, Süleymaniye, 3631, fols. 34a-38b. It has to be a rather long compendium. Ḥunayn does not mention that summary. It was probably written after his death. Cf. G. Strohmaier, ANRW, pp. 2001-2002, and E. Savage-Smith, "Galen's lost ophthalmology and the *Summaria Alexandrinorum*", in V. Nutton, ed., *The Unknown Galen*, London 2002, pp. 121-138, in p. 130.

70 A. Sidarus, *Un recueil de traités philosophiques et médicaux à Lisbonne*, *Zeitschrift für Geschichte der Arabischen-Islamischen Wissenschaften*, 6 (1990), pp. 174-194 (Galenic works, pp. 183-84; description of the ms. in p. 179). The scribe was Al-Mubarak b. Isma'il b. Muhammad al-Kutubi al-^cAbbasi al-Mutatabbib, who copied it in Aleppo and Alexandria ca. 764-765/1363-1364. According to Sidarus, the manuscript would have reached Portugal some time between 1775 and 1800. As a whole, this two-volume manuscript — which we have not had the opportunity to examine in its entirety — contains about thirty two works or extracts from works, mainly on philosophy, and mixed up rather messily, with no apparent relationship among them. Along with *De inaequali intemperie* (Vol. I, nr. 9) and *De marasmo* (Vol. I, nr. 16) by Galen, there are two treatises by Plato and another three attributed to Aristotle. As for medieval Islamic authors, they range from Ibn al-Tilmidh up to Abu Sulayman al-Sijistani, Ibn Sina, al-Bukhari, al-Farabi, Ibn al-Jazzar, al-Kindi, Abu Hayyan al-Tawhidi, 'Umar al-Khayyam and Ibn Tufayl.

71 A thorough examination of the manuscript would need to be done in order to rule out that missing folios of *De inaequali intemperie* are scattered throughout the volumes. [Ms. not mentioned by Diels.]

M Madrid, Biblioteca Nacional, MS 5011, (earlier 130/3; Gg. 152), f. 127b-137a, Magribi writing, IX/XVⁱⁿ c. paper.⁷²

P Paris, Bibliothèque Nationale, MS 2847, f. 106a-114b, Oriental writing, 614/1217-1218, paper.⁷³ Diels 84 (f. 106-113, XIII c.) This manuscript corresponds to the version of Ḥunayn's translation elaborated by the Islamic physician Abū Jaʿfar Ahmad ibn Muhammad ibn Abī l-Ashʿath (d. 360/970).⁷⁴ Actually, he simply divided the text into six sections by means of adding a small sentence which summarises the contents. According to the colophon, he considered this treatise to be part –the fourth maqala- of Galen's book on Temperaments.⁷⁵

The treatises *De inaequali intemperie*, *De optima corporis nostri constitutione* and *De bono habitu*, mentioned by Galen as a triad to be read in a row,⁷⁶ are found as a triad in three out of our seven Greek copies, and in the Arabic mss. Matritensis 5011, and Parisinus 2847. Ḥunayn mentions them in a row (nr. 50-52)⁷⁷, in the same order as the Greek ms. T. That means that they were put together at least in the IX c., but it is rather probable that the group was formed way beforehand.

4. Stemma.

There are two families, **h** (SEM) and **d** (APL). Inside **h**, EM are closely related against S; inside **d**, AP are closely related against L. There is evidence of contamination in AP, coming from **e** (EM) and **s** (S). See next page.

72 Sezgin, G.A.S., p. 109; F. Guillén de Robles, *Catálogo de los manuscritos árabes existentes en la Biblioteca Nacional de Madrid*, Madrid: Imprenta M. Tello, 1989, p. 65; H. Derenbourg, *Notes critiques sur les manuscrits arabes de la Bibliothèque Nationale de Madrid*, Paris 1904, pp. 20-21. In this manuscript, our work is preceded by the treatises K. fi l-Ustuqusat ʿala ra'y Buqrat = *De elementis* and K. al-Mizaj (Maqalas I, II, III) = *De temperamentis*. It is followed by Maqala fi afdal al-hayyat = *De optima corporis nostri constitutione* and Maqala fi khisb al-badan = *De bono habitu* (Diels 84: xv c.)

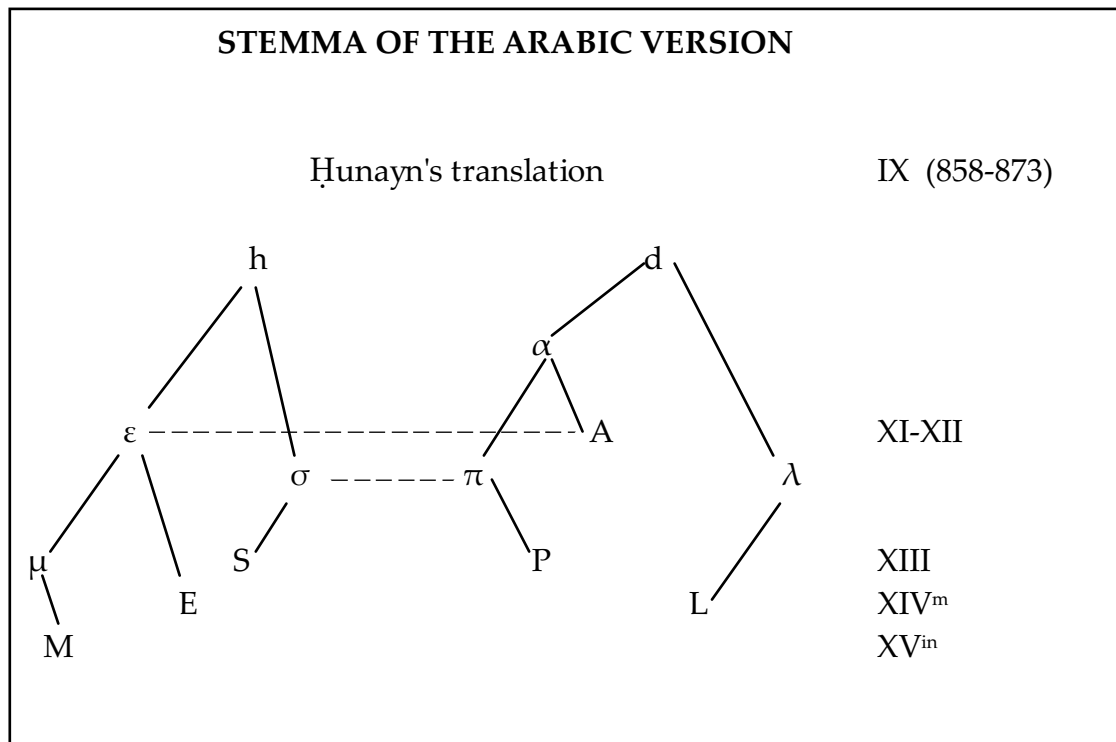
73 Sezgin, G.A.S., p. 109; Baron de Slane, *Catalogue de manuscrits arabes*, Paris, 1883-1895, p. 513. As in the copy preserved in Madrid, this manuscript contains K. fi l-Ustuqusat ʿala ra'y Buqrat = *De elementis*, K. al-Mizaj (Maqalas I, II, III) = *De temperamentis*, *De inaequali intemperie*, Maqala fi afdal al-hayyat = *De optima corp. nostr. const.* and Maqala fi khisb al-badan = *De bono habitu*.

74 Sezgin, G.A.S., p. 301-302; Ullmann, *Die Medizin...*, pp. 138-139.

75 Ullmann, *Die Medizin...*, p. 138.

76 *De ord. libr. suor.* 2: XIX 56,9-12 K.= I 94,7-9 Boudon: τό τε περὶ τῆς ἀρίστης κατασκευῆς τοῦ σώματος ἀνα γνῶναι καὶ τὸ περὶ τῆς εὐεξίας καὶ τὸ περὶ ἀνωμάλου δυσκρασίας.

77 Treatises 50 and 52 translated by Ḥunayn; 51: the Arabic translation derives from the Syriac version by Hubaysh.



The **d**-family is by far superior to the other.

h=SEM

P. 142,6-7 "erysipelas and the other humour known as" *om.* SEM

P. 160,10-11 "surplus of heat and coldness"] "heat" *om.* SEM

P. 166,17 "all of it" *om.* SEM

μ=EM

P. 154,18 "turns to" *om.* EM

P. 166,3 "very intense"] "very" *om.* EM

h=SM/ E corrects

P. 142,11 post ἀρρησάντων ("inactivity"), "or coldness takes them because of something cold nearby, like ice or something frozen or a very cold air" *add.* SM

d=APL

P. 160,19 "nor snake to snake" *om.* APL

P. 170,1 "to nobody" *om.* APL

d=PL/ A contaminated by **ε**

P. 170,18 "the kinds of these diseases"] "the kinds" *om.* PL=

d=AP/ L wrong; contaminated by **h**

P. 166,6 "of the testicles" AP: "of the teeth" L SEM

π (=P) contaminated by **σ**

P. 154,15 "everything thick and dense slowly alters" *om.* PS

5. The text of the translation.

The style of Ḥunayn's Arabic versions compared to the Greek texts is summarised by Strohmaier.⁷⁸ He followed an old method of the Syrian translators, trying to render the sense more than the words; that explains the change of sentence order within a clause, the substitution of a noun for a pronoun, or a paraphrase, for the sake of clarity. He often used two synonyms in order to translate a Greek word.

6. Relationship of the Arabic version to the extant Greek text.

6.1. Sometimes the Arabic text is correct, against the Greek *codd.*

P. 166,6 ὄρχεις *scripsi*, *cf.* "testicles" *Hun.*^{AP}: ὀδόντας *codd.* The previous ΟΔΥΝΩΝΤΑΙ could have easily turned ΟΡΧΕΙC into ΟΔΟΝΤΑC.

6.2. At times, it adds a text not extant in the Greek mss. I have accepted it when it was necessary for the contents, and/or it agreed with Galen's style, and/or the omission could be explained as an error.

P. 142,11 πάντως *addidi*, *cf.* "(or a calm or inactivity) that surpasses the convenient", *Hun.* ΠΑΝΤΩCΑΡΘΗCΑΝΤΩΝ Homoeoteleuton

P. 144,6 μόνον *addidi*, *cf.* "just" *Hun.* Lost by phonetic homoeoteleuton in τῶν ὁμαλῶν μόνον and visual likeness in uncials: ΟΜΑΛΩΝΜΟΝΟΝ

P. 144,9 μοι *addidi*, *cf.* *Hun.* "my (intention)", and Gal. De antidot. II 1: XIV 106, 5-6 K. Lost because of iotacism in the row γράμματι πρόκειται <μοι> διελθεῖν.

P. 144,9 σε *addidi*, *cf.* "to you" *Hun.* (*om. Hun.*^{MP}). Lost by phonetic haplography in αναμνησσε.

P. 146,11 κενάς *addidi*, *cf.* "hollows" *Hun.* Homoeoteleuton:

ΤΑCΜΕΤΑΞΥΧΩΡΑCΚΕΝΑC

P. 158,15 ἢ ψυχρότερον, *cf.* "compared to the coldest" *Hun.*, *cf.* hae vero frigidior, Nic., *addidit iam* Charterius. Lost by homoeoteleuton in θερμότερον ἢ ψυχρότερον.

P. 168,14 κατὰ τὴν διάθεσιν *addidi pace Hun.*, "according with the state".

In many cases the Arabic text includes short explanations:

P. 142,6 οἰδισκόμενον] "when in it (the organ) occurs oedema –which is the phlegmatic tumor-", *Hun.*

P. 142,14 ἀπλαῖ] "simple and singular" *Hun.*

P. 148,16 post φλεγμονή *addidit* "which is the hot tumor", *Hun.*

Some additions of *Hun.*'s text are not genuine. Most of them I have left in the apparatus criticus.

⁷⁸ Strohmaier, "Galen in Arabic...", p. 19,1, and ANRW, pp. 2010-2011.

6.3. At times Greek text is omitted by *Hun*. I would have deleted it with the same criteria as above. In fact, I have considered them all, but actually I have not deleted Greek text on the basis of *Hun*. Some examples:

P. 146,9-10 καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν εἴρηται non habet *Hun*. Anatomical Procedures is mentioned in p. 146,5, and appears again here. However, the author twice quotes De temperamentis, in p. 144,1 and p. 146,16. On the other hand, the composition of the text backs the mention of a book at the end of a paragraph.

P. 148,10 ἅπαντα non habet *Hun*. It could be a repetition from πανταχόθεν ὑπὸ τῆς ὑγρότητος ἅπαντα. However, the composition of the treatise backs the use of this pronoun for closing paragraphs. See Introduction, Composition.

6.4. Different sense, erroneous in my opinion. Maybe due to a different text.

P. 148,5-6 ὅταν ἰσχυρῶς σφηνωθῇ, "when the flow gets hard *wedged*"; *Hun*. reads "when it is too much in excess". Maybe he read or understood σφριγωθῇ or something like that (but σφριγωθῇ is *difficilior*).

P. 160,4-5 κινδυνεύει τοιγαροῦν ἐκ τῶνδε κακεῖνος ὁ λόγος ἔχειν ἐπιείκειαν, "In fact, on those grounds, probably that reasoning is convenient". *Hun*. reads "as for this comparison, the *soul* is scarcely calm with those words".

In other passages, the wrong translation is due to a poor understanding of the Greek text, at times backed by a bad transmission in his exemplar(s):

P. 170,19-20 ἀρκεῖ καὶ τοῦτ' εἰρησθαι μόνον, ὡς ὁποῖον] μόνον, ὡς *om. Hun*. Homoeoteleuton –on –on.

When the text includes personal names, they can be transliterated in part of the transmission, and mentioned in a more general way in others.

P. 168,17 Πραξαγόρας] *cf. Fraksāgūrās Hun^P: "some Greek men" Hun^L: om. Hun^{cett}.*

The following duality might just be caused by the inferior text of the h-family:

P. 170,2 παρὰ τοῖς παλαιοῖς ἰατροῖς] "to the ancient doctors" *Hun^{ALM}: "to the wise men" Hun^{cett}*. However the mention of both philosophers and physicians is frequent in Galen.

Very often a Greek word appears translated in some of the Arabic mss., and not in the others. The Arabic d-family usually keeps to the Greek text against the h-family:

P. 168,17 ὠμός, *cf. raw Hun^{MAP}, om. Hun^{cett}*

Sometimes it happens the other way round:

P. 168,18 οὐδεὶς] *cf. "nobody" Hun^{SEM}, om. Hun^{APL}*

6.5. As for the Greek model, it agrees with the Δ-family. See below, Relationships between the Greek manuscripts. The Greek manuscripts and Hunayn.

6.6. Sometimes the mss. of *Hun.* present two readings, as the Greek text does.

P. 154,12 δυσκόλως AP, "with difficulty": cf. "with effort and intensity", *Hun.*: χολή, μόγις U: μόλις z, et U^{i.m.}, cf. scarcely, *Hun*^L

In p. 162,10 Galen mentions ἐν ταῖς τῶν συμπτωμάτων αἰτίαις: "in my book of the causes of symptoms" *Hun.*, and in p. 164,17, ἐν ταῖς τῶν νοσημάτων αἰτίαις, "in my book of the causes of diseases" *Hun.* In both cases the verbal form that introduces the title is εἰρησεται, "I shall describe", but in the first sentence the Greek ms. P has εἰρηται, as in *Hun.*^{SEM}, "I describe", while the other Greek mss. and *Hun.*^{APL} rightly present a Future form: "I shall describe". Probably the agreement is due to a *lectio faciliior* both in the Greek P, and in the three mss. of the h-family of *Hun.*

6.7. Some errors of Ḥunayn.

P. 142,12 παθόντων om. *Hun.* Lost in the phonetical homoeoteleuton ἀργήσαντων, ἢ τι τοιοῦτον ἕτερον παθόντων.

P. 146,8-9 καθ' ἐν ὅτιον ὁμοιομερές μόριον: in(side) any homoeomer part : "in the only organ" *Hun.* He omits ὅτιον, because of the homoeoarcton ὅτιον ὁμοιομερές.

P. 146,20 ἅπασι om. *Hun.*, in the homoeoteleuton ἅπασι τοῖς μέρεσι.

P. 168,11-12 ἀνώματος δὲ καὶ ἡ τῶν ἄλλων ἀπάντων, πλὴν τῶν ἐκτικῶν ὀνομαζομένων om. *Hun.* The next sentence begins with ἀνώματος δὲ καί: saut du même au même.

P. 170,13 καρκίνος, ἐρυσίπελας, ἄνθραξ, ἔρπηξ, οἰδημα, cf. "cancer, herpes, erysipelas, oedema" *Hun.*, ἄνθραξ om. Saut du même au même and iotacism erisi/erpi: ΕΡΥCΙΠΕΛΑCΑΝΘΡΑΞΕΡΠΗC.

A 3. RELATIONSHIPS BETWEEN THE GREEK MANUSCRIPTS. THE GREEK MANUSCRIPTS AND ḤUNAYN. ORIBASIOS

1. All the copies descend from one archetype, for they have common errors:

omission:

P. 146,7 οὕτω *addidi*. It has been lost because of haplography and saut du même au même in the series ΥΠΑΡΧΟΥCΙΟΥΤΩΚΑΙΤΟΥΤΩΝ. It is necessary for Syntax, the sentence being nonsense as it is transmitted. See Commentary to p. 146,7. The error was produced in uncial letters, and there are not common minuscule errors. As it is present as well in the translation of Ḥunayn, written

some time between 858 and 873,⁷⁹ we may situate the archetype in a *terminus ante quem* middle of IX c., a date coherent with the use of capital letters.

There are other errors easily produced in uncial letters (see Commentary, especially to 158,3: ΑΥΤΑΤΑ→ΑΠΑΝΤΑΤΑ). Three of them:

P. 4,10 παντὸς *addidi* Homoeoteleuton:

ΚΑΠΗΠΑΝΤΟCTΟΥΨΥΧΟΝΤΟC. καὶ πὶ <παντὸς> τοῦ ψύχοντος is parallel to the previous ἐπὶ παντὸς τοῦ θερμαίνοντος

P. 6,16 ἄν *addidi* (ΟΥΤΩΓΑΝ→ΟΥΤΩΓΟΥΝ) Perseveration, dittography

P. 6,17 ἄν *addidi* (ΑΝΑΝΘΡΩΠΟC) Haplography

2. There are two families, Δ and Λ. The Δ-family is composed of PUDV, while the other is formed by LTM. Both of them agree in error against each other. Family Δ is by far the best. Both of them present uncial errors.

Errors in Δ:

omission:

P. 146,6 εἰρημένων *om.* Δ *Hun.* ΤΩΝΕΙΡΗΜΕΝΩΝΟΜΟΙΟΜΕΡΩΝ Homoeoteleuton and phonetic similarity of the two groups.

P. 146,18 τέ Λ: *om.* Δ ΟΠΟΙΑΤΕΤΙCΕCΤΙΝ Loss of τέ in the series of T and EC.

P. 146,7 οὕτω Λ P^{s.l.}: *om.* P^{i.l.} z (ἤδη U) Easy haplography in:

πεπονθοτοκοῦτωCΩματοC (For P^{s.l.} see below)

P. 148,7 τῶν κινούντων αὐτὸ χιτῶνων LM: τῶν χιτῶνων αὐτῶν TPz, *cf.* "from the veins' bodies themselves", *Hun.* Homoeoteleuton.

P. 152,3 γὰρ Λ: *om.* Δ "Phonetic" haplography in a iotacistic series: τοῖσι γὰρ τὴν φύσιν διαλασσομένοισι

P. 152,8 αἱ *om.* Δ ΑΥΤΑΙΑΠΟΙΟΤΗΤΕC Haplography

P. 162,13 ἅπας *om.* Δ ΠΥΡΕΤΟCΑΠΙCΧΩΡΙC A sort of haplography

P. 166,7 διαθέσεων *om.* Δ, *Hun.* Homoeoteleuton in τῶν τοιούτων διαθέσεων.

varia:

P. 144,13 μόρια Λ: μέρη Δ (ΚΑΛΟΥ)ΜΕΝΑΜΟΡΙΑ→ ΜΕΝΑΜΕΡΗ Perseveration of ΜΕ.

P. 146,12 πάνυ LTP⁹⁰: καὶ Δ ΠΑΝΥ→ ΚΑΝ Palaeographic confussion.

P. 146,13 αὐτῶν Λ, *cf.* "in them" *Hun.*: τούτων Δ The loss of the adjacent ἄν (πάνυ φωράσαις <ἄν> αὐτῶν) can be explained by ΑΝΑΥΤΩΝ, not by *ΑΝΤΟΥΤΩΝ.

P. 152,6 ἐπὶ Λ: ἐν Δ ΕΠΙΜΕΝ→ ΕΝΜΕΝ Anticipation.

P. 166,7 οὐδὲ Λ: οὐτε Δ οὐτε is *facilior*

⁷⁹ Vide *supra*. See Sezgin, GAS, p. 75.

P. 166,8 καὶ γὰρ εἰ Λ: εἰ γὰρ Δ

P. 168,1 αὐτοῦ L (αὐτῆς) TM: οὕτω Δ

ΟΥΔΕΝΕCΤΙΝΑΥΤΟΥ→ΟΥΔΕΝΕCΤΙΝΟΥΤΩ, and ΤΟΥ into ΤΩ.

P. 168,13 μὴν LM: μὲν z: δὲ PU The unusual correspondence μὲν ... μὴν gave way to the *facilior* μὲν, while δὲ is a correction.

P. 170,10 λοιποὶ Λ: ἄλλοι Δ ἄλλοι is *facilior*, ΑΛΛ coming from:

ΤΑΙΚΑΙΟΙΛΟΙΠΟΙΔΕ: ΤΑΙΚΑΙΟΙΑΛΛΟΙΔΕ

P. 170,21 ἐργάζεται Λ: ἐργάζεται Pz: -ζεσθαι U The Future ἐργάζεται is *difficilior*, and is backed by the next ἀφίξεται.

2.2. Errors in Λ

omission:

P. 142,7 ἐστὶ *om.* Λ ΤΟΥΤΟΥΔΕCΤΙΤΟΥΓΕΝΟΥC, *saut du même au même*

P. 144,14 εἰς *om.* Λ ΕΙΤΥΧΟΙΕΙCΜΗΡΟΝ, *saut du même au même* with the help of *iotacism*

P. 160,15 οὐκ Δ: *om.* Λ οὐκ was lost in Λ in uncial letters, between a first and a third ΟΥ: ΟΥΜΟΝΟΝΟΥΚΟΙΚΕΙΟΥC

P. 160,20 γοῦν Δ: οὖν Λ ΑΥΞΕΤΑΙΟΥΝ *Haplography* in uncials

P. 162,4 ἀπάντων Δ: *om.* Λ ΤΩΝΔΑΛΛΩΝΑΠΙΑΝΤΩΝ *Homoeoarcton* and *homoeoteleuton*

P. 162,8 νῦν *om.* Λ ΕΝΤΩΝΥΝΕΝΕCΤΩΤΙ *Haplography*

P. 162,14 ἐστὶ *om.* Λ κεκραμένων ἐστὶ νοσημάτων *Homoeoteleuton*

P. 162,15 μόνη *om.* Λ ἐπὶ σήψει μόνη *Iotacism*

P. 164,1 τοῦ θερμοῦ *om.* Λ αὐξηθέντος τοῦ θερμοῦ ... ζέσαντος *Homoeoteleuton*

P. 164,9 πυρετοῖς (cf. "fevers" Hun.) *om.* Λ τοῖς τοιούτοις πυρετοῖς *Homoeoteleuton*

P. 170,2 ἐξ ἀνάγκης *om.* Λ ἐξ ἀνάγκης disappeared in Λ when the scribe copied the next word beginning with Ε (ἐπεσθαι), leaving ἐξ ἀνάγκης out.

addition:

P. 160,14 τὸ *ante* σῶμα *add.* Λ ἅπαν σῶμα is right

P. 160,15 ἔχει *post* οἰκείους *add.* Λ (from preceding line)

P. 166,13 καὶ *add.* Λ *ante* προσραίνεις False correction

P. 170,14 *post* φαγέδαινα *add.* φλεγμονή Λ (from preceding line)

varia:

P. 160,19 ἀσπὶς ἀσπίδα] ἀσπίδα ἀσπὶς Λ

P. 164,1 αὐξηθέντος Δ: αὐξηθέντων Λ *Homoeoteleuton* (πλειόνων ἢ πόνων αὐξηθέντος)

P. 164,20 οὗτοι Δ, cf. "these" Hun.: οὕτω Λ In οὗτοι πάντες, Λ reads ΤΟΥΠΙ as ΤΩΠΙ in uncial letters

- P. 164,21 κατεψυγμένοι Δ: καταψυχόμενοι Λ (*difficilior*)
 P. 166,3 σφοδροτάτου Δ: σφοδρου Λ Haplography
 P. 166,18 δι' ἐλαχίστου Δ: δὴ ἐλαχίστω Λ After the initial iotacism was produced, the adjective was changed into Dative in order to (wrongly) agree with the initial τῷ.
 P. 172,1 γίγνεσθαι Δ: γενέσθαι Λ Durative aspect is right.

2.3. Inside the Δ-family, the four mss. have their own errors. On the other hand, P, or U, or DV, by themselves, present at times the reading of Δ.

Errors in P:

omission:

- P. 142,14 γὰρ *om.* P
 P. 144,2 ἢ *pr. om.* P
 P. 144,13 ἐξ αὐτῶν *om.* P
 P. 146,11 ἐργάζεται] ἐργάζονται P
 P. 152,8 τε *om.* Pz
 P. 152,11 τῆς *om.* P
 P. 152,15 αἶμα *om.* P
 P. 164,15 τισι *om.* P
 P. 166,2 γε *om.* P
 P. 170,5 τῆς bis LTz: τοῖς MU: *om.* P
 P. 172,7 ἄν *om.* P

addition:

- P. 146,14 καὶ *ante* αὐται *add.* P

varia:

- P. 146,5 ἐγχειρήσεσιν] ἐγχειρίσεσιν P
 P. 148,6 σφηνωθῇ] σφινωθῇ P
 P. 148,12 ὀδυνῶνται: ὠδυνῶνται P
 P. 160,18-19 ἔχισ ἔχιν] ἔχιδναν ἔχιδνα P
 P. 162,5 νοσοῦσιν] κάμνουσι P (*e l.* 22)
 P. 164,15 ἐγείρηται] ἐγείρεται P

Errors in U:

omission:

- P. 144,9 πρόκειταί *om.* U
 P. 146,17 σαφηνείας *om.* U
 P. 148,3 μὲν *om.* U
 P. 148,5 αἱ *om.* U
 P. 148,10 σύνδεσμοι *om.* U
 P. 150,7 κατασκήψαντος] κατα- *om.* U

P. 154,16 χυμὸς *om.* U

P. 164,2 ἀμετροτέρων ... ἐκθερμανθέντος *om.* U

P. 166,1 καρτεροῦ *om.* U

P. 168,3 ἀμέτρου *om.* U

addition:

P. 150,3 *post* φθορὰν *add.* ἀναγκαῖον ἀκολουθῆσαι φθορὰν U, *cf.* necessarium est sequi corruptionem Pet.

P. 150,20 νῦν *ante* ὑπάρχοντα *add.* U

P. 150,15 *ante* ἀγαθή *add.* δύο U

P. 154,15 διὰ τοῦτο γίνονται καὶ ὀδύναι *ante* πρώτως *add.* U

P. 154,21 καὶ *post* αἶμα *add.* U

P. 156,14 ἢ *ante* τῶν ἀρτηριῶν *add.* U

P. 160,19 τε *ante* ἐστι *add.* U

P. 166,1 *post* ὑπὸ κρύους *add.* πυρὶ οὔτοι U

P. 168,13 καὶ *ante* σπάνιον *add.* U

P. 170,1 *post* μηδεὶς *add.* οὕτως U

P. 170,7 ἄμφω] ἄμ' ἄμφω U

varia:

P. 148,6 στέγηται] στέγει τε U

P. 148,8 πίμπλονται] πίμπλαται U

P. 148,8 αἶ] αἷ U

P. 148,9 τῆς ὑγρότητος] ὑπὸ τῆς ὑγρότης U

P. 148,17 αὐτὸν] αὐτῶν U

P. 148,17 ζέει] ζῇ U

P. 148,17 συνεκθερμαίνει] συνθερμαίνει U

P. 148,17 αὐτῶ] αὐτὸ U

P. 150,6 ἔσται] ἐστὶ U

P. 150,7 ὑγροῦ] ῥεύματος U

P. 150,22 φθαρήναι] φθαρήσεσθαι U

P. 152,12 εἰ] ἢ U

P. 154,7 καταψύχεται] κατάψυχρον U

P. 172,7 γε] τε U

Errors in D:

omission:

P. 156,6 μήπω UV: μηδέπω ΔΡ: μὴ D

P. 152,5 διαλλάττεται] διαλλάτται D

Errors in DV=z:

omission:

P. 146,19 ἔστιν *om.* z

- P. 148,15 μὲν *om.* z
 P. 150,21 δηλονότι *om.* z
 P. 150,22 αὐτῶν *om.* z
 P. 152,12 τε *om.* z
 P. 170,8 ἐν *om.* z

addition:

- P. 152,7 ἢ *ante* διὰ *add.* z
 P. 154,14 γίγνεσθαι] ἐγγίγνεσθαι z
 P. 156,2 αἱ *ante* δυσκρασίαι *add.* z
 P. 158,7 αὐτοῦ *ante* ἀπάντων *add.* z
 P. 170,2 καὶ *ante* παρὰ *add.* z

varia:

- P. 146,19 δὴ] οὖν z
 P. 146,20 πεπονθότος] ῥευματισθέντος z
 P. 148,14 βαρύνονται] βαροῦνται z
 P. 148,15 τὸ νόσημα] τὰ νοσήματα z
 P. 150,6 ἔσται τῆς ἰάσεως] τῆς ἰάσεως ἔσται z
 P. 150,11 *post* ἀποστάσεών ἐστιν *trasp.* ἢ εἰς ἄκυρον μὲν οὐ μὴν μεγίστην z
 P. 150,20 τοῖς σπλάγχνοις ὑπάρχοντα z
 P. 152,4 τὴν φύσιν] τῆς φύσιος z
 P. 152,4 διαλλασσομένοισι] -μένης z
 P. 152,4 διαφθειρομένοισιν] -μένης z
 P. 152,14 τι] τοι z
 P. 164,12 ἐλέγετο] ἐγένετο z
 P. 166,9 ὄν] οἶον z

P is some sort of edition of the treatise.

When P *in linea* diverges from Δ, it usually agrees with the Δ-family, both in error and in right reading.

- P. 152,9 ξηρᾶς Uz: ὑγρᾶς ΔP
 P. 152,16 χολῶδες Uz: χολωδέστερον ΔP
 P. 154,12 δυσκόλως ΔP: χολή, μόγισ U: μόλις z, *et* U^{i.m.}
 P. 156,6 ἐθελήσαις Uz: ἐθελήσεις ΔP

It presents readings *supra lineam*, with or without the indication γράφεται, coming from Δ as well.

- P. 144,15 οἰκεῖα *om.* P^{i.l.} z, *restituit* P^{s.l.}
 P. 146,12 πάνυ LTP⁹⁰ A: καὶ Δ, *cf.* "maybe" Hun.
 P. 146,20 οὕτω Δ P^{s.l.}: ἤδη U: *om.* P^{i.l.} z

P. 148,11 πρὸ τούτων LP^γ, cf. "before that" Hun.: πρῶται P

P. 158,9 ἀνδράσιν LP^{s.l.}: om. P^{i.l.} Uz

However, at times, P^{s.l.} agrees with its own family, while P^{i.l.} agrees with the other group.

P. 148,2 δυσ P^γ, δυσκρασίαν U, cf. *dyskrasia* Hun., cf. Gal. 9.309.4: κράσιν (*sic*) cett.

P. 148,11 post πρὸ *habent* δὲ P^γ Uz

Sometimes its *s.l.* variants are not attested anywhere else, coming from a different source, or, in some cases, from conjecture in a previous copy. Some of them could be glosses:

P. 148,7 διηθείται] διδρροῦται P^{s.l.}

P. 152,13 ἐπιεικῆς] μετρίως P^{s.l.}

But others are true readings:

P. 146,18 ῥητέον] εἴρηται P^γ

P. 150,6 οὖν P^{s.l.}: om. P^{i.l.} cett.

At times P preserves the right reading from Δ (or Λ?).

P. 156,4 τὰ ἄλλα P, cf. *alia* Nic.: om. cett.

P. 156,5 ὑγιαίνοντος ἔτι P^{s.l.}, *servat* "still" Hun., cf. *adhuc* Ger.: καὶ ζῶντος P^{i.l.} cett. ὑγιαίνοντος ἔτι disappeared in a double *saut du même au même*: EICHNEIYTIAINONTOCETL and the remaining ζῶντος was corrected in ζῶντος: εἰς ἣν εἰ ὑγιαίνοντος ἔτι τοῦ ζῶντος καὶ μήπω πυρέττοντος. The text read by Hun. had lost ὑγιαίνοντος but not ἔτι.

The corrections in P are introduced by the scribe himself, adding new strokes or crossing out the letters, so that it is often impossible to tell the former spelling from the latter. Probably, as he was a rather good scribe,⁸⁰ somebody told him to write a copy from two different exemplars of the same treatise(s). I guess that he copied the text from a ms. A, while having a second (B) in front of him, which included the scholies: he left room for them. When he finished the copy of all the treatises, he started to correct them looking at B as exemplar, and just having ms. A within reach. Thus, he corrected the text *in linea* and *supra lineam*, included *lectiones s.l.*, copied the γράφεται, and copied the scholies.

In p. 168,11-12, the scribe of a previous exemplar omitted (*saut de même au même*) a line (ἀνωμάλως δὲ καὶ ἡ δυσκρασία τῶν ἄλλων ἀπάντων πλὴν τῶν ἐκτικῶν). Its corrector added the sentence in *margin*. The next scribe (P or a former one) wrote the text before its place (l. 10), keeping the omission. A second exemplar, B, read by the scribe at the time of correcting his copy, presented a good text as far as lines 11-12 were concerned: P *expunxit* the wrong addition, and wrote *in margine* the missing sentence.

All in all, this ms. is a rather good witness for the *constitutio* of the text.

⁸⁰ See my *Un texte byzantin inédit sur la scène de Galien et Glaucon (De locis affectis, 8,361,12 -366,5 K.)*, in: A Garzya and J. Jouanna, eds., *Les Textes Médicaux Grecs...*, pp. 135-148.

Ms. U has some errors from uncial letters:

- P. 146,17 σαφηνείας *om.* U Pet. ΥΠΙΟΜΝΗCAICAΦΗΝΕΙΑC
 P. 148,3 μὲν *om.* U ΠΡΩΤAIMENAIMΕΙΖΟΥC
 P. 150,7 κατασκήψαντος] κατα- *om.* U ΑΠANTOCTOYΚΑΤΑΚΗΨANTOC
 P. 150,20 νῦν *ante* ὑπάρχοντα *add.* U ΑΥΤΟNΥΠAPXONTA Dittography
 P. 154,21 καὶ *post* αἷμα *add.* U (AIMAKAI).
 P. 172,7 γε] τε U (ΓΕ TE)

On the other hand, it has several good readings against uncial errors in the other mss. (see Commentary). Peter of Abano translated a previous copy of this ms. at the end of the XIII c. (see below, The Greco-Latin Translations). Probably the Greek text of some of the treatises in U, was not available in minuscule writing⁸¹ in a particular area, and a transliteration was demanded for some of them. The XIII c. has seen a new period of transliteration.

Some good readings in U:

- P. 142,6-7 ἐρυσιπέλατι κάμνων U, κάμνον *correx*i : ἐρυσιπελατούμενον *cett.*
 It is an uncial error: ΕΡΥCΙΠΕΛΑΤΙΚAMNQN → ΕΡΥCΙΠΕΛΑΤΟΥMENON.
 By the way, such a verb is not attested, whereas the syntagm of κάμνω with dative is precisely the same in De loc. affect. IV 11: VIII 286,11K., ἐρυσιπέλατι κάμνει τὸ σπλάγχνον. The good reading in U is backed by the next καρκίνω, corrupted as participle καρκινούμενον in the others (and P^{s.1}), and kept by PU. For κάμνω with καρκίνω, see Adv. Iulianum 8,5: XVIIIa 290,7 K. = CMG V 10,3; 64,6 Wenkebach: μήτε καρκίνω κάμνοντα.
 P. 158,6 *post* οὕτω *add.* ὥς APz It is a dittography in uncial letters: ΟΥΤΩCΩC
 P. 158,16 εἴη U: ἦν *cett.* Iotacism and *lectio facili*or
 P. 168,5 οὗτοι U: *om. cett.* It is an uncial error in the others, ΕΧΟΥCΙΟΥΤΟΙ

At times, U agrees in error with the Δ-family:

- P. 148,8 κενὰ Pz, *cf.* "hollow" *Hun.*: *om.* AU

Sometimes in good reading:

- P. 162,3 ἐκείνος AU, *cf.* that *Hun.*: ὀνομαζόμενος Pz

In the lower level, DV are rather alike, although both of them have some errors of their own: as they usually agree, I refer to them as z. For the most part, V is a copy of D, even if it is not accurate to say that V is just a copy. On the other hand, D has been corrected, and V has not. There are many errors in z. At times, they keep the right reading of Δ, lost in PU:

- P. 170,9 ἐκ δύο z, *cf.* "two" *Hun.*: κακ U: διὰ AP

Pz agree in error far more often than Uz, so that there is a common source for them.

⁸¹ Slightly later is the Latin translation by Nicholas of Regio, who worked in Southern Italy (Calabria), whilst Pietro d'Abano taught and lived in Padua (he studied in Paris as well).

omission:

P. 146,8 ἐν *om.* Pz

P. 146,9 μόριον *om.* Pz

P. 148,1 ἢ *ante* ἀπλῇ *om.* Pz

addition:

P. 142,12 *post* προσπιπτόντων *add.* φαρμάκων Pz

P. 162,2 περὶ μὲν τούτων ἕτερος ἂν εἴη λόγος *scrips. bis* Pz, *sed postea* περὶ μὲν τούτων ἕτερος λόγος *exrunx.* PD

P. 166,7 τι *ante* τῶν *add.* Pz

varia:

P. 146,16 ταυτὶ] ταῦτα Pz

P. 150,14 καὶ *bis*] καὶ Pz

Uz agree in error (against AP; see above for P agreeing with Λ). Uz might be = Δ:

P. 144,7 ὅστις] τις Uz ΔΗΛΟΝΟCTIC → ΔΗΛΟNTIC haplography

P. 156,13 τῆς *om.* Uz (τῇν ἐκ τῆς σηπεδόνης)

P. 156,20 τε] τι Uz

P. 158,15 τοσοῦτω AP: τοσοῦτον Uz

P. 170,4 ἐπηκολούθησεν] ἠκολούθησε Uz

2.4. In the Λ-family, the three mss. have their own errors.

Errors in L

omission:

P. 152,10 οὐσίας *om.* L

P. 154,9 θερμοτάτη ... φλέγμα *om.* L

P. 154,9 ξανθὴ χολή *om.* L

P. 156,21 ἀκριβῶς *om.* L

P. 160,6 γὰρ *om.* L

P. 162,9 εἰσὶ *om.* L

P. 164,19 ἰσχυρῶς *om.* L

P. 166,1 ταχέως *om.* L

varia:

P. 142,9 ἀλλοιουμένων] ἀλλοιω- L

P. 146,13 αἰσθήσει] αἰσθήσεσι L

P. 146,21 ἀνωμάλου] ἀνωμαλίας

P. 148,11 πρὸ] πρὸς L

P. 148,16 ἀνώματος] ἀνωμαλία L

P. 150,13 ἐντὸς] ἐν L

P. 152,9 πεινῆν] πεινῶν L

P. 166,13 μὴ] μὲν L

Errors in T

omission:

P. 146,8 τε *om.* T

P. 146,19 μία *om.* T

addition:

P. 148,10 *ante* νεῦρα *add.* τὰ T

varia:

P. 144,11 τοι] τι T

P. 146,14 ἔχουσι] ἔχουσai T

P. 148,3 κατασκήψαντοςὸ κατασκήψαντος T

P. 148,7-8 κὰν τούτῳ] κακ τούτων T

P. 148,15 τῷ] ὡς T

P. 150,6 διαφορηθέντος ἅπαντος] διαφορηθέντα ἅπαντα T

P. 150,13 ἀποστάσεων] ὑποστάσεων T

P. 156,9 θερμότητος] τὴν θερμότητα T

P. 156,15 μεταβάλλεται] μεταλαμβάνει T

P. 158,12 ἔτι] ἔστι T

P. 172,3 διατιθέμενον LMΔ Σ: διατεθειμένον T

Errors in M

omission:

P. 146,12 κὰν Δ, *cf.* "maybe" *Hun.*: πάνυ L TP^{ve} Ald.: *om.* M

P. 148,13-14 τε ἅμα καὶ θλίβονται *om.* M

P. 150,19 τὰς *ante* φλέβας *om.* M

addition:

P. 154,7 *ante* φύσει *add.* τῇ M

varia:

P. 148,11 αῖ] αἰ M

P. 154,7 ἦ] ἦν M

P. 154,16 δ' ἦ] δὲ M

P. 156,6 τοῦ] τὰ M

P. 156,6 ἐμβαλεῖν] ἐμβᾶσιν M

P. 158,16 πλησιάζον] πλησιάσαν M

P. 168,2 ῥιγοῦσι M

L and M are closely related. Some common errors:

omission:

P. 148,12-13 τε καὶ διατείνονται καὶ διασπῶνται, κακ τῶν ἔξωθεν θερμαίνονται τε *om.* LM

P. 154,20 καὶ *ter om.* LM

P. 170,1 καὶ *om.* LM

addition:

P. 154,7 *ante* φύσει *add.* τη LM

P. 158,5 *post* καὶ *add.* στερεοῖς καὶ LM

varia:

P. 144,12 ὅστις] ὅς LM

P. 156,20 ἄπαν, ὁδός TPUD^{p.c.}: ἐπάνοδος LM

P. 162,18 ἐτέρωθι] ἐτέρωθεν LM

P. 166,10 αὐτοῖς P: αὐταῖς LM: *om. cett.*

P. 166,10 κινοῖντο Pz Ch.: κινοῖτο T: κινεῖτο LM

P. 168,4 κατὰ τὸν αὐτὸν ΔT: κατ' αὐτὸν τὸν LM

P. 170,20 ἦ TPz: ἦν LM, U *ut vid.*

At times, M preserves a good reading, or just corrects:

P. 150,10 ἀκυροτάτην M: -ω- *cett.*

P. 156,16 πάσχοι M: πάσχει *cett.*

P. 170,17 παχέως M: παχέος *cett.*

M against LT, agreeing with Δ:

P. 156,16 εἰ *om.* LT

Some good readings both in Λ and P^{s.l.} may hide good text of the former:

P. 158,9 ἀνδράσιν ΛP^{s.l.}: *om.* P^{i.l.} Uz

Some good readings both in Λ and U may hide good text of the former, U being just contaminated by it, or just preserving a right lesson:

P. 162,3 ἐκεῖνος ΛU, *cf.* "that" Hun.: ὀνομαζόμενος Pz

Some good readings of L most probably come from Λ, being TM contaminated by Δ:

P. 160,20 αὔξεται L: αὐξάνεται *cett.* ΑΥΞΕΤΑΙ→ΑΥΞΑΝΕΤΑΙ Dittography and *facilior*.

P. 162,7 τινὰ L: πολλὰ *cett.*, *cf.* "many" Hun. καὶ ἄλλα τινὰ in Galen is *difficilior* than καὶ ἄλλα πολλά (he uses both). The series KAIAΛΛATINA was changed into KAIAΛΛAΠOΛΛA: TI was read Π, and NA was read ΛΛA.

2.5. Both families are independent from each other. The separative errors either have been produced in uncial letters, or are not depending on minuscule letters. That is, the two families existed before the transliteration. That means that they have been separately transliterated.

The fact of U preserving sound text against the other mss., which have uncial errors, as well as many errors in U being uncial errors against the other mss., points to a probable transliteration on the basis of U (*ca.* XIII c., see below, Peter of Abano).

3. The Greek manuscripts and Hunayn.

Hunayn's translation agrees with the Δ-family in error, and most of the good readings in it are present in *Hun.* as well.

Errors in Δ and *Hun.*:

P. 146,6 εἰρημένων *om.* Δ *Hun.* ΤΩΝΕΙΡΗΜΕΝΩΝΟΜΟΙΟΜΕΡΩΝ

Homoeoteleuton and phonetic similarity of the two groups.

P. 166,7 διαθέσεων *om.* Δ *Hun.* Homoeoteleuton:

ΤΩΝΤΟΙΟΥΤΩΝΔΙΑΘΕΕΩΝ

P. 146,12 πάνυ LTP⁹⁰: καὶ Δ, *cf.* "maybe" *Hun.* ΠΑΝΥ→ΚΑΝ

Good readings in Δ and *Hun.*:

P. 164,1 ἀνξηθέντος (τοῦ θερμοῦ) Δ, *cf.* (heat) "increases" *Hun.*: ἀνξηθέντων

Δ. Homoeoteleuton in ἐκ γυμνασίων πλειόνων ἢ πόνων ἀνξηθέντος

P. 164,20 οὗτοι Δ, *cf.* "these" *Hun.*: οὕτω Δ Easy error in uncials: ΟΥΤΟΙ read ΟΥΤΩ

P. 168,7 εἶσι Δ, *cf.* "presents (such condition)" *Hun.*: ἔτι Δ

P. 170,2 ἐξ ἀνάγκης Δ, *cf.* "it is necessary" *Hun.*: *om.* Δ

P. 170,14 post φαγέδαινα *add.* φλεγμονή Δ: *non habent* Δ, *Hun.*

P-*Hun.*:

P. 142,10 ἀνώμαλος γίγνεται δυσκρασία P^{a.c.}, *cf.* "anomalous *dyskrasia* happens" *Hun.*: ἀνώμαλοι δυσκρασῖαι γίνονται *vel* ἀν- γίγ- δυσκ- P^{p.c.} *cett.*

U-*Hun.*:

P. 146,16 κράσεως U, *cf.* "temperament", *Hun.*: κράσεων *cett.*

P. 150,15 δύο U, *cf.* "two" *Hun.*: *om.* *cett.*

z-*Hun.*:

P. 144,1 δυσκρασῖαι z, *cf.* "dyskrasias", *Hun.*: *om.* *cett.*

P. 148,10 σύνδεσμοι καὶ ὑμένες z, *cf.* "ligaments and membranes", *Hun.*: ὑμένες καὶ σύνδεσμοι ΔP

PU-*Hun.*:

P. 166,18 τό τε ψύχον καὶ τὸ θερμαῖνον PU; *cf.* "that which cools and that which heats up", *Hun.*: τό τε ψυχρὸν καὶ τὸ θερμὸν, z: τό τε θερμὸν καὶ ψυχρὸν Δ.

P. 172,2 τοῦδε PU, *cf.* "that" *Hun.*: οὕτω z: *om.* Δ

Pz-*Hun.*

P. 148,8 κενὰ Pz, *cf.* "hollow" *Hun.*: *om.* ΔU

Uz-*Hun.*

P. 152,8 ξηραίνεσθαι Uz, *cf.* "get dry" *Hun.*: ὑγραίνεσθαι ΔP

P. 152,9 ὑγραίνεσθαι Uz, *cf.* "get wet" *Hun.*: ξηραίνεσθαι ΔP

P. 152,9 ξηρᾶς Uz, *cf.* "dry" *Hun.*: ὑγρᾶς ΔP

P. 152,10 ὑγρᾶς Uz, *cf.* "humid" *Hun.*: ξηρᾶς ΔP

P. 168,6 αἰσθάνονται Uz, *cf.* "perceive" *Hun.*: *om.* *cett.* (-MACIACAICΘ-)

As for the Greek text, the fact of *Hun.* agreeing with P alone, U alone or z alone, as well as with Δ, means that any of them represents for us a layer of the text datable to the IX c. So that U and z cannot be just considered recentiores.

On the other hand, *Hun.* witnesses the presence of the two Greek families in the IXc., a fact inherent to the families themselves, as I have shown above. Our Greek transmission presented two branches by the time of Ḥunayn.

Moreover, against all the Greek mss., Ḥunayn has the right text for p. 166,6: ὀρχεῖς *scripsi*, *cf.* testicles *Hun.*^{AP}: ὀδόντας *codd.* The previous ΟΔΥΝΩΝΤΑΙ could have easily turned ΟΡΧΕΙC into ΟΔΟΝΤΑC. As all the Greek *codd.* agree in error, it was in the Archetype. It seems to me that a hypothetical correction of the text, produced before Ḥunayn or by himself is not probable, unless a parallel passage could be found elsewhere (in fact, there is one *locus similis*, but *cf.* commentary to Section 14: p. 166,6 of the Text). If not by correction, the right text had to be found in an exemplar independent from the archetype.

4. The Greek manuscripts and Oribasius.

The *loci similes* in Oribasius (see below, The Greek indirect tradition) attest common errors, or at least common text, between them and the Δ-family.⁸²

P. 150,2 - 154,4 καὶ δυοῖν γε ... τὸ ζῶον αἶμα] = Collectiones medicae CMG VI 2,1; 44,1,10,5 – 44,1,13,1 δυοῖν γὰρ ... τὸ ζῶον αἶμα.

Error:

P. 152,16 σύμπαν] πᾶν U Orib.

It agrees in right reading with the Δ-family:

With Δ:

P. 152,13-14 τοῦ ζώου τὸ σῶμα Δ Orib.: τὸ τοῦ ζώου σῶμα Δ

P. 152,17 συνδράμη P, U *ut videtur*, z Orib.: συνδράμοι Δ

With P:

P. 150,4 καὶ δὴ καὶ Pp.c. Orib.: καὶ δὴ *cett.*

P. 150,7 ἡ bis P^{s.l.} Orib.

With PU:

P. 150,3 γίγνεσθαι *add. post φθορὰν* Δz: *non habent* PU Orib.

With Uz:

P. 150,9 τε *pr.* Uz Orib.

P. 152,15 τὸ ζῶον Uz Orib.: τοῦ ζώου τὸ σῶμα P: τὸ τοῦ ζώου σῶμα Δ

P. 152,16 χολῶδες Uz Orib.: χολωδέστερον ΔP

⁸² For the relationship between Oribasius and the transmitted text of Galen, see now Garofalo-Debru, Galien, VII, pp. 17-24 (De ossibus ad tirones), pp. 102-105 (De musculorum dissectione).

When it agrees with one ms. of the Λ -family, the reading is attested as well in the Δ -family (U):

With TU:

P. 152,13 ὑπάρχοι TU Orib.: ὑπάρχει *cett.*

P. 152,14 ἔχοι TU Orib.: ἔχει *cett.*

With TUz:

P. 152,15 εἰ post ἦ *add.* LMP (*non habent* TUz Orib.)

With MU:

P. 152,15 ζέοι MU Orib.: ζέει *cett.*

P. 152,16 ὑπάρχοι MU Orib.: ὑπάρχει LP D^{s.l.}

The agreement in error in p. 152,16 is not enough to tell for certain the relationship between those and Galen's.⁸³

If the text of Oribasius is unanimous,⁸⁴ the community could vaguely be established. If that is the case, the text of *De inaequali intemperie*, coming from a single archetype in uncial letters (at least, the common omission of οὐτω in P. 146,7), could have been divided into two branches in the IV c.?

We could think that the text of Uz is the correct text of Galen. Even then, *the fact of the existence of a Λ -family, which doesn't come from Uz (Δ -family), nor the other way round*, could point to a division of the text into two branches, datable to the IV century or earlier (previous to the inclusion of Galen's text by Oribasius). The archetype would antedate the division into two branches (III-IV^m c.) It is just a possibility. At least the two families were divided before Hunayn's translation.

5. Stemma. See page 46.

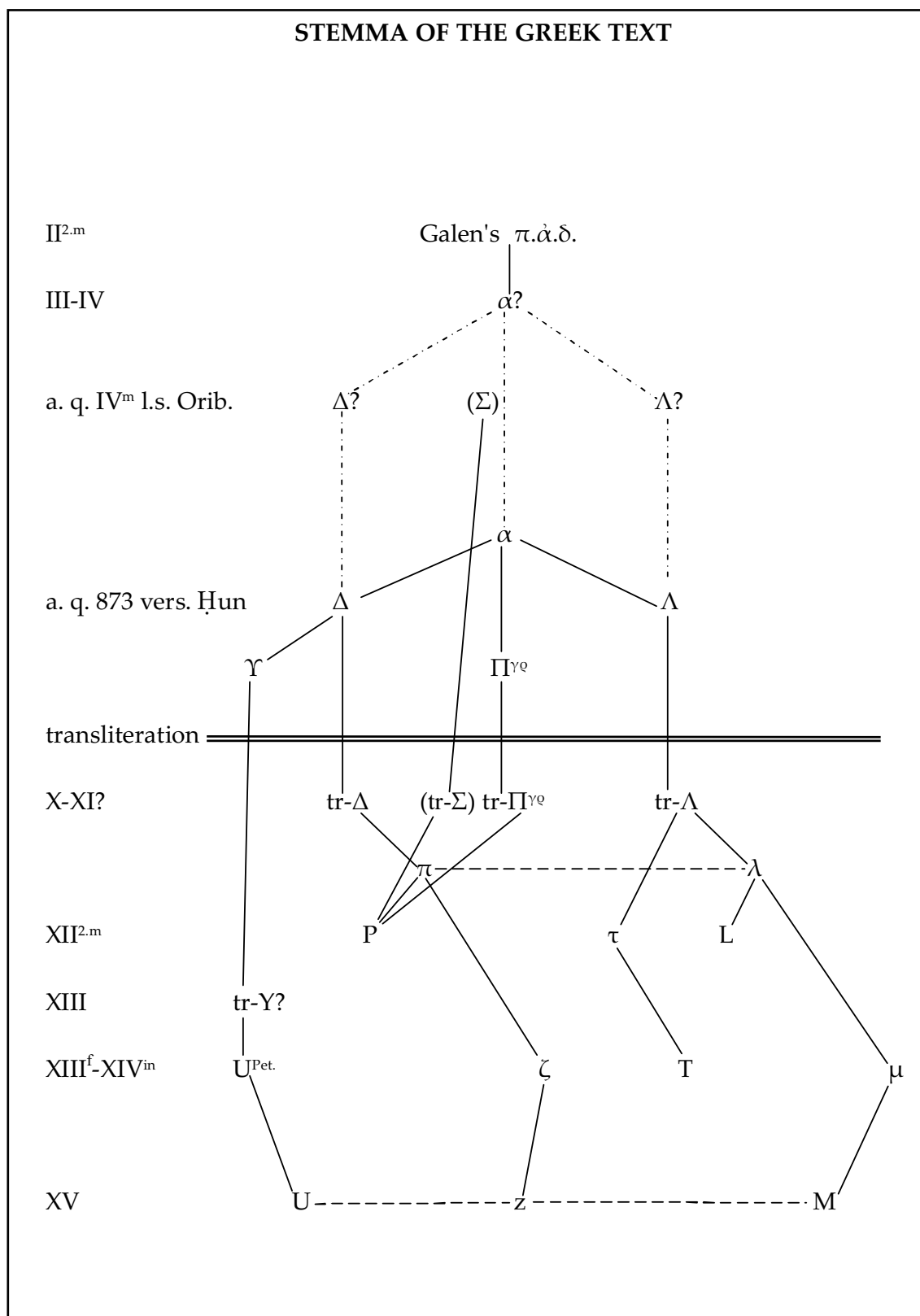
A 4. THE GREEK EDITIONS AND THEIR SOURCES.

1. The first three Renaissance translators of the treatise seem to have collaborated in the Aldine edition: Giorgio Valla, Niccolò Leonicensio and Thomas of Linacre.⁸⁵ While it was usual to find that the Aldine editors and their collaborators just used one ms., several modern editors have remarked that two or even more mss. were at work. For the *constitutio* of the text of *De inaequali in-*

⁸³ However, theoretically the editors of Orib. could not have been influenced by Galen's text, because the agreements Gal./Orib. are not present in the Aldine, Basle, Chartrier, or Kühn's edition of this treatise, which comes from the Λ -family, unless they had a copy of U. In the case of different readings, the Aldine edition and Oribasius only agree in p. 152,15-16, ζέοι and ὑπάρχοι (MU, coming from M to the Aldine).

⁸⁴ The text of Raeder does not present *lec. variantes*, but I have not checked the mss.

⁸⁵ See below, The Renaissance translations. Cf. my *Les éditions du traité de Galien De inaequali intemperie à la Renaissance*, in: Boudon-Millot, éd., *Éditer les médecins grecs*, pp. 187-198. I checked the Aldine in the Library of the Universidad Complutense in Madrid.



temperie, the team of Giovanni Battista Oppizzoni⁸⁶ probably had at hand more than one copy, as did the first Renaissance translators of the treatise.⁸⁷

The Aldine edition is based upon the agreement of the three mss. composing the Λ -family. The amount of unique lessons and the agreements in punctuation aim at the Marcianus 282⁸⁸ as primary source.

Agreements of M and Aldine (A)

Error:

P. 154,5 ἦ LTP^{s.l.}: ἦν MA

P. 154,7 *ante* φύσει *add.* τη MA

P. 154,16 δ' ἦ] δὲ MA

P. 158,8 αὐτοῖς *ante* τεθερμασμένων LPU: *ante* τῶν μορίων MA: *om. cett.*

P. 158,16 πλησιάζον] πλησιάσαν MA

P. 162,14 κεκραμένων] -αμμένων M (μ bis s.l.) A

P. 168,2 ῥιγῶσι] ῥιγοῦσι MA

P. 168,12 ῥιγῶσι] ῥιγοῦσι MA

Correction:

P. 150,10 ἀκυροτάτην MA: -ω- *cett.*

P. 156,16 πάσχοι MA: πάσχει *cett.*

The Trivultianus gr. 685, belonging to the same family, has probably been used as well. Its writing is easy. The amount of single agreements with the Aldine edition is small, but it may represent as well the agreements of Ald. with this one and the Laurentianus or/and the Phillipps, which do not share single agreements. Although some Laurentians have been pointed to, as a model for the Aldines,⁸⁹ the writing of this copy is rather difficult. This is also true for the Phillipps.

86 For the circumstances of the Aldine edition of Galen, *cf.* pp. 34-39 in: N. Mani, Die griechische editio princeps des Galenos (1525), ihre Entstehung und ihre Wirkung, Gesnerus 13, 1956, pp. 29-52, and V. Nutton, John Caius..., pp. 19-37. Some important details in J. Mewaldt, Die Editio princeps von Galens in Hippocratis de natura hominis, Sitzungsberichte der Königl. Preussischen Akademie der Wissenschaften, 1912, pp. 892-903. For the Aldine editions in general, see M. Sicherl, Griechische Handschriften und Aldinen, Wolfenbüttel 1978, pp. 119-123.

87 *Cf.* Mani, Die griechische..., p. 42; G. Baader, p. 214 of: Galen in mittelalterlichen Abendland, and p. 61 of: Die Antikerezeption...

88 D. Béguin has pointed out that the Aldine edition is based on this ms. *Cf.* Sur la méthode... As for the "printing copy" and other ways of the Aldine press, *cf.* M. Sicherl, Handschriftliche Vorlagen der Editio princeps des Aristoteles, in: Abhandlungen der Geistes- und Sozialwissenschaften Kl., Akad. der Wissenschaften und der Literatur in Mainz, 8, 1976, pp. 3-65.

89 For the De sectis ad introducendos, a copy of this Laurentianus has been used as exemplar of correction, but not the Laurentianus itself. See Béguin, Sur la méthode..., p. 41. On the other hand, Irigoin has remarked the importance of the mss. written in Italy (the Laurentiani being an important group of them), for the genesis of the Galenic corpus (*cf.* Autour des sources..., pp. 208-209). Nutton maintained that the Florentian mss. had not been consulted by the Aldine editors of Galen (Nutton, John Caius..., p. 40. For the Laur. Plut. 74.3. see n. 22.)

Single agreements of Trivultianus and A (just errors)

P. 142,13 πλείον L] πλείονες TA

P. 148,10 *ante* νεῦρα *add.* τὰ TA

P. 156,9 θερμότητος] τὴν θερμότητα TA

P. 166,10 πλεονάζοιεν ἐν *scripsi*: πλεονάζοιεν zP: -άζειν ἐν LM: -άζειεν TA

P. 172,3 διατιθέμενον LMΔ: διατεθειμένον TA

There is another reading in the Aldine that is not in the mss., and could come from a wrongly understood compendium in T: παρὰ written as a π crowned by a kind of epsilon inclined with the central axis prolonged up- and eastwards (↗):

P. 154,17 παρὰ TMPz: κατὰ U: πᾶν L: περὶ (*apud παρὰ abbrev. in T?*) A

The use of those two mss. covers 99% of the text. They represent –besides their single agreements with A– the agreements with all the groups where any of them is present.

Some readings not found in those groups, could have been taken from one of the mss. z, either D or V.⁹⁰ The Laudianus has been in the hands of German or English people,⁹¹ while the Vaticanus was in the Vatican Library before 1500. In fact, Thomas of Linacre used one of them (see below, Renaissance translations) for his translation of this treatise, and he prepared Aldine editions. There are not single agreements with A, but the scarce coincidences of A and the Δ-family, could be easily explained by them.

P. 144,13 σκέλος ΔA: σκέλους LM: σκέλη T

P. 144,13 εἰς P^{s.l.} zA: *om.* AP^{i.l.}UP. 144,14 χεῖρ P^{p.c.} zA: χειρὸς Λ: χεῖρα U

The use of P is rather improbable, while U just accounts for the first reading, but not for the other two. While the use of three mss. may seem complicated, the hypothesis of a single ms. is rather improbable: there would be many more deviations. As Aldo began to gather mss. of Galen ca. 1500,⁹² the presses would have collected a good amount of books before 1516, when the

90 For *De temperamentis*, Helmreich pointed to these copies as source of the Aldine (Galen *De Temperamentis*, p. IX). De Lacy considered that their text for *De elementis*, was very near to the Aldine (CMG V 1,2, p. 13.). E. Wenkebach (*Textkritische Beiträge zu Galens Protrepikosfragment*, *Sudhoffs Archiv* 26, 1933, 298), on the basis of the corrections in margine in the Laudianus 58, guessed that it had been used as the basic copy by the Aldine presses (*Cf.* Nutton, John Caius, p. 46, n. 21). The Vaticanus was borrowed for a year in 1520-1521 (see J. I. Mercati, P. Franchi de Cavalieri, *Codices Vaticani graeci*, I, Rome 1923, repr. Modena 1980, p. 391): it could have arrived to Venice just in time.

91 See H. O. Coxe, *Bodleian Library. Quarto catalogues. I. Greek Manuscripts* (1853), repr. with corrections by R. Barbour, N. Wilson, Oxford 1969, p. 539, col. a. The ms. belonged to David Paraeus and Samson Johnson.

92 *Cf.* Irigoin, *Autour des sources...*, p. 215.

mss. of Bessarion started to be available. On those grounds the Opizoni team would have had at hand several mss. for some treatises. Looking for a precise book, they may have found copies of several others, and they just profited from them.

Of course, the Aldine does not have more errors than expected, and some of the readings could have been, in fact, corrections of the text, as in the following:

P. 168,15 ἡ τι *correxit* A: ἡ τί AP: ἡ τί U: εἰ τε z

2. Some new misprints and/or errors are found as well in the Aldine. I leave aside minimal misprints, and will quote some interesting ones below (see Appendix).

3. The exemplar of the Aldine in Jena, was corrected by Janus Cornarius.⁹³ In three out of four corrections, the correct text is present in the mss. (see Appendix).

4. The second Greek edition of the Opera omnia appeared in Basle, 1538. The treatise⁹⁴ is written in Vol. I, 249-252. The printer was A. Cratander⁹⁵. Among the editors (H. Gemusaeus, L. Fuchsius et G. Camerarius), Leonhart Fuchs⁹⁶ (1501-1566), who prepared the second volume, later published a translation and commentary of De inaequali intemperie.⁹⁷

This edition presents minimal variations in relation to the Aldine. It reproduces most of its faults, and corrects just a few. See Appendix.

5. John Caius⁹⁸ corrected an exemplar of the Basle edition, now in the Eton College. See below. As in the case of Cornarius, for the most part, the

93 Cf. Mani, *Die griechische...*, pp. 48-50. According to Mani, Cornarius corrected by conjecture and/or on the grounds of the mediaeval Latin translations. He prepared the Latin Galen published in Basle (by Froben) in 1549: as for our treatise, he printed the translation by Thomas Linacre. See B. Mondrain, *Éditer et traduire les médecins grecs au XVI^e siècle. L'exemple de Janus Cornarius*, in: D. Jacquart, ed., *Les voies de la science grecque*, Geneve 1997, pp. 391-417. On the other hand, J. J. Scaligerus did not write corrections to this treatise in the Aldine exemplar of the Herzogbibliothek in Wolfenbüttel (copy checked by Pilar Perez Cañizares).

94 I checked the copy in the Library of the Wellcome Institute, in London.

95 For his activity on Galen's works between the Aldine and the Basle edition, see V. Nutton, *John Caius...*, pp. 38-49.

96 Cf. R. J. Durling, *Leonhart Fuchs and his Commentaries on Galen*, in: *Medizinhistorisches Journal* 24, 1989, 42-47.

97 See below, Renaissance commentaries.

98 According to Nutton (*John Caius...*, p. 51), Caius could have had within reach the Marcianus gr. 282. For the copies used by Caius, see now Beate Gundert, *Zu den Quellen der Basler Galen-Ausgabe (1538)*, in: Ch. Brockmann, *Ärzte...*, 81-98.

right readings are present in the mss., and more precisely in z and the translation by Linacre, who used z as model.

6. A third edition of Galeni opera omnia was signed by René Chartier in Paris.⁹⁹ He put together Hippocrates and Galen (1639-1679). He corrected errors, and introduced new text and new errors. He included a Latin translation (*vide infra*). The treatise is in Vol. VII, 170-177, edited in 1649. The division into 9 chapters and their position are taken from Nicholas of Reggio (*vide infra*), but the titles are different.

7. Kühn's edition of this treatise appeared in Leipzig in 1824. He corrected somehow Charterius' text.

8. APPENDIX. Aldine (A), Basle (B), Charterius (Ch).

8.1. Aldine errors:

corr. Cornarius

P. 142,10 ἐκκαυθέντων LMU: ἐκαυ- AB, *corr.* Corn., *corr.* Ch: ἐγκαυθέντων TPz

P. 170,5 τῆς bis] τοῖς MUAB, *corr.* Corn., Caius, Ch

P. 170,9 ἐκ δύο z: διὰ APABC: διὰ δυοῖν *scripsit* Corn.

corr. Basle

P. 142,8 ἀλλὰ] ἄλλα A, *corr.* B

P. 150,1 τοὺς] τοῦ A, *corr.* B

P. 156,7 αἰσθήση] -ήση A, *corr.* B

P. 164,6 οὐδ' ὅλως] οὐ δόλως *codd.* A, *corr.* B

corr. Caius

P. 164,3 ὅτι] ὅτε AB, *corr.* Caius, Ch

P. 170,15 ὑγρῶν] ὑγρὸν TMAB, *corr.* Caius, Ch

P. 170,20 ἦ] ἦν LMAB, *corr.* Caius, Ch

corr. Charterius

P. 148,2 δυσκρασίαν U, κρᾶσιν P et δυσ P⁹⁰: κρᾶσιν *cett.* A: *corr.* Ch

P. 148,15 κάμνει] κάμνειν P^{a.c.} z AB, *corr.* Ch

P. 154,17 παρὰ] περὶ A, *corr.* Ch

P. 158,10 ἡλλοιωμένοις] ἄλλοιωμένοις AB, *corr.* Ch

P. 158,15 <ἦ ψυχρότερον> *recte add.* Ch., *e Nic.* vel frigidior

P. 164,19 ἐψύγησαν z: ἐψύχησαν (*sic*) Λ, P et *add.* z^{s.l.}, U AB, *corr.* Ch

P. 166,7 post μορίων *interrogationem recte indic.* Ch: *dist. codd.*, AB

⁹⁹ I checked the copy of the Biblioteca Nacional de España in Madrid.

P. 166,10 πλεονάζοιεν Pz: πλεονάζειεν T AB, *corr.* Ch.¹⁰⁰

P. 166,10 κινεῖντο Pz: κινεῖτο LM AB, *corr.* Ch

P. 166,11 οὐδὲν P: οὐδὲ *cett.* AB, *corr.* Ch

P. 166,17 τῷ z: τὸ *cett.* AB, *corr.* Ch

P. 170,4 ῥίγος (*sic*) AB, *corr.* Ch

P. 172,7 χαλεπωτέρῃ] -ποτέρῃ L AB, *corr.* Ch

8.2. New errors in Basle

P. 142,12 κακ LTΔ A: κάκ MB

P. 162,2 διὰ] πρὸς B, *corr.* Ch

P. 162,10 αἰτίας] αἰτίας B, *corr.* Caius, *corr.* Ch

P. 164,9 ἀκολουθήσει] ἐκολουθήσει A: ἐκκολουθήσει B: *corr.* Ch

8.3. New errors in Charterius

P. 154,7 ἦ Λ P^{s.l.} A.: ἦν Ch

P. 164,1 τὴν θερμασίαν ἐπιτεινόντων *post* αὐξηθέντος *add.* Ch

A 5. THE LATIN TRANSLATION FROM THE ARABIC.

1. The author.

The first known translation into Latin, beginning *Malicia complexionis diuerse quandoque*, and ending *Deinde post ipsum librum de ingenio sanitatis*, is based on the Arabic text:

P. 142,4-5 πλὴν τῶν ἐκτικῶν ὀνομαζομένων: "except the fever denominated continuous, called *hektikos* by the Greeks" *Hun.*: *preter febrem fixam, dictam grece ethicam Ger.*

P. 142,6 γαγγραινούμενον (getting gangrenuous): "it reaches such a point that it takes the way of degeneration and death, the tumour known by the Greeks as *anqrāyā*" *Hun.*: *ad terminum tendens, secundum quod erit in semita corruptionis et mortis, et est apostema quod greci vocant cancrene Ger.*

It scarcely uses Greek terms. The name of Gerard of Cremona (ca. 1114-1187)¹⁰¹ is not mentioned in the manuscripts as far as I know, but in a list of his translations written by his associates and disciples shortly after his death, a *Liber Galieni de malicia complexionis diuerse*, tract. I, is mentioned.¹⁰²

¹⁰⁰ πλεονάζοιεν ἐν *scripsi*: πλεονάζοιεν z, -άζοι, et ἐν *s.l.* P, Ch.: -άζειν ἐν LM: -άζειεν TAB

¹⁰¹ Cf. B. Boncompagni, *Della vita e delle opere di Gherardo Cremonese*, in: *Atti dell' Accademia Pontificia dei Nuovi Lincei*, IV (1850-1851), Rome 1852, pp. 387-493, and G. Sarton, *Introduction...*, 2.2, 339-344.

¹⁰² See Sudhoff, *Die kurze 'Vita'*, pp. 78, 80. The ms. *Lipsiensis* 1119, is the oldest that contains a list of the translations by Gerard. Cf. Sudhoff, 1927, p. 295, and Table I.

Working in Toledo¹⁰³ at least since 1157,¹⁰⁴ Gerard was a very prolific translator.¹⁰⁵

2. The manuscripts.

I have searched manuscripts containing this translation not only through the usual repertoires,¹⁰⁶ but by means of books, papers and catalogues somehow related to Medieval Science as well.

The amount of copies is outstanding.¹⁰⁷ The list of Diels,¹⁰⁸ including 53 mss., is far from complete, and I guess that my own -85 mss.- does not include the whole material. The unexpected interest that this treatise awakened is founded, in my opinion, on two of its features. First, its contents coupled with style: key notions of anatomy, physiology and pathology written in a very clear way. The second is obviously its small size. This book is a comprehensive encyclopaedia of medicine that could be carried by a physician-to-be and/or learned by heart without much effort. It was included in the Montpellier curriculum in 1309.¹⁰⁹

I have marked with * the copies that I have seen myself.

Basle, Universitätsbibliothek,¹¹⁰ D I 5, XIV c., 69rb-71vb, misc. The text is divided into 8 chapters.

103 For the introduction and work on Arabian medicine in Toledo, see H. Schipperges, *Zur Rezeption und Assimilation arabischer Medizin im frühen Toledo*, *Sudhoffs Archiv für Geschichte der Medizin und der Naturwissenschaften* 39, 1955, pp. 261-283, now in G. Baader, G. Keil, eds., *Medizin...*, pp. 151-176.

104 His name is included in the staff of Toledo's Cathedral since that year on. Cf. F. J. Hernández, *Los Cartularios de Toledo*, Madrid 1985 (in 1157, 1164, 1174, 1176 he was a member of the chapter). See D. Jacquart, Fr. Micheau, *La médecine arabe...*, Paris 1990, p. 148.

105 The list written by his colleagues contains more than 70 titles, although not all of them are clear. Cf. Sudhoff, *Die kurze...*, p. 77-79, and D'Alverny, p. 452 of: *Translations and Translators*, in: *Renaissance and Renewal in the Twelfth Century*, ed. R. L. Benson, G. Constable, Cambridge Mass. 1982, 421-462 = *La transmission*, 421-462.

106 Ackermann, Diels, Thorndike-Kibre, Kristeller *Iter Italicum*, R. Durling: *A Chronological Census; Corrigenda I-II; A Guide to...*; *INCIPIT* (CD-ROM); *IN PRINCIPIO* (online). Fichtner.

107 As for the agents of the diffusion of the XII and early XIII century translations from the Arabic and the Greek, D'Alverny (*Translations...*, pp. 457-459) points to the wandering scholars.

108 Diels, I, 84.

109 Cf. D'Alverny, Pietro, pp. 27-28, and N. G. Siraisi, Taddeo Alderotti, pp. 106-107.

110 Diels 84 [12]. *Iter* 5,49. G. Goldschmidt, *Medizin und Alchemie des Mittelalters*, in five boxes. Class D = medical mss. K. Escher, *Die Miniaturen in den Basler Bibliotheken, Museen und Archiven*, Basel 1917, p. 85, n° 118. G. Haenel, *Catalogi librorum manuscriptorum qui in bibliothecis Galliae, Helvetiae, Belgii, Britanniae, Hispaniae, Lusitaniae asservantur, nunc primum editi*, Leipzig 1830 (cols. 513-660), col. 659: misc. xiv, Galen. Ph. Schmidt, *Die Bibliothek des ehemaligen Dominikanerklosters in Basel*, *Basler Zeitschrift für Geschichte und Altertumskunde* 18, 1919, pp. 183-244, in p. 225.

Basle, Universitätsbibliothek,¹¹¹ D III 8, XIV c., 142rb-145ra, misc.

Bergamo, Biblioteca Civica Angelo Mai,¹¹² Ms. Gamma V 2, now MA 507, XV c. (1470 or shortly after), f. 250v-252r, paper, 2 cols., miscellanea, un-numbered folios. Notabilia ex libro Galieni de malitia complexionis (Excerpt).

*Berlin, Berolinensis¹¹³ lat. 638 (ol. Boncompagni 214), XIII^f c., f. 23va-25va, membranaceus, two cols, 382x250. A Galenic codex for the most part. De malicia between De complexionibus and De simplici medicina.

[Bernkastel-Kues, Cusanus, Bibliothek des St. Nikolaus-Hospitals, ms. medicus 8, xiii/xiv c., n^o 8. Diels 84 [56], and ms. medicus 11, xiii/xiv c., n^o 5. Diels 84 [56]. Those two Diels' references are no longer correct, according to Ms. Gabriele Neusius, present (2006) curator.]

Bernkastel-Kues, Bibliothek des St. Nikolaus-Hospitals, Cusanus, ms. medicus 296,¹¹⁴ XIV c., ff. 206-208, vellum, 334x229, two columns to the page, 208 ff. A collection of G.'s treatises. Its origin is Montpellier: "Iste liber est magistri henrici stengemse de fritzlar, qui emit in monte pessol(ano)." The 14th treatise is De malicia, followed by De ingenio sanitatis.

Bernkastel-Kues, Bibliothek des St. Nikolaus-Hospitals, Cusanus, ms. medicus¹¹⁵ 297, XIII-XIV c., f. 135-137, vellum, 288x200, two columns to the page, 214 ff. Some Galen's treatises. De malicia is the fifth, followed by De ingenio sanitatis.

Boston, Massachusetts,¹¹⁶ The Library of Frank B. Bemis, Ms. 5, Vellum, late XIIIth c., f.?, 390x250, 268 folios. Northern Italy (Bologna?) A Galen's collection. The third treatise is De malicia complexionis diverse, between De complexionibus and De iuvamentis membrorum.

Boston, Massachusetts,¹¹⁷ The Library of Frank B. Bemis, Ms. 6, ca. 1350, ff.?, vellum, 420x270, 98 folios. Northern Italy (probably Venice). Contempo-

111 Not in Diels or T-K. Durling, *Corrigenda II*, p. 375. Iter 5, 49. Ph. Schmidt, *Die Bibliothek...*, p. 233.

112 Not in Diels or T-K. Iter 1, p. 9. Iter 5, p. 479. J. Agrimi, *Tecnica e scienza nella cultura medievale*, Florence 1976, pp. 1-46, in pp. 25-27. F. Bazzi, *Inventario dei manoscritti e degli incunaboli di interesse medico della Civica Biblioteca "Angelo May" di Bergamo*, *Rivista di storia della medicina*, Roma, 1, 1959, pp. 130-192.

113 Not in Diels, or T-K. Iter 3, pp. 475-476. Durling, *A guide to ... III*, p. 349. E. Narducci, *Catalogo di manoscritti ora posseduti da D. Baldassarre Boncompagni (n^o 214)*, Roma 1892, 2nd. augm. ed., pp. 128-130.

114 J. Marx, *Verzeichnis der Handschriften-Sammlung des Hospitals zu Cues bei Bernkastel an der Mosel*, Trier, 1905, pp. 287-288. Not in Diels, T-K, Iter. *IP (=included in *In Principio*).

115 J. Marx, *Verzeichnis*, pp. 287-288. Not in Diels, T-K, Iter. *IP.

116 S. Ricci-M. J. Wilson, *Census of Medieval and Renaissance Manuscripts in the USA and Canada*, vol. I, New York (1935), repr. 1961. C. U. Faye - W. H. Bond, *Supplement to the Census of...*, New York 1962. Not in Diels, T-K, or Iter.

117 Not in Diels, T-K, or Iter. Bibliography, *ut supra*.

rary notes. De malicia is the fourth treatise, between De pharmaciis and De accidente et morbo.

Bourges (Fr.), Biturigensis¹¹⁸ 299 (247), XIII^f,¹¹⁹ f. 144vb-147rb. Vellum,¹²⁰ two cols., 410x270 mm. 180 ff. A collection of Galen's books.¹²¹ Between Liber Galieni De sentenciis¹²² and De iuvamento hanelitus. Southern France, maybe Montpellier.¹²³

Brugge (Be.), Brugensis, Stadsbibliothek 466, XIV c., ff. 125ra-126va, membranaceus,¹²⁴ 308x215, 139 ff. Miscellanea. Between Viaticus Constantini, and Theorica planetarum by Gerard of Cremona. Marginal notes.

*Cambrai, Cameracensis¹²⁵ 907 (806), xiv c., f. 164ra-166va, vellum, 166 ff., two cols., 291x211. A small Galen's collection, including five treatises. De criticis diebus is followed by some notes, and a different hand writes De malicia, which is the last treatise of the ms.¹²⁶

Cambridge University, Peterhouse College, Cantabrigiensis¹²⁷ St. Petri 33, XIII-XIV c., ff. 23v-24r.

*Cesena, Biblioteca Malatestiana¹²⁸, Malatest. S V 4, middle or second half of the XIV c., 117vb-119va, vellum, two cols., 405x260, 264 ff., probably Italian. The ms. belonged to G. Marco de Rimini. De malicia: capitulatus by a second hand, as well as interlinear and marginal notes by a third. The writing is easier than in De inaequali distemperantia (tr. by P. d'Abano), placed in 135va-136vb. Most of the fifty two treatises included are Galen's. This is the 31st, between De complexionibus and De simplicibus farmaciis.

118 Diels 84 [56]: XIV c.

119 Cf. D'Alverny, Pietro..., p. 28, «recueil de Galien, XIII s.»

120 Catalogue général des manuscrits des Bibliothèques publiques de France, Départements, tome IV, Paris 1886, pp. 71-72 (XIV c.).

121 Cf. Sudhoff 1927, p. 30.

122 See Nutton CMG V,3,2, p. 25.

123 Cf. D'Alverny, Pietro..., p. 28.

124 Diels 84 [56] (XIII c.) A. Poorter, Catalogue des mss. de Médecine médiéval de la ville de Bruges, Paris 1924, p. 523, and Catalogue des mss. de la Bibliothèque publique de la ville de Bruges, vol. II, Paris 1934, pp. 523-525. Not in T-K, Iter. *IP.

125 Diels 84 [56]: XIV c.. T-K 846. *IP.

126 Catalogue général des manuscrits des Bibliothèques publiques de France, Départements, t. xvii, Paris 1891, p. 367.

127 Diels 84 [56]. T-K 846. *IP.

128 G. M. Muccioli, Catalogus Codicum Manuscriptorum existentium ad sinistram ingredientium partem Malatestianae Caesenatis Bibliothecae, II, Cesena 1784, p. 36. R. Zazzari, Sui codici e libri a stampa della Biblioteca Malatestiana din Cesena. Ricerche e osservazioni, Cesena 1887, pp. 296-300. Anna Manfron, La biblioteca di un medico del Quattrocento. I codici di Giovanni di Marco da Rimini nella Biblioteca Malatestiana, Torino, 1998, pp. 215-219. Diels 84 [56]. Not in Iter 1 and 5. See Nutton CMG V 8,1, pp. 26-27, and CMG V 3,2, p. 23. See below description and notes in Pietro d'Abano: Pet^B.

*Cesena, Malatestianus¹²⁹ D XXV 1, XIII c., f. 47vb-50rb, vellum, 403x262, 197 ff. It belonged to G. Marco de Rimini. A collection of twelve treatises by Galen. De malicia is the fifth, between De complexionibus and De criticis diebus. The text includes scarce notes.

*Cesena, Malatestianus¹³⁰ D XXV 2, XIII c., f. 197va-201ra, vellum, 428x270, 2 cols., 272 ff. Mutilo in initio. Collection of G. Marco da Rimini. A Galen codex, including 14 treatises and a Commentum to De sectis. De malicia is the seventh treatise, between De iuvamento anhelitus and De pulsibus ad Tyrones; the text includes chapters and there are a few notes. Probably written by the same hand as D XXV 1.

Chartres, Autricensis¹³¹ 284*(340), XIII c., f. 62v-64r, vellum, two cols., 375x247 mm., 258 ff. Galeni opuscula. De malicia between De simplici medicina and De iuvamento membrorum.

[Chartres, Autricensis¹³² 293*(351), XIV c., ff.56v-58r., vellum, two cols., 370x250, 129 f. Containing a large collection of Galen's treatises, it was destroyed in 1944. De malicia was written between De interioribus libri vi and De ingenio sanitatis libri xiv.]

[Dresden, Dresdensis¹³³ Db. 91, XV c., ff. 15va-18vb, membranaceus, 2 cols. Miscel. Destroyed (Iter 3, p. 376).]

Edinburgh, University Library,¹³⁴ Ms. 166, late XIII c., ff. 190va-192rb, vellum, two cols., 12 7/8 x 9 1/2, 274 folios, Anglo-Norman. Treatise 9, De malicia complexionis, followed by De ingenio sanitatis.

*Erfurt, Stadtbibliothek, Amploniensis¹³⁵ in quarto (Q) 178, first half of the XIV c., 159vb-160vb, vellum, 178 ff. Two cols. *Varia medica*. De malitia is abridged. Between De complexionibus and De virtutibus simplicis medicine. The last sentence of the treatise is missing. It ends in "spissior, difficilior et siccior" ("Et qui antecedit quidem ... de ingenio sanitatis").

129 G. M. Muccioli, *Catalogus*, vol. I, p. 87. R. Zazzeri, *Sui codici...*, pp. 207-208. A. Manfron, *La biblioteca...*, pp. 198-200. G. Baader, *Die Bibliothek...* pp. 60-62. Diels 84 [56].

130 XIII c. Manfron, while Muccioli and Zazzeri dated it in the xiv c. M. Muccioli, *Catalogus*, vol. I, p. 87. R. Zazzeri, *Sui codici*, pp. 208-209. A. Manfron, *La biblioteca...*, pp. 200-202. Diels 84 [56]. T-K 846.

131 Diels 84 [56]: XIII c. Cf. Sudhoff 1927, p. 300, and *Catalogue général des manuscrits des Bibliothèques publiques de France. Départements*, t. xl, Paris 1890, p. 140.

132 *Catalogue général des manuscrits des Bibliothèques publiques de France. Départements*, t. xl, Paris 1890, pp. 144-145. Diels 84 [56]: xiv c. Cf. Sudhoff 1927, p. 300: 20 treatises by Galen. T-K 846. *IP.

133 F. Schnorr von Carolsfeld, L. Schmidt, *Katalog der Handschriften der Königlichen öffentlichen Bibliothek zu Dresden*, Leipzig 1882, vol. I, p. 307. Not in Diels. T-K 846.

134 Not in Diels or T-K. Durling, *Corrigenda II*, p. 375. C. R. Borland, *A descriptive catalogue of the Western mediaeval manuscripts in Edinburgh University Library*, Edinburgh 1916, p. 249. For a dating in the XII c., cf. Iter IV 20b, and Durling, *A Guide to...* IV, 360.

135 W. Schum, *Beschreibendes Verzeichnis der Amplonianischen Handschriften-Sammlung zu Erfurt*, Berlin 1887, pp. 433-435. Diels 84 [56]: xiii c. Not in T-K or Iter. *IP.

*Erfurt, Stadtbibliothek, Amploniensis¹³⁶ in folio (F) 249, late XIII c. more than early XIV c. (Schum), ff. 234rb-236vb, two columns to the page, vellum, 294 folios, Italian origin. Many glosses. Between *De complexionibus* and *De elementis secundum Hippocratem*. A collection of Galen's treatises that belonged to the physician Amplonius Ratinct from Rheinberg.

Eton College Library,¹³⁷ ms. 132, nr. 13 James/16 Ker, XIII c., ff. 235-237, vellum, 270x190 mm., 2 columns, written probably in France (Ker). 18 Galenic or pseudo-Galenic treatises. *De malicia* between *De simplici medicina* and *De iuvamentis membrorum*.

Florence, Riccardianus¹³⁸ 868 (LII 1), XV c., f. 109r-111v, paper, miscellanea. *De malicia* fragmentary at the end.

Gdansk, Biblioteka Gdanska Polskiej Akademii Nauk,¹³⁹ Mar. F.41, XIV c., ff. 167ra-169rb.

Kassel, Landesbibliothek und Murhardsche Bibliothek der Stadt Kassel, Cassellanus¹⁴⁰ in 8^o, Ms. medicus 10, 46r-53r. "Finitus liber de malicia complexionis diverse Galieni anno domini 1336 perfecto in Montepessulano..." A paper codex, 220x150, 136 ff., composed by three parts (1336 to ca. 1380), written in Montpellier and Goslar. *Varia medica*. Glosses to the treatise.

*Klosterneuburg (Niwenburgensis), Bibliothek des Chorherrenstiftes, CCl 126, ca. 1300, f. 247ra-249rb, membranaceus,¹⁴¹ two cols., 435x275, 249 fl. North of Italy. Illuminated codex. Text divided into eight chapters. In the middle of the XV c. the ms. arrives at the Neuburg monastery as a gift from Michael Ofner, vicarius chori ecclesie Pataviensis. It is the last treatise of the codex, written after *De pulsum usu*. Glosses *in margine et supra lineam* in a rather small handwriting.

136 W. Schum, *Beschreibendes*, pp. 158-160. Cf. K. Sudhoff, "Anatomietexte..." 1927, 293-303, in p. 297. Diels 84 [56], XIII c. G^a Ballester, *Commentum*..., p. 145. Not in T-K, or Iter. *IP.

137 Not in Diels. Iter IV 276. Durling, *A Guide to* .. IV, 360. M. R. James, *Descriptive Catalogue of the manuscripts in the Library of Eton College, Cambridge* 1895, pp. 61-62. N. R. Ker, *Medieval manuscripts in British Libraries*, vol. II Abbotsford-Keele, Oxford 1977, pp. 752-754.

138 G. Lami, *Catalogus codicum manuscriptorum qui in Bibliotheca Riccardiana adservantur*, Livorno, 1756, pp. 26; 204; 319; 348. Cf. *Inventario e stima della Libreria Riccardi. Manoscritti e edizioni del secolo 15*, Florence, 1810, p. 21. Durling, *A Guide to*... I-II, p. 506. Iter 1, p. 180. M. S. Elsheikh, *Medicina e farmacologia nei manoscritti della biblioteca ricardiana di Firenze*, Roma 1990, p. 108. Not in Diels.

139 Not in Diels. Durling, *Corrigenda II*, p. 375. Durling, *A Guide to* .. IV, p. 360. Iter 4, p. 399b.

140 H. Broszinski, *Die Handschriften der Murhardschen Bibliothek der Stadt Kassel und Landesbibliothek*, Band 3, 1 (*Manuscripta medica*), Wiesbaden 1976, pp. 74-77. Not in Diels or T-K. Durling, *Corrigenda II*, p. 375. Iter 3.2, pp. 74-77. Iter 6, p. 521: carta miscellanea, xiv c. Galen, *de malitia complexionis, de ingenio sanitatis*. Cf. G^a Ballester, *Commentum supra tractatum* ..., pp. 144-145. *IP.

141 Alois Haidinger, *Katalog der Handschriften des Augustiner Chorherrenstiftes, Klosterneuburg*, Teil 2, Codd. 101-200, Vienna 1991, pp. 35-38. *IP (wrong nr. 11). Not in Diels, T-K, Iter, Durling.

*Krakow, Bibliot. Jagellonica¹⁴² 800, ff.115va-117va, 1279 A.D., a parchment ms. of Italian origin, 395 by 260 in size, containing 279 plus II folios. Text divided into chapters.

Leipzig, Universitäts-Bibliothek ms. 1227, 214r-220v, carta miscell. This part of the manuscript¹⁴³ (it contains different fasciculi) was written probably ca. 1475/80 as the watermarks show (three mountains with cross, see Piccard Dreiberg VII 2313 and VII 2328). There is no printed description of the codex. The curator kindly provided me with these notes.

*London, British Library, Harleianus¹⁴⁴ 3748, XV c., f. 208v-210v, vellum, over 500x300. De malicia after De complexionibus.

*London, British Library, Harleianus¹⁴⁵ 5425, XIV c., f. 53vb-56va., vellum.

*London, British Library,¹⁴⁶ Add. 22.669, XIV c., f. 45v-47v, vellum, two cols., in folio, written in Italy. A Galen's collection. De malicia complexionis diverse between De complexionibus and De bona habitudine.

*London, Wellcome¹⁴⁷ Historical Medical library, ms. 285, former Philipps 6915, early XIV c., f. 50rb-52ra, vellum, 355x225, 99 folios, two cols. Written in an Italian gothic hand. Malitia complexionis between De differentiis februm and De accidenti et morbo.

*Madrid, Biblioteca Nacional, Matritensis¹⁴⁸ 3308, dated 1472 A.D., ff. 158r-168v, 305x210, 168 f.

Montpellier, Montepessulanus¹⁴⁹ (École de méd.) 18, XIII c., f. 22-24, vellum, in folio. It is an important Galenic collection, written in Italy. Between De complexionibus and De virtutibus naturalibus.¹⁵⁰

142 M. Kowalczyk et alii, Catalogus codicum manuscriptorum medii aevi latinorum qui in bibliotheca Jagellonica Cracoviae asservantur, vol. VI, Cracoviae 1996, 162-169. Not in Diels. *IP.

143 Iter 3, p. 417. Iter 6, p. 523. Not in Diels, T-K.

144 Diels 84 [56]. Iter IV 150a. Durling, A Guide to... IV, 360. A Catalogue of the Harleian Manuscripts in the British Museum, vol. iii, London 1808, p. 58.

145 Diels 84 [56] (XIII c.) A Catalogue of the Harleian Manuscripts in the British Museum, vol. iii, London 1808, p. 267.

146 Catalogue of the additions to the manuscripts in the British Museum in the year 1856-1860, London 1875, rep. 1965, p. 715. Not in Diels, T-K, Iter.

147 S. A. J. Moorat, Catalogue of Western Manuscripts on Medicine and Science in the Wellcome Historical Medical library, vol. I, Mss. written before 1650 A.D., London 1962, pp. 179-180. Not in Diels. Iter IV 223a. Durling, A Guide to ... IV, 360.

148 Diels, 84 [12: as tr. from the Greek]. Iter 4, p. 525b. Durling, A Guide to ... IV, p. 360. J. L. de Toro, Inventario general de manuscritos de la Biblioteca Nacional vol. X, Madrid 1984, pp. 64-65. The ms. contains as well Galen's De februm differentiis libri II, De accidente et morbo libri VI.

149 Catalogue général des Bibliothèques publiques des Départements, t. I, Paris 1849, pp. 290-291. Diels 84 [56]. Sudhoff 1927, 297-298: 17 treatises by Galen. T-K col. 846. D'Alverny, Pietro..., 29-30. *IP f. 9?

150 G^a Ballester, "Commentum *supra* tractatum...", p. 128, note 182, remarks that this ms. (along with several others) collects the nucleus of the "New Galen": De complexionibus,

*Munich, Bayerische Staats-Bibliothek, Monacensis¹⁵¹ Latinus 5, dated 1304, f. 143rb-145rb. A vellum codex in-folio, containing a collection of Galen's treatises in 263 ff. Between *De complexionibus* and *De crisibus*.

*Munich, Bayerische Staats-Bibliothek, Monacensis¹⁵² Latinus 11, XV c. (T-K 846), f. 94vb-96va, vellum, 96 f. A small Galen's collection of seven treatises. Between *De virtutibus simplicis medicine* and *De complexionibus* (incomplete).

*Munich, Bayerische Staats-Bibliothek, Monacensis¹⁵³ Latinus 3512 (Aug. civ. 12), a. 1300, f. 337ra-338va, vellum, in folio, 434 f. Many scholia in a very small writing. *Miscellanea medica* for the most part. Between G.' *De pulsibus* and *Comm. in Hipp. Aphorismos*.

Naples, Biblioteca Nazionale, Neapolitanus VIII D 30, XIV c.,¹⁵⁴ f. 18ra-19vb, vellum, 2 cols., 265x190 mm. *De malitia* "fragmentary at the end." (Iter 1, 425). Some glosses. Between *De complexionibus* and *De criticis diebus*.

[Naples, Biblioteca Nazionale, Neapolitanus VIII D 32, XIV c.: IP notice.¹⁵⁵ This is a wrong notice in IP. Not Galen in VIII D 32.]

Naples, Biblioteca Nazionale, Neapolitanus¹⁵⁶ VIII D 34, XIV c., ff. 53rb - 53va (55rb according to Cenci), vellum, two cols., 340x240. It includes scholia. Between *De accidenti et morbo* and *Therapeutica*.

De malicia complexionis diverse, De crisi, De criticis diebus, De morbo et accidenti, De differentiis febrium, De ingenio sanitatis, De simplicibus medicinis, De iuvamentis membrorum, De interioribus, De regimine sanitatis and De virtutibus naturalibus.

151 C. Halm, G. Laubmann, *Catalogus codicum latinorum Bibliothecae Regiae Monacensis*, t. I, Pars I, Munich 1868, p. 2. Sudhoff, 1927, 296. Diels 84 [56]: xiv c. Not in T-K, or Iter.

152 C. Halm, G. Laubmann, *Catalogus...*, p. 3: xiv c. Diels 84 [56]: xiv c. T-K 846: xv c. Not in Iter.

153 C. Halm, G. Laubmann, G. Meyer, *Catalogus...*, t. I, pars II, Munich 1871, pp. 82-83. Diels 84 [56]: 1300. Not in T-K, Iter.

154 XIV c. according to Iter 1, p. 425; 6, p. 113, and Durling, *A Guide to... I-II*, p. 506. F. Fossier, *La Bibliothèque Farnèse. Étude des manuscrits latins et en langue vernaculaire*, Rome 1982, pp. 87-487 (Naples), in p. 369. Diels 84 [56]. Writings of Galen: *de complexionibus*, in 3 books, inc. *Insignes antiqui medicorum*; cf. Durling, *Linacre...*, p. 85, n. 5; *de malicia complexionis diverse*, fragm. at the end, inc. *Malitia complexionis diversa quando*; *de criticis diebus*, in 3 books, inc. *Et signum* (i.e., *Ea signa?*) *que non paulatim minuuntur*; *de accidenti et morbo*, inc. *In initio huius libri morbum diffinire oportet*. (Iter *ibid.*)

155 IP quotes Cesare Cenci, *Manoscritti francescani della Biblioteca Nazionale di Napoli I-II*, Florentiae, Romae 1971.

156 Iter 1, p. 425: *Malitia complexionis*, "perhaps fragmentary at the end." Many notes. Cf. Cesare Cenci, *Manoscritti francescani della Biblioteca Nazionale di Napoli I-II*, Florentiae, Romae 1971, II, 832. Cf. Chiappini, p. 177, and n. 463 (p. 153). Durling, *A Guide... I-II*, p. 506. Diels 84 [56]. *IP. Writings by Galen (Iter, *ibid.*): *de simplici medicina*, fragm. at the end, inc. *Non est mihi necesse ostendere; de differentiis febrium*, inc. *Differentie febrium que quidem maxime*; *de accidenti et morbo*, inc. *Intentio* (i.e., in initio) *huius libri deffiniri morbum oportet*; *de malitia complexionis diverse*, inc. *Malitia complexionis diverse* (perhaps fragm. at the end). The inventory also lists: Galen, *therapeutica*. Hippocrates, *de natura humana*.

New Haven, Yale University, Med. Library,¹⁵⁷ Ms. 6., ca. 1350, vellum, Northern Italy (probably Venice), 98 folios.

Nürnberg, Stadtbibliothek, Cent. III 16, vol. II, ff. 28va-30rb, XIII c., vellum,¹⁵⁸ 410x255. Miscellanea medica. Seven Galenic treatises. Probably French. Between *De complexionibus* and *De criticis diebus*, as in Neapolitanus VIII D 30.

Oxford, Balliol College Library¹⁵⁹ 231, late XIIIth c., 280v-282v, vellum, 14,1/2x101/2 inch.

Oxford, Merton College Library¹⁶⁰ 218, XIV c., ff. 25-27, vellum, in folio, 2 cols.

Oxford, Merton College Library¹⁶¹ 219, early XIV c., f. 36b (Diels).
Oxford, Merton College Library¹⁶² 685, 1353 A.D., f. 152 c (Diels).

Paris, Bibliothèque de l'Arsenal,¹⁶³ Parisinus Armamentarii 1080, dated 1334, f. 24v-25v, vellum, two cols., 273x190 mm., 301 ff. *Varia* medica, including at the beginning some Galenic and Hippocratic treatises, most of them abbreviated by Iohannes de Sancto Amando. The copy was finished in 1334 by Johannes de Berblengheem. *De malicia* is preceded by the *De simplici medicina* and followed by *De iuvamentis membrorum*.

Paris, Bibliothèque de la Sorbonne, Parisinus Sorboniensis¹⁶⁴ 125, 2nd half of XIII c., fol. 26rb-28va, vellum, 430x295 mm., 305 ff. A very important collection of Galen, with 18 treatises.¹⁶⁵ It includes the series *De elementis*, *De*

157 S. Ricci-M. J. Wilson, *Census...*, p. 162. Iter V, 275. B.A. Shailor, *Catalogue of Medieval and Renaissance Manuscripts in the Beinecke rare Book and manuscript Library, Yale University...*, vol. I, 1984, p. 16. Not in Diels, T-K. Treatises included: *Liber therapeutices*, *De utilitate anhelitus*, *De pharmaciis*, *De malicia complexionis*, *De accidente et morbo*, *De lapide*, *De phlebotomia*, *De pharmaciis Hippocratis*, *De virtutibus naturalibus*, *De complexionibus*, *De regimine sanitatis*.

158 Ingeborg Neske, *Die lateinischen mittelalterlichen Handschriften: Varia: 13.-15. und 16.-18. Jh.*, Wiesbaden, 1997 (*Die Handschriften der Stadtbibliothek Nürnberg*; Bd. 4), pp. 12-15. Not in Diels, T-K or Iter. *IP.

159 Diels 84 [56]: xiv in. H. O. Coxe, *Catalogue of the manuscripts in the Oxford colleges*, vol. I, Oxford (1852), repr. 1972, pp. 77-78. R. A. B. Mynors, *Catalogue of the manuscripts of Balliol College*, Oxford 1963, pp. 244-247. D'Alverny, *Pietro* 28, n. 34.

160 Diels 84 [56]: f. 25. H. O. Coxe, *Catalogue...*, p. 84.

161 Diels 84 [56]. H.O. Coxe, *Catalogue...*, p. 86.

162 Diels 84 [12]. Ackermann, p. lxxix. Thorndike, "Translations...by N. da Reggio", p. 226. V. Nutton, *CMG V* 8, 1, pp. 26-27.

163 H. Martin, *Catalogue des Manuscrits de la Bibliothèque de l'Arsenal*, Paris 1886, vol II, pp. 264-266. Diels 84 [56]: XIV c. Not in T-K, Iter, IP.

164 *Catalogue général des manuscrits des Bibliothèques publiques de France.*, vol. 12,1. Université de Paris et Universités des Départements, Paris 1918, pp. 29-30. Not in Diels, T-K, Iter. *IP.

165 D'Alverny, *Pietro.*, p. 29: "Montp. 18 and Sorbon. 125 contain very early collections of Galen's treatises."

complexionibus,¹⁶⁶ De malicia..., De simplici medicina, De iuvamentis membrorum, De ingenio sanitatis. It presents notes to the treatise.

[Paris, Bibliothèque Nationale, Parisinus lat. 6765, mentioned by Diels 84, [12 and 56] between brackets, and by Ackermann (I lxxix K.). It just contains grammar treatises.]

*Paris, Bibliothèque Nationale, Parisinus¹⁶⁷ latinus 6865A, XIV c., ff. 39vb-41vb, vellum, 2 cols. No notes. f.41r hardly intelligible.

*Paris, Bibliothèque Nationale, Parisinus latinus 6865B, middle of the XIV c., f. 152va-154va, vellum, two cols., 385x302. Maybe the best known ms. of the Latin Galen.¹⁶⁸ It was in Avignon in 1353; D'Alverny suggests that it was written in Southern France.¹⁶⁹ On the other hand, Nutton¹⁷⁰ relates it to "the Angevin court of Naples", and points to the period 1345-1353 for the copy.

*Parisinus latinus¹⁷¹ 7015, XIV c., 36vb-38vb, vellum, two cols.

*Parisinus latinus¹⁷² 11.860, XIV c., 82 rb-84 ra, vellum, 2 cols. Between De morbo et accidente and De simplici medicina.

*Parisinus latinus 14389, XIII c. (middle or third quarter),¹⁷³ or XIV c.¹⁷⁴, 32ra-35va, Italian (NE).

*Parisinus latinus¹⁷⁵ 15455, XIII c., 94rb-96rb, vellum. De malicia between De iuvamentis membrorum and De crisibus.

*Parisinus latinus,¹⁷⁶ nouvelles acquisitions 343, XIV c., 37ra-39va, vellum, miscellanea. De malicia: notes by two hands at least. Between De complexionibus and De virtutibus dispensantibus corpus humanum.

166 Cf. Durling, Galenus Latinus I, for the translation of Burgunde of Pisa.

167 Not in Diels, T-K, Iter. Durling, Corrigenda II, p. 375.

168 Diels 84 [56]: XIV c. T-K 846. *IP. Thorndike, Translations... Niccolò, p. 226. D'Alverny, Pietro..., p. 35.

169 Cf. D'Alverny, Pietro d'Abano, p. 45. This ms. and Vat. pal. 1211 contain most of the translations of Galen by Niccolò (see below for the description of Vat. pal. 1211, in the chapter dedicated to Niccolò).

170 Nutton CMG V 3,2, pp. 23, 33. See Nutton CMG V 8,1, pp. 26-27.

171 Diels 84 [56]: XIV c. *IP.

172 L. Delisle, Bibliothèque de l'École de Chartres, 26, 1865, p. 208. Diels 84 [56]: XIV c. Iter 3, pp. 251-252. Durling, A guide to .. III, p. 349. *IP.

173 According to the web (www.bnf.fr, 6 February 2006). Bibliothèque nationale de France, Département des Manuscrits, Division occidentale, Cote Latin 14389. L. Delisle, BEC, 30, 1869, pp. 11-12.

174 Diels 84 [56]: XIV c. Iter 3, p. 234: XIV c. Durling, A guide to .. III, p. 349. *IP.

175 Description: Delisle, BEC 31, 12. Date: Diels 84 [56] xiii c. T-K 846. Iter 3, p. 260 (XIII). Durling, A guide to... III, p. 349. Fichtner. *IP.

176 L. Delisle, Inventaire des mss. de la Bibliothèque Nationale. Fonds de Cluni, Paris 1884, pp. 172-175, n° 98. L. Delisle, Inventaire alphabétique, 2 vols, Paris 1891, p. 265. Diels 84 [56]: XIII c. Iter 3, 272 (XIV c.) Durling, A guide to... III, p. 349. *IP.

*Parisinus latinus,¹⁷⁷ nouv. acq. 1482, XIII^{ex}, 76rb-78 va, vellum, miscellanea. De malicia: many notes by a second hand. Easy writing. Between De complexionibus (tr. ascribed to Gerard of Cremona in the ms. instead of to Burgundio), and De elementis secundum sententiam Ypocratis (tr. ascribed as well to G. of Cremona).

*Prague. Pragensis¹⁷⁸ bibliotheca universitaria 1404 (VIII A 1), XIV c., f. 280ra-281vb, membranaceus, two columns, 415x255, 369 ff. In the XV c. it belonged to the physician Iohannis Maelss Braunaviensis. Between Galen's De morbo et accidente and Passionarius Galieni.

*Salzburg (Salisburgensis), Museum Carolino-Augustum¹⁷⁹ 4004, XIV c., ff. 207ra-208va, membranaceus, 226 ff. Italian origin. Most of the codex presents two columns, as it happens in De malitia. Between De causis pulsuum and Liber secretorum. De malitia is scarcely annotated.

Tübingen, Universitäts-Bibliothek, Tübingensis¹⁸⁰ Mc 30, vol. II (ff. 113-175) dated 1407, f. 163r-174v, paper, 205x150, 175 f. *Varia medica*. De malitia is the last treatise of the volume: the text presents interlinear and *in-margine* glosses.

Tübingen, Universitäts-Bibliothek, Tübingensis¹⁸¹ Mc. 343, before 1501 A.D., ff. 278r-288v, paper, misc., 220x160. The treatise ends the volume, and is preceded by a Commentum in Galieni Artem parvam, and some Quaestiones, by Jacobus Forliviensis.

Vatican City, Biblioteca Vaticana, Vaticanus latinus¹⁸² 2375, XIV c., f. 24r-27r, vellum, misc.

Vatican City, Biblioteca Vaticana, Vaticanus latinus¹⁸³ 2378, XIV c., f. 60r-61r, vellum, misc.

177 L. Delisle, Inventaire des mss. de la Bibliothèque Nationale. Fonds de Cluni, Paris 1884, pp. 170-172, n° 97. L. Delisle, Inventaire alphabétique, 2 vols, Paris 1891, p. 265. Diels 84 [56] (no date). Iter 3, p. 274. *IP.

178 J. Truhlár, Catalogus codicum manu scriptorum latinorum qui in C. R. Bibliotheca Publica atque Universitatis Pragensis asservantur, Praeae (2 vols., 1905-1906): Pars prior: Codices 1-1665, 1905, p. 525 (xiii/xiv c). Not in Diels, T-K, Iter. *IP. Durling, Corrigenda II, p. 375 (XIV c.).

179 Donald Yates, Descriptive inventories of manuscripts microfilmed for the Hill Monastic Manuscript Library, Austrian Libraries, Volume I, Collegeville (Minn.) 1981, pp. 145-148. Not in Diels. Iter 3, 37: XIV c. Iter 6, 436. Durling, A guide to..., III, p. 349 (early XIV). *IP.

180 H. Röcklein, Die lateinischen Handschriften der Universitäts-Bibliothek Tübingen, Teil I (Mc1-Mc150), Wiesbaden 1991, pp. 117-119. Not in Diels, T-K. Iter 6, p. 543.

181 Not in Diels or T-K. Iter 6, p. 545. G. Brinkhus, A. Mentzel-Reuters et alii, Die lateinischen Handschriften der Universitätsbibliothek Tübingen: Teil 2: Signaturen Mc 151 bis Mc 379 sowie die lateinischen Handschriften bis 1600 aus den Signaturengruppen Mh, Mk und aus dem Druckschriftenbestand, Wiesbaden: Harrassowitz, 2001 (= Handschriftenkataloge der Universitätsbibliothek Tübingen ; Bd. 1, Teil 2), pp. 237-239.

182 Diels 84 [56]. Iter 2, 312. Iter 6, 319: it does not mention Galen. Membranaceus, misc., XIV c.

183 Diels 84 [56]. Iter 2, 312. Cf. Sudhoff, Anatomie..., p. 301 (XII c.)

Vatican City, Biblioteca Vaticana, Vaticanus latinus¹⁸⁴ 2381, XIV c., f. 198r-200v, vellum, misc.

Vatican City, Biblioteca Vaticana, Vaticanus latinus¹⁸⁵ 2386, f. 48r-50r.

Vatican City, Biblioteca Vaticana, Vaticanus latinus¹⁸⁶ 2416, XIV c., f. 58v-60v, vellum, misc.

Vatican City, Biblioteca Vaticana, Vaticanus Palatinus latinus¹⁸⁷ 1092, XIII-XIV c., f. 19va-21vb, vellum, 255x195, 169+3 folios, French. A Galen's collection. De malicia between De complexionibus and De simplici medicina.

Vatican City, Biblioteca Vaticana, Vaticanus Palatinus latinus¹⁸⁸ 1093, XIV c., f. 125rb-126vb, vellum, 395x265, 145+1 folios. Italian. Galenic collection. De malicia between Galen's De regimine sanitatis (=Methodo medendi, transl. Burgundio) and De flebotomia, tr. G. Moerbeke.

Vatican City, Biblioteca Vaticana, Vaticanus Palatinus latinus¹⁸⁹ 1094, XIV c., f. 85vb-88va (CMG), vellum, 310x225, 643+1 folios, French. A very large Galenic collection. De malicia between De simplici medicina and De iuvamentis membrorum.

Vatican City, Biblioteca Vaticana, Vaticanus Palatinus latinus¹⁹⁰ 1095, XIV c., f. 51rb-53vb, vellum, 410x270, two cols., Italy (Southern France?). A Galen's collection. De malicia between De complexionibus, and De regimine sanitatis (=Methodo medendi, transl. Burgundio).

Vatican City, Biblioteca Vaticana, Vaticanus Palatinus latinus¹⁹¹ 1096, XIV c., f. 126ra-127vb, vellum, 405x280-285, 183+1 folios, two cols., Italy. Galen and Hippocrates. Between de simplicibus farmaciis, tr. Stephanus de Messina, and De virtutibus naturalibus, tr. Burgundio.

Vatican City, Biblioteca Vaticana, Vaticanus Palatinus latinus¹⁹² 1104, first half of XIV c., f. 96ra-97vb, vellum (116-127 paper), 365x245, 127+4 folios, Italy, misc. medica. De malicia is the last Galen's treatise, following De virtutibus naturalibus.

184 Diels 84 [56]. Iter 2, 312. Iter 6, 319. P. Kibre, Hippocrates Latinus: Repertorium of Hippocratic Writings in the Latin Middle Ages (VI), *Traditio*, 36, 1980, 347-372, in p. 359.

185 Diels 84 [56].

186 Diels 84 [56]. Cf. Aristoteles latinus II 1227-1228, n° 1863. Iter 6, 319.

187 Diels 84 [56]. L. Schuba, Die medizinischen Handschriften der Codices Palatini Latini in der Vatikanischen Bibliothek, Wiesbaden 1981, pp. 23-24. Iter 6, p. 356.

188 Diels 84 [56]. L. Schuba, Die medizinischen..., pp. 25-26. Iter 2, p. 393. Iter 6, pp. 356-357.

189 Diels 84 [56]: xiv c. L. Schuba, Die medizinischen..., pp. 26-31. Iter 6, p. 357.

190 Diels 84 [56]. Schuba, Die medizinischen..., pp. 31-32. Iter 2, 393. Iter 6, 356.

191 Diels 84 [56]. Schuba, Die medizinischen..., pp. 33-34. Iter 2, 393 and 6, 357.

192 Not in Diels. Schuba 48-49. Durling, *Corrigenda I...*, p. 466. Iter 6, 366.

Vatican City, Biblioteca Vaticana, Vaticanus Otobonianus¹⁹³ 1158, XIII c., f. 86vb-88vb, vellum, misc.

Vatican City, Biblioteca Vaticana, Vaticanus Urbinas¹⁹⁴ 209, olim 285, XIV-XV c., f. 119. De malitia complexionis capita I-IX cum scholiis excerptis e Galeno et aliis.

Vatican City, Biblioteca Vaticana, Vaticanus Urbinas¹⁹⁵ 247, XIV c., f. 85v.

Vatican City, Biblioteca Vaticana, Vaticanus barberianus¹⁹⁶ latinus 178, XIV c., ff. 103r-104v, vellum, misc., between Galen's *De differentiis febrium* and *De diebus criticis*, by Hugo de Civitate Castellis.

Venice, Biblioteca Marciana, Fondo Antico¹⁹⁷ 317 (App. cl. XIV 5) (Diels), XIV c., ff. 49-51.

[Venice, Biblioteca Marciana, App. cl. XIV 26, XV c., f. 65 (Diels 84 [56]). Not in Iter 6. Not by Galen, according to Zorzanollo, *Catalogo dei codici latini della Biblioteca Nazionale Marciana di Venezia non compresi nel catalogo di G. Valentinelli*, vol. III, Trezano 1985 (Class. xiv).]

Vienna, Österreichischen Nationalbibliothek, Vindobonensis¹⁹⁸ lat. 2294, XIV c., 148b-151a, 228 ff. Treatises by Galen. *De malicia* between *De accidenti et morbo* (*De symptomatum causis*) and *Liber pharmacorum*.

Volterra, Biblioteca Comunale Guarnacciana, Volaterranus¹⁹⁹ 103 (6365), XIV c. (Iter 6, 292), f. 87 (Diels), excerpt, vellum. Between Galen's *De voce* and *De differ. febrium*.

193 Not in Diels. Durling, *Corrigenda I*, pp. 466, 475. E. Pellegrin, *Les mss. classiques latins de la Bibliothèque Vaticane*, vol. I, Paris 1975, pp. 437-863 (Otoboniani). Iter 6, 374.

194 Diels 84 [56]. T-K 846. E. Pellegrin, *Les mss. classiques latins de la Bibliothèque Vaticane*, vol. II, part 2, Paris 1982, pp. 518-685 (codd. Urbinate). C. Stornaiolo, *Codices Urbinate Latini*, 3 vols., Rome 1902-1921.

195 Diels 84 [56].

196 Not in Diels. Theodore Silverstein, *Medieval Latin Scientific Writings in The Barberini Collection*, Chicago 1957, p. 144. *IP. Iter 2, p. 443. Iter 6, p. 388.

197 Diels 84 [56]. T-K col. 846. A. M. Zanetti, *Latina et italica D. Marci Bibliotheca codicum manuscriptorum per titulos digesta*, Venice 1741, p. 137. G. Valentinelli, *Bibliotheca Manuscripta ad S. Marci Venetiarum*, 6 vols., Venice 1868-1873. vol. V, pp. 76-77. Iter 2, p. 212.

198 K. Sudhoff, p. 295 of: *Anathomietexte in den lateinischen Galenhandschriften des XIII. und XIV. Jahrhunderts und in den Frühdrucken*, in: *Janus* 31, 1927, pp. 293-303. See *Tabulae codicum manu scriptorum praeter graecos et orientales in Bibliotheca Palatina Vindobonensi asservatorum*; ed. Academia Caesarea Vindobonensis, Vienna, 1864-1899, vol. 2, p. b49. M. Roland, *Die Handschriften der alten Wiener Stadtbibliothek in der Österreichischen Nationalbibliothek*, Vienna, 1999. Not in Diels, T-K, Iter, or Durling.

199 Diels 84 [56]: xv c., f. 87. Iter II, pp. 307-310; 580. Cf. Giuseppe Mazzatinti, *Inventari dei manoscritti delle biblioteche d'Italia*, Forlì 1893, vol. II, p. 193, n° 103. G. Funaioli, *Studi italiani di filologia classica xviii 1910*, pp. 77-169, in p. 132. Gabriella Pomaro, in *Catalogo di manoscritti filosofici nelle biblioteche italiane II*, Florence, 1981, pp. 201-230, in pp. 225-227: Galen, *de crisis*; *de interioribus*; *de phlebotomia*; *de virtutibus naturalibus*; *de voce*; *de malitia complexionis*; *de differentiis febrium*; *de accidenti et morbo*; *de motibus liquidis*; *de diebus criticis* (fragm.) Iter 6, p. 292.

Wiesbaden, Nassauischen²⁰⁰ Landesbibliothek, Ms. 56, XV c., f. 32vb-35vb, paper, two cols., 292x215mm, 342 ff. *Varia medica*. Between Galen's *De morbo et accidente* and *Divisiones omnium infirmitatum corporis humani* (attributed to Galen in the ms).²⁰¹

[Wolfenbüttel, Bibliotheca augustea. August. c. libr. de pulsibus (cat. p. 301)??, Ackermann. I cannot find the reference. See Otto von Heinemann et alii, *Die Handschriften der Herzoglichen Bibliothek zu Wolfenbüttel, 1884-1913. Zweite Abteilung. Die Augusteischen Handschriften*, vol. I-V, 1890-1903, repr. Frankfurt am Main, 1966. Cf. Iter I, p. 225.]

Wrocław, Vratislaviensis²⁰² Bibliotheca universitaria, IV F 25, late XIII c., ff. 125r-127v.

Wrocław, Vratislaviensis²⁰³ Bibliotheca universitaria, IV F 26, ff. 86r-88v.

[Würzburg, Universitätsbibliothek, M.p.th. q. 45, ff. 197v, *De malicia mali*. D. Keller, *Die Pergament-Handschriften der Königl. Universitäts-Bibliothek Würzburg in alphabetischer Reihenfolge verzeichnet*, Würzburg 1886, p. 9. I. Schwarz, *Die medizinischen Handschriften der Kgl. Universitätsbibliothek in Würzburg*, 1907, vol. I, pp. 75-77. Iter 3, p. 743: membran., misc., XIII-XIV c. The incipit is *De malicia mali*, not Galen's *De malicia complexionis*.]

3. The printed text.

This translation is included in the first Latin edition of Galen's *Opera Omnia*, edited by the physician Diomedes Bonardus, and printed by Filippo Pinzi in Venice, 1490 (vol. 2, f. 21rb-22vb).²⁰⁴ It appears as well in the second edition, prepared by Hieronimus Surianus, and printed by B. Benalius, in Venice 1502 (vol. 2, f. 38a-41b).²⁰⁵

On the other hand, an edition of this version, on the basis of the ms. Kassel, Ms. medicus 10, Amploniensis (F) 249, and the 1490 edition, is printed in L. García Ballester, E. Sánchez Salor, "*Commentum supra tractatum Galieni de malicia complexionis diverse*", in Arnaldi de Villanova opera medica omnia, vol. XV, Barcelona 1985, pp. 15-296.

200 G. Zedler, *Die Handschriften der Nassauischen Landesbibliothek zu Wiesbaden*, Leipzig 1931, pp. 65-69. Not in Diels or T-K. *IP.

201 See E. L. Demaitre, *Medieval Notions of Cancer: Malignancy and Metaphor*, *Bulletin of the History of Medicine*, 72, 4, 1998, pp. 609-637.

202 Diels 84 [56]. Iter 4, 424b. Durling, *A Guide to...* IV, 360. Sudhoff, 1927, p. 296.

203 Diels 84 [56]. Cf. Henschel, *Catalogus codd. Medii aevi medicorum et physicorum*, Wrocław 1847.

204 For the editions of Galen in the Renaissance, see R. Durling, *A Chronological Census*. The references to the different versions included in the *Opera omnia* present some errors (cf. p. 286), but Durling's research is outstanding. The reference in T-K 846: *Opera*, 1490, II, 237r-238v, is wrong. Checked copy: Complutense University Library.

205 *Secunda impressio Galieni quecumque in prima continebatur apprehendens: novaque annectetur Galieni opera, pars secunda*, ed. H. Surianus, Venecia, B. Benalius, 1502. Checked copy: Göttingen University Library.

4. The text of the translation.

I have checked the earlier manuscripts (and some 45 all in all) in order to find if a part of the Arabic text was missing in our mss., and/or a sentence was wrong in the Arabic text, and right in the Latin text because of error in our extant Arabic mss. That is not the case.²⁰⁶ Gerard's version agrees in error with the Arabic ms. E. So that this translation is not necessary to establish the Greek text (see below).

Through the translation of Ptolomeus' *Almagest*, Gerard was helped by a mozarab called Galippus,²⁰⁷ who translated the Arabic into the vernacular, leaving Gerard to put the text into Latin.²⁰⁸ We do not know how far this is true for the rest of his versions.²⁰⁹ Gerard's translations introduce several Arabic words into medical Latin.²¹⁰

At least six copies of this translation, besides the 1490 edition, present a division into eight chapters: Basle Universitätsbibliothek D I 5 (XIV c.), Cesena D XXV 2 (XIII c.), Cesena SV4 (XIV c.), Klosterneuburg CCl 126 (1300 A.D.), Krakow, Bibliot. Jagellonica 800 (1279 A.D.), and Vaticanus Urbina 209 (XIV-XV). The earlier mss. are dated in the XIII c. The Hebraic translation of Gerard's version, *ante quem* 1305, presents this division as well.

As for the style of this translation, it follows even the linguistic structure of the Arabic text when that is possible,²¹¹ but at times Gerard -or his interpreter- does not understand the meaning, and/or fails to find the precise Latin words.²¹² Maybe his Arabic exemplar presented such errors. We cannot tell. However the arabic ms. E is very near to the Gerard's text, and it does not present such errors (see below):

206 Exceptionally, in p. 2, 19 *ποικίλως om. Hun., sed servat Ger. (et Greek codd.)*

207 See Paul Kunitzsch, *Der Almagest. Die Syntaxis Mathematica des Claudius Ptolemäus in arabischer-lateinischer Überlieferung*, Wiesbaden 1974, pp. 85-86.

208 This procedure is revised by D'Alverny, in: *Les traductions à deux interprètes, d'arabe en langue vernaculaire, et de langue vernaculaire en latin* (1986), in: *La transmission*, pp. 193-206 (she refers to Gerard in pp. 197-198).

209 Cf. D. Jacquart, Fr. Micheau, *La médecine arabe...*, pp. 149-150.

210 See D. Jacquart, Fr. Micheau, *La médecine arabe...*, pp. 160-165.

211 D. Jacquart, F. Micheau, *La médecine arabe...*, p. 152: "A l'opposé de Constantin l'Africain, Gérard de Crémone et ses associés rendent l'arabe littéralement, jusqu'aux moindres particules et en suivant le plus possible l'ordre des mots. La traduction est un véritable calque de l'original." See as well Ilona Oppelt, «Zur Übersetzungstechnik des Gerhard von Cremona», *Glotta* 38, 1959, 135-170.

212 For an alike situation in the *Almagest*, see Kunitzsch, *Der Almagest...*, p. 104. D'Alverny qualifies the style of Gerard's translations as "very literal and with stereotyped renderings." (*Translations...*, p. 453): She quotes some of his mannerisms: *illud est quod declarare, or demonstrare volumus, or quod est quia*.

P. 144,9 *ante* ἵνα distinxit *Hun.*, *sed non* *Ger.*²¹³

P. 150,2 ἀναγκαῖον ἀπαντῆσαι] it is unavoidable for the matter to turn into ...
Hun.: et impossibile quidem est quin ... perveniat *Ger.*

P. 154,19 καὶ πᾶσι τῶν ἐκτὸς ἀπάντων, and it is present in every external thing
Hun.: in omnibus interioribus rebus et extrinsecis invenitur *Ger.*

The copies of this version present many errors, due to its ample diffusion. Students of medicine as well as trained physicians most probably copied the text for personal use, as it happened just before photocopying became available world-wide. On the other hand, the mss. are rather contaminated, and to draw a stemma is far from possible.

5. The Arabic exemplar of Gerard of Cremona.

Agreements in error:

P. 142,10 ψυχέντων, ἢ ἐκκαυθέντων] *cf.* when coldness or the sun heat *Hun.*^P: heat or coldness from the sun *Hun.*^{EMA}, calor aut frigus ex sole *Ger.*

P. 146,21 ἀλλὰ] however *Hun.*^{MP}: because *Hun.*^{cett.}, quoniam *Ger.*

P. 148,7 τῶν κινούντων αὐτὸ χιτώνων LM: τῶν χιτώνων αὐτῶν TPz] *cf.* from the veins' bodies themselves *Hun.*^P: from the veins' body itself *Hun.*^{SEMA}, ex ipso corpore venarum *Ger.*

P. 154,10 τῇ ξανθῇ χολῇ] yellow bile *Hun.*^{APL}: yellow *om.* *Hun.*^{cett.}, *Ger.*

P. 166,17 σύμπαν] all of it *Hun.*^{APL}: *om.* *Hun.*^{cett.}, *Ger.*

P. 172,7 χαλεπωτέρῳ] heavier and harder *Hun.*^{APL}: drier *add.* *Hun.*^{SM, et Ai.m.}, siccior *Ger.*²¹⁴

Ger. agrees in error with **h** (see Stemma in The Syrian and Arabic translations, 4), represented 4 times by SEM, once by eA (A contaminated by e) and once by SEA (A contaminated by **h**). It agrees in error with E the six times: his model was a manuscript **e**, ancestor of E, written before 1187 A.D.

6. The use of this version in the *Constitutio textus* and Critical Apparatus.

When the Arabic text does not agree with the Greek, I have included in the Critical Apparatus the text of Gerard after the Arabic.

P. 146,21 κοινὸν] "general and common", *Hun.*, *sed* commune et participativum *Ger.*

P. 148,5-6 ὅταν ἰσχυρῶς σφηνωθῇ] "when it is too much in excess" *Hun.*, *cf.* cum ergo illa superfluitas redundat *Ger.*

P. 148,9 ὥστε] "up to happening...", *Hun.*, adeo donec accidat *Ger.*

²¹³ See my Composition et style du traité de Galien De inaequali intemperie: avantages et désavantages pour la transmission du texte, *Storia e ecdotica dei testi medici greci*, ed. A. Garzya, Naples, D'Auria Editore, 1996, pp. 141-153.

²¹⁴ At times there are different readings in Arabic following different readings in Greek. Maybe *Hun*SM et *Hun*^{Ai.m.}, present a reading ΞΗΡΑ due to wrong word-division of ΧΑΛΕΠΩΤΕΡΑ (ΤΕΡΑ → ΞΗΡΑ), iotacism and dittography.

When I add text on the authority of *Hun.*, I usually include the Latin translation:

P. 168,14 κατὰ τὴν διάθεσιν *addidi*, *pace Hun.*, "according with the state"; *cf.* *secundum dispositionum Ger.*

A 6. THE HEBREW TRANSMISSION

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1. The Hebrew context

Given that Galen was undoubtedly one of the most important medical authorities in the Middle Ages, the number of Hebrew translations is surprisingly small, which is corroborated by Dr. Elinor Lieber in her study on the Hebrew translation of Galen's books.²¹⁵

Galen's books were transmitted in two ways: through their translation and through some collections of summaries. *De inaequali intemperie* was not among the books translated into Arabic at the beginning of the Oriental translation movement nor in the summaries of his "Sixteen Books" that were known in Arabic as well as in the Hebrew language, as *Kibuttzei Galenos* (Galenic summaries).²¹⁶

Maimonides, a true Galenist, contributed to the knowledge of Galen by composing his Abridgments of the works of Galen. Nevertheless, his major contribution was his (Medical) Aphorisms, the most popular of his medical books in Arabic, Hebrew as well as Latin. Maimonides wrote in his prologue: "And I do not claim to have authored these aphorisms that I have set down in writing. I would rather say that I have selected them —that is, I have selected them from Galen's words from all his books, both from his original works and from his commentaries on the books of Hippocrates".²¹⁷

The Hebrew medical translations were linked to the Christian universities from the very beginning. The first group of Hebrew medical translations was done at the end of the XIIth century. This group was formed by 24 books and all of them were authored by a single unknown translator.²¹⁸ The 24 books

²¹⁵ Moritz Steinschneider, (1893) *Die Hebraeische Übersetzungen des Mittlealters und die Juden als Dolmetscher* (reprint Graz: Akademische Druck-U. Verlagsanstalt 1956), pp. 650-664. Elinor Lieber, (1981), *Galen in Hebrew: the transmission of Galen's work in the mediaeval Islamic world*, in: V. Nutton, ed., *Galen: problems and prospects*.

²¹⁶ The content of these collections from the Alexandrian Canon until the *Kibuttzei Galenos* is described in Lieber (1981), 173.

²¹⁷ See Maimonides, *Medical Aphorisms*. Treatises 1-5, ed. and trans. by Gerrit Bos, Provo, Utah: Brigham Young University Press, 2004, p. 2.

²¹⁸ A description of the translator's prologue, which informs about the 24 books, can be found in Ron Barkai, *A History of Jewish Gynaecological texts in the Middle Ages*, Leiden-Boston-Köln: Brill, 1998, pp. 20–34. The prologue was published by Steinschneider: *Haqdamat*

were taken from the medical corpus of the first important medical school in Christian Europe, the Salerno School. Among these books some Galenic treatises are found. All of them were translated from Latin, and later, most of those that had originally been written in Arabic were again translated into Hebrew, but now from the Arabic texts.

A significant fact is related to the Hebrew translation of the Canon of medicine by Avicenna. This famous medical encyclopaedia was translated into Latin at the end of 12th century. Nevertheless it was not translated into Hebrew until the end of the 13th century. The reason for this is that the book arrived and became successful in French and Italian universities at the end of 13th century. Only then did the Jews decided to translate it into Hebrew. The book needed to have the approval of the Christian university to gain the appreciation of Jewish translators.²¹⁹

2. The Hebrew translation of *De malitia complexionis diverse* (= *De inaequali intemperie*).

The Hebrew translation of *De malitia complexionis diverse* is also related to a prestigious Christian medical School, the Faculty of Medicine of Montpellier.²²⁰ This translation was completed in the second half of the 13th century. Some years later, on September 8th 1309, Pope Clement V established the mandatory readings for the Faculty of Medicine of Montpellier. One of them was *De malitia complexionis diverse*,²²¹ and one of the Pope's counselors was Arnau de Vilanova who had written a *Commentum supra tractatum Galieni De Malicia complexionis diverse*. This *Commentum* was expounded by Arnau in the years 1292-1295.²²²

Arnau de Vilanova's medical books were widely translated into Hebrew. In spite of his antijudaism, he was highly esteemed as a medical author among his Jewish contemporaries.

In this environment, David ben Abraham Caslari, also known as Bon-godas and Maestro David Caslari, decided to translate the Galenic text into Hebrew.

ha-ma'atq bi-ketab yad Paris 1190, *Magazin für die Wissenschaft des Judenthums* 15, 1888, p. 197, and 6-14 (Hebrew part).

219 Joseph Shatzmiller, *Jews, Medicine and Medieval Society*, University of California Press, Berkeley, Los Angeles, London, 1994, pp. 49-50.

220 The esteem Jewish translators showed toward the books written by professors of the Faculty of medicine of Montpellier is a well known phenomenon. See Lola Ferre, "Hebrew Translations from Medical Treatises of Montpellier", *Korot* 13, 1998-99, pp. 21- 36.

221 Antoni Cardoner i Planas, *Historia de la medicina a la Corona d'Aragó (1162-1479)*, Barcelone: editorial Scientia, 1973, p. 73.

222 Cf. L. García Ballester, E. Sanchez Salor, R. Durling, eds., *Commentum supra tractatum Galieni De malicia complexionis diverse. Doctrina Galieni de interioribus*, in: Arnaldi de Villanova, *Opera medica Omnia XIV*, Barcelona: Publicacions i Edicions de la Universitat de Barcelona, 1985.

David ben Abraham Caslari's life remains quite unknown. He was living in Narbonne, where he did this translation. The poet Abraham Bedersí, who seems to be David Caslari's close friend, addressed him a letter, probably in 1295.²²³ In the year 1305 he was still living there, where his son Abraham ben David Caslari was born. A year later, 1306, Philip IV ordered the expulsion of the Jews and the family moved to Catalonia. Between 1324 and 1349, his son Abraham Caslari settled in Besalú, where he wrote four medical treatises.²²⁴ Abraham Caslari is the best known family member and we could say that he inherited from his father the medical profession as well as the knowledge of the Hebrew language that he used in his medical books.

This translation has been preserved in the Bodleian Library, with the signature Opp. Add. Fol 18 (fol. 19v-27r). Although the translation was done at the end of the 13th century or at the beginning of the 14th, this manuscript was copied by Yehiel ben Mordekai ha-Rofe (the physician) in the year 1475.²²⁵

The title is taken from the Latin title: *פסלחתמ גזמ עור רפס*

The *incipit* is as follows:

לא ירצון ושלמ ירלשקה מהרבא דוד ר' מכחה תקתעהוויאילגס ל פלחתמ גזמ עור רפס
שדוקה ושל

(Book on the malitia complexionis diverse, translated by the wise R. David Abraham ha-Caslari, from the Christian language into the Holy tongue)

Comparing the Hebrew text with the Latin one, we find a formal difference: the division into chapters. Unlike the Greek and Arabic versions, Latin and Hebrew texts included chapter divisions; but whilst the Latin text we know through the commentary of Arnau de Vilanova is divided into 12 parts, the Hebrew version is divided into 8 chapters. The division into 12 chapters established by the editors of Arnau de Vilanova's Commentary is based on a Latin manuscript of the Commentum (Reginensis latinus 1773, see below, The Medieval Commentaries), and suggested by the internal rhythm of the Commentary.²²⁶ However, most of the copies of the Latin transmission do not have chapter divisions and, if they do, the division is into 8 chapters,²²⁷ as in the Hebrew version.

²²³ Doniach, N.S., (1932-33), "Abraham Bédersí's Purim letter to David Kaslari", The Jewish Quarterly Review: New series, vol 23, n^o1, pp. 63-69.

²²⁴ On Abraham ben David Caslari see Friedenwald, Harry (1944), "History of the Jewish physicians of Spain, Portugal and Southeastern France", The Jews and the Medicine. Essays, 3 vols., Baltimore: The Johns Hopkins Press, 1944, (reprint Ktav Publishing House, 1967) vol. 2, pp. 662 and 682. Alteras, Isaac (1977), "Jewish physicians in Southern France during the 13th and 14th centuries", The Jewish Quarterly Review, vol. LXVIII, pp. 14-223, 222.

²²⁵ N^o 2083 in Neubauer, A.D., (1886) Catalogue of the Hebrew Manuscripts in the Bodleian Library and in the College libraries of Oxford, Oxford: Oxford University Press.

²²⁶ See García Ballester, Sanchez Salor, (eds), Commentum *supra* tractatum Galieni De malicia complexionis diverse, pp. 144-146.

²²⁷ Cf. The Latin translation from the Arabic, above.

In spite of these irrelevant differences, the Hebrew text is a faithful translation from the Latin text. The faithfulness does not involve a slavish dependence on the Latin language. David Caslari had resorted to Latin word transcriptions less than other Jewish translators of Latin medical books did.

Why does it seem that this translation is preserved in a single manuscript? This could be a consequence of the mess that followed the expulsion of 1306 or perhaps the explanation lies in the ultimate triumph of Avicenne's Canon that partially replaced the "new Galen" that Arnau de Vilanova endeavoured to impose.²²⁸

A 7. THE MEDIEVAL COMMENTARIES AND QUAESTIONES WRITTEN ON THE BASIS OF THE ARABO-LATIN VERSION.

1. The first commentaries/questiones on this treatise were written towards the end of the XIII c. on the basis of the Latin version of the Arabic, the only available at the time, as far as I know; the new Latin translations from the Greek were on the verge of appearing. Their authors were Arnau de Vilanova, Dino de Garbo and Bernard de Hangarra. In early XV c. Ugo Benzi wrote his *Questio*. Those texts endorse the interest awoken by *De malicia*, translated from the Arabic just one century earlier. And they were written by the time Pietro d'Abano and Niccolò da Reggio translated from the Greek the *περὶ ἀνωμάλου δυσκρασίας*.

2. Arnau de Vilanova (ca. 1240-1311).

Incipit:²²⁹ *Intendit Galienus in hoc tractatu ostendere quomodo malicia complexionis diverse introducatur in membrum unum sive in corpus totum. Explicit: quoniam in aliis libris Galieni concedente Domino satisfacere plenius curabimus diligenter.*

García Ballester places the composition of the *Commentum supra tractatum Galieni de malicia complexionis diverse*, in the years 1290-1295,²³⁰ while Arnau was a Professor in Montpellier. *De malicia* was included in the Curriculum of Montpellier in 1309.²³¹ Manuscripts:

Oxford, Merton College 230, ff. 61va-83ra, first half of XIV c.

Vatican City, Vaticanus Reginensis Latinus 1773, ff. 1r-42v. XV c., 2nd. half.

²²⁸ See García Ballester, Sanchez Salor,(eds), *Commentum ... De malicia complexionis diverse*, p. 35.

²²⁹ T-K 758. All sort of details in Garcia Ballester, *Commentum*. See P. Glorieux, *Répertoire des maîtres en théologie de Paris au XIIIème siècle*, vol. I, 1933, p. 420. *IP.

²³⁰ Garcia Ballester, *Commentum*, pp. 26-27.

²³¹ See other data in The Hebrew translation, above.

It was printed in Opera Arnaldi de Villanova, Leiden, ed. Th. Murchio, apud F. Fradin, 1504, ff. 351v-371v. It was reprinted in Leiden 1509, 1520, 1532, Venice 1505 and 1527, and Basle 1585.

We have a thorough study of the Commentary, including an edition of the text, by L. García Ballester and E. Sánchez Salor: *Commentum supra Tractatum Galieni De malicia complexionis diverse*, in: Arnaldi de Villanova Opera Medica Omnia, Barcelona 1985, pp. 1-296. Cf. as well L. García Ballester, Arnau de Villanova y la reforma de los estudios médicos en Montpellier: El Hipócrates latino y la introducción del nuevo Galeno in: *Dynamis* 2, 1982, 97-158.

3. At the same time in Montpellier, **Bernardus de Hangarra** (Bernard Engarra) wrote 13 quaestiones in *Supra libellum de mala complexione diversa dubitata, quorum pones secundum hunc magistrum Bernardum de Hangarra montis pessolani*.

Munich, Monacensis latinus CLM 534, XIV c., f. 43r-44v.²³²
Subscriptio: *Supra libellum de mala conditione diversa dubitata secundum Mag. Bernardum de Hangarra Cancellarium montispessolanum*.

4. **Dino del Garbo**²³³ or Dinus de Florentia was a disciple of Taddeo Alderotti.²³⁴ Son of a surgeon in Florence, he learned Medicine (and probably had previous education as well) in Bologna, sometime before 1295, when Alderotti died. He was a member of Florence's guild of physicians in 1297, where he practiced, but went back to Bologna to complete his medical training. By 1305 he started to lecture at the studium of Bologna. He lectured in Sienna, and Padua as well, and spent some years in Florence, where he died in 1327, having achieved an important reputation. He commented on works by Avicenna, Hippocrates and Galen. Dino commented on Galen's *De differentiis febrium* and the *Tegni*²³⁵ as well as *De malicia*. The treatise was included in the curriculum of Bologna in 1405, along with another fourteen Galenic works recommended for the study of theoretical medicine.²³⁶

Dino deals with some of the subjects of the treatise. At times he uses the form of *quaestiones*, as Taddeo and his disciples did in Bologna.²³⁷

232 Text of the quaestiones (not the answers) in Garcia Ballester, *Commentum*, p. 67.

233 G. Sarton, *Introduction*, 3.1, pp. 837-838. The reported date of his birth, 1280, could be incorrect, for he was Taddeo Alderotti's disciple and this professor died in 1295 (even if the alumni went to the University when they were 14 years old).

234 Cf. N. G. Siraisi, *Taddeo*, pp. 55-64.

235 *Vide* Siraisi, *Taddeo*, pp. 103, 420.

236 Siraisi, *Taddeo*, p. 107, and n. 31.

237 "The questiones in commentaries may indeed often have been the ultimate distillation of longer questions that were actually or heavily disputed or, at any rate, were the subject of independent treatment in full scholastic form", Siraisi, *Taddeo*, p. 243.

Incipit.²³⁸ Ut videamus aliquater necessitatem eorum que in hoc libro sunt tradita (edita *Malatest.*) Explicit. ad rationes in oppositum factas ... et ideo videatis per vos.

The text is preserved in the following manuscripts.²³⁹

Erfurt, Amploniensis²⁴⁰ F 257, ff. 48r-55v.

Cesena, Malatestianus²⁴¹ D XXVI 1; XIII-XIV c., ff. 159 ra - 165va, vellum, treatise n^o 18. It belonged to Giovanni Marco da Rimini. It includes Dino's commentary on Galen's *De differentiis febrium* (following *De malicia*), and on *Tegni*.

Madrid, Matritensis²⁴² 12241, XIV-XV c., ff. 51ra-65va (f. 50 deest). Dino del Garbo, Gentile de Foligno, Juan de Tomamira. Inc. *Malitia complexionis diverse*. Explicit scriptum super libro de malicia complexionis diverse secundum q. venerabilem magistrum dinum de guarbo (sic) de Florencia ipso bononie existente deo gratias. Index of the commentary in f. 2r. The next treatise is a commentary on *De tabe* by Gentile da Foligno.

Vaticanus latinus 2484, ff. 196v-210r according to Siraisi, Taddeo, pp. 420, 424. Incipit *Quia intentio nostra est edere tractatum*.

Vaticanus latinus²⁴³ 4452, XIV c., ff. 133ra-142vb, vellum, misc. Incipit *Ut videamus aliquater necessitatem eorum que in libro*.

Vaticanus latinus²⁴⁴ 4464, ff. 74ra-86va, 1310 A.D.

This commento has not been printed.

5. **Ugo Benzi**²⁴⁵ (Hugh of Siena), 1376-1439. Although he was of great renown, and his *Questio de malitia complexionis diverse*,²⁴⁶ is the largest of those written by him, there is just one ms. containing the text.

Incipit (Lockwood, *ibid.* 236): *Queritur utrum mala complexio diversa sit in qualibet parte eius cuius alteratur complexio. Ad partem affirmativam ar-*

238 T-K 1625.

239 Francesco Puccinotti, *Storia della medicina*, Leghorn 1850-1870, vol. II, pp. ii, cvii-cxii.

240 See G^a Ballester, *Commentum*, p. 141, n. 377. Wrongly attributed to Arnau. Cf. W. Schum, *Beschreibendes Verzeichnis...*, p. 938.

241 Muccioli, *Catalogus*, I p. 90. Zazzeri, *Sui codici*, pp. 215-220. Manfron, pp. 207-209. G. Baader, *Die Bibliothek...*, description in pp. 73-75 (wrong reference 159 a^v-170a^v; in 165vb-170va is written the Commentary to Galen's *De differentiis febrium* by Dino).

242 Gallardo, p. 61. Guy Beaujouan, pp. 180, 184. Iter IV: 570b. Durling, *A Guide to ..* IV, p. 357.

243 T-K col. 1625. Iter 2, 327. Siraisi, Taddeo, pp. 424 (133r-142v), 420. Incipit *Ut videamus aliquater necessitatem eorum que in libro*.

244 T-K col. 1625. Iter 2, 327, and 6, 335. Cf. *Journal of the History of Medicine and allied sciences* 8, 1953, p. 268. Siraisi, Taddeo, pp. 419, 425.

245 Cf. Nutton, *Medieval Western Europe*, p. 157, and D. P. Lockwood, *Ugo Benzi*, Chicago 1951.

246 T-K 846.

guitur primo sic.²⁴⁷ Mala complexio diversa est qualitas; quelibet qualitas habet subiectum adequatum; ergo male complexionis diverse est aliquod subiectum adequatum.

Explicit: auctoritates autem Galieni et Avicenne nihil volunt preter conclusionem hanc ultimam. Ideo ista de hac questione sufficient. (Jan. 20, 1422).

It is preserved in the Vaticanus latinus 2473, paper, 257 folios, written at Perugia by Oliverus Steenhusen of Flandria in 1441-1442. The question was written by Ugo in January 1421 (=1422), according to the subscription. "In the manuscript the subscription is followed by a long note attesting the oral discussion of the same quaestio by Ugo himself at Florence a little over a month after it was 'published' ", points out Lockwood.²⁴⁸

It was printed "as an appendix to the commentary of Jacobus Forliviensis on Avicenna, I, 1-2 ... and was thus issued six or seven times from 1488 to 1547".²⁴⁹ It was printed in Pavia in 1500, and twice in Venice before 1495.

I have checked the Pavian edition of 1512.²⁵⁰

f. 29vb: Incipit: subtilis questio Ugonis Senensis de malitia complexionis diverse.

f. 33rb: Explicit. ideo ista de hac questione sufficient.

Subscription: Scripta Florentie et completa per me Ugonem Senensem Anno domini ab incarnatione 1421, die 2 Ianuarii. Amen.

Papiae 1512, die 10. octobris. impressum per Iacob de Burgo franco, sumptibus Aloysii de Castello Comensis ac Bartholomei de Morandis Bergomensis.

A 8. THE GRAECO-LATIN TRANSLATIONS. PIETRO D'ABANO.

1. The author.

The first translation from Greek into Latin, beginning: Inequalis dis-temperantia fit aliquando secundum animalis corpus, is preserved, as far as I know, in three manuscripts. Only the explicit of Malatestianus S V 4 ascribes it to an author, Peter of Abano (ca. 1250-1315). His translation of this treatise is neither mentioned in his Conciliator, nor in a list of Galen's works translated by Peter, written in the ms. Oxford, Bodleian Library, Canonicus Misc. 46, f.

²⁴⁷ primo sic Vat.: multipliciter ed.

²⁴⁸ Ugo, pp. 228-229.

²⁴⁹ Lockwood, Ugo, pp. 229, 383.

²⁵⁰ I do not find references to this edition in Lockwood's rather complete study of the Printed editions of Ugo, pp. 382-398. Issue of Complutense University. I have checked as well the 1547 Juntine edition (Venice): Avicenna, Canon, I, cum comm. J. Forliviensis. Venecia apud Iuntas 1547.

30 verso, dated in the XV c.²⁵¹ However Peter of A. mentions Galen's treatise by using the same words as in the above-mentioned translation (*De distemperantia inequali*).²⁵² I have checked Burgundio's rendering of *δυσκρασία* in his *De complexionibus* (=De temperamentis):²⁵³ both *dyskrasia* and *distemperantia* are used. Niccolò da Reggio just transcribes the Greek word (written *dyskrasia* in the mss.) In the translation ascribed to Peter of Abano, *distemperantia* is the only word for *δυσκρασία*.

D'Alverny has gathered the manuscripts' (or editions') evidence and the references to his translations by Peter himself, concluding that he completed some of the translations made by Burgundio Pisanus,²⁵⁴ as Niccolò da Reggio corrected afterwards some of Peter's translations. I shall come back to this subject when reviewing Niccolò's translation.

As we do not have a clear picture of Peter's activity, the date of the translation cannot be fixed. He was born ca. 1250,²⁵⁵ and died in 1315. He studied in Paris,²⁵⁶ went to Constantinople²⁵⁷ and was the first Professor of Medicine at Padua (1306-1314). His persecution by the Inquisition may have something to do with the scarce diffusion of some of his translations. Nicholas of Reggio, younger than Peter, received the first payment for his translations of medical works in 1308, and his activity continues up to 1348, but his translation of this treatise was written before ca. 1320. An earlier date for the translation of Peter of A. is probable (before 1315 in any case), but I am not certain.

2. The manuscripts.

J Cracoviensis (Bibliotheca jagellonica) 800, a parchment ms. of Italian origin, written in 1279, 395 by 260 in size, containing 279 plus II folios. The beginning of the translation has been inserted after a copy of the Arabo-Latin one, on f. 117vb,²⁵⁸ but on f. 118ra another treatise begins (Galen's *De interio-*

251 Cf. L. Thorndike, "Translations of the Works of Galen from the Greek by Peter of Abano", *ISIS* xxxiii, 1942, 649-653.

252 In his *Conciliator Diff.* 30 and 52; cf. M. Th. D'Alverny, p. 50 in "Pietro d'Abano traducteur de Galien", *MedRin* 11, 1985, 19-64.

253 R. Durling, Burgundio of Pisa's translation of Galen's ΠΕΡΙ ΚΡΑΣΕΩΝ "De complexionibus", Berlin-New York 1976.

254 See D'Alverny, Pietro..., 31-32. Such is the case for *De sectis*, tr. by Burgundio and completed by Peter (in Cesena, S V 4), and for *Therapeutica methodus* (books 7-14 of *De methodo medendi*).

255 Vide Gustav Gröber, Uebersicht über die lateinische Literatur von der Mitte des VI. Jahrhunderts bis zur Mitte des XIV. Jahrhunderts, Neue Ausgabe des II. Bandes des Grundrisses der romanischen Philologie, Munich 1963, pp. 256, 259.

256 Cf. Biographisches Lexikon der hervorragenden Aertzte aller Zeiten und Völker, Erster Band, Second ed., Berlin-Vienna 1929, s.v. Abano.

257 Cf. P. Lain, Historia de la medicina, Barcelona 1978, p. 154.

258 M. Kowalczyk et alii, Catalogus codicum manuscriptorum medii aevi latinorum qui in bibliotheca Jagellonica Cracoviae asservantur, vol. VI, Cracoviae 1996, 162-169, in p. 163.

ribus in Burgundio's translation).²⁵⁹ Kowalczyk's catalogue points out: "Post f. 117 unum folium cum textu desideratur." The codex being written by several hands, I guess that this column was copied after the rest of the manuscript had been written, because it has not been rubricated: "desideratur rubricatio in columna dextra f. 117v."²⁶⁰ Thus, the year 1279 is a terminus post quem for the copy on 117vb. The writing in this column is rather similar to the hand that wrote the preceding treatise. The catalogue ascribes the translation to Nicholas of Reggio. The text presents several wrong geminations (tallis, callefactis, consimilles), and was probably written by an Italian scribe. The text ends in p. 148,2 of the Greek text: *Differencie autem paciencium corporum consecuntur naturas. aliter quidem enim simplex caro. aliter vero universus musculus in distemperanciam [devenit inequalem].*

This ms. is not included in the specialised bibliography of medical mss. (Diels, Thorndike-Kibre, Durling, Kristeller, In Principio, G. Fichtner), nor in the articles concerning Peter of Abano by Thorndike,²⁶¹ and M. Th. D'Alverny.²⁶² I have found it as I checked the copy of *De malicia*, sent from Poland.

M Cesena, Malatestianus S V 4, ff. 135va-136vb. A parchment codex dated to the middle or the second half of the xiv c., 405 by 260 in size, composed by 264 folios, with two columns to the page.²⁶³ "Scrittura gothica" (Manfron). The writing is not easy to read. The translation is attributed to Peter of Abano:²⁶⁴ *Explicit liber Galieni de inequali distemperantia translatus de greco in latinum per Petrum paduanum. deo gratias. amen.* The rendering of *De nigra cholera*²⁶⁵ is attributed as well to Peter of Abano in this ms. The codex contains fifty two treatises, most of them by Galen, including the Arabo-Latin translation *De malitia complexionis*. According to D'Alverny, this codex is the most important testimony of Peter's translations from Galen.²⁶⁶ It is a palimpsest for the most

259 This ms. is not mentioned by R. Durling in his edition (Stuttgart 1992).

260 M. Kowalczyk, p. 167.

261 Cf. note 1.

262 See note 2.

263 See G. M. Muccioli, *Catalogus Codicum Manuscriptorum existentium ad sinistram ingredientium partem Malatestianae Caesenatis Bibliothecae*, II, Cesena 1784, p. 36. R. Zazzeri, *Codici e libri a stampa della Biblioteca Malatestiana di Cesena. Ricerche e osservazioni*, Cesena 1887, pp. 296-300. A. Manfron, *La biblioteca di un medico del Quattrocento. I codici di Giovanni di Marco da Rimini nella Biblioteca Malatestiana*, Torino, 1998, pp. 215-219. D'Alverny, "Pietro d'Abano..." pp. 54-55. It belonged to Niccolò de Leonardis, Professor of medicine in Padua at the beginning of the xv century (he died in 1452); consequently D'Alverny suggested that the ms. could be executed in Padua (Pietro d'Abano..., p. 37). Afterwards it belonged to Giovanni Marco da Rimini (died 1474), who donated his library to Cesena. Cf. G. Baader, *Die Bibliothek...*, pp. 76-81. Cf. V. Nutton, *De praecognitione* (CMG V 8,1), pp. 28-29 and notes, and *De propriis placitis* (CMG V 3,2), pp. 23, 33.

264 Thorndike, "Translations...", p. 653.

265 See Thorndike, "Translations...", p. 649.

266 D'Alverny, "Pietro d'Abano...", pp. 31-32.

part,²⁶⁷ including the folios of this treatise, and its hands are Italian.²⁶⁸ The writing is gothic (*littera textualis*). The previous text is *De pronosticis* (by Nicholas) and is followed by *De tabe vel de marasmo*.

Explicit. Hec inde sufficere videntur precognoscere debentibus de farmacia consequentia negotium et post hoc methodum curativam.

C Cesena, Malatestianus S XXVI 4, ff. 80ra-83vb, a parchment codex, 312 mm. by 227 mm. in size, composed of 239 folios.²⁶⁹ V. Nutton²⁷⁰ considers it written ca. 1465.²⁷¹ For the folios 1-133, Manfron describes a *littera antiqua* from the middle of the XV c.,²⁷² while the following folios are written in a "*gotica semi-corsiva*", from the XIV c. According to Marinone,²⁷³ Nutton,²⁷⁴ De Lacy,²⁷⁵ and Fortuna,²⁷⁶ the treatises studied by them in this ms. were copied from the preceding, S V 4, as G. Baader²⁷⁷ pointed out for most of the ms. In fact, many of Galen's treatises have been written in the same order on both mss. Our treatise follows *Pronosticorum Liber*, and *De tabe et marasmo* is written afterwards, as in the other one. The writing is easy to read. In the explicit of our treatise the translator is not mentioned. Only at the beginning of Galen's *De nigra cholera*, Petrus Paduensis is said to have been the translator (f. 101ra).

Incipit. Inequalis distemperantia fit aliquando. Explicit: et post hoc methodum curativam.

267 See Zazzeri, *Codici e libri...*, p. 300; Manfron, *La biblioteca...*, p. 215.

268 Italian origin for such spellings as *paxionis* (ss), *inextiuali* (s), *uexicam* (s). Cf. V. Nutton, CMG V 8,1, p. 29, and (CMG V 3,2), pp. 23, 33, with bibliography: "Corrections and marginalia from at least three hands can be distinguished: the original scribe, and two later owners, Nicolaus de Leonardis and Giovanni Marco da Rimini." (CMG V 3,2, p. 23).

269 Cf. Diels, 84 [12]; G. M. Muccioli, *Catalogus...* II, p. 173. Zazzeri, 480-482. Manfron, 238-240. T-K col. 438. D'Alverny, 50. Muccioli, *Catalogus...* II, p. 36 remarks: "Petrus Paduanus is est, qui ab Apone, sive Abano vico agri Patavini Aponensis est dictus, de quo vide quae diximus Tom. I, Plut XXV pg. 89.

270 CMG V 3,2, p. 34. Cf. CMG V 8,1, pp. 29-30, with bibliography: pace A. Minor and J. Schmutte.

271 G. Baader (*Die Bibliothek...*, 1977, p. 47) pointed out that S XXVI 4 have been copied for the most part from S V 4, after 1445, when this last was in the Library of Giovanni Marco da Rimini.

272 Manfron, p. 38. Cf. V. Nutton, CMG V 3,2, p. 34; CMG V 8,1, pp. 29-30, and A forgotten manuscript of Galenus latinus, *Studia codicologica*, Berlin 1977, pp. 331-340. Cf. G. Baader; *Die Bibliothek...*, p. 47, and D'Alverny, *Pietro...*, p. 36 y n. 49. Zazzeri (p. 482) dated the copy in the XIII c., with additions from the XIV century.

273 N. Marinone, *Galeno, La dieta dimagrante*, Torino 1973, p. 17.

274 See CMG V 8,1, pp. 31-32, and CMG V 3,2, p. 35.

275 De Lacy CMG V 3,1, p. 17.

276 S. Fortuna, CMG V 1,3, p. 33.

277 *Die Bibliothek...*, p. 47.

3. Relationships between the mss.

The mss. present many common omissions, e.g.:

P. 142,12 ἀνώμαλοι *om. Pet.*

The three of them have a common archetype.

Mss. M and C present common omissions. Being *mutilus* ms. J, we cannot know whether they were as well in their exemplar of copy, e.g.:

P. 162,4-5 τῶν δ' ἄλλων ἀπάντων πυρετῶν οὐδεὶς ἀναίσθητος *om. Pet.^{MC}*

M and C share common errors. M has no errors of its own. C does have errors of its own. C is derived from M.

Errors in C:

Omission:

P. 142,4 καλουμένοις] vocatis JM: *om. C*

Misreading of abbreviations in M:

P. 142,10 ἦ] seu JM: vel C

P. 144,5 τοιαῦται] huiusmodi JM (h^{di} M): hee C

P. 144,7 ἄντικρυς] quasi JM (qⁱ M): quidem C

P. 146,3 ἐγχωρεῖ] contingit JM (9^t M): convenit C

P. 146,4 γὰρ] namque JM (nāz M): naturam *scripsit C, sed expunxit turam et add. q³ s. l.*

Metathesis:

P. 142,3 ὑδέροις] ydropise M: ydropesi C

Changes in Word Order:

P. 144,11-12 καὶ γαστέρα καὶ θώρακα] et ventrem et pectus JM: et pectus et ventrem C

Lectio facilior:

P. 146,2 τένοντες] corde JM (chordae): cor (*expunxit –de*) C

Sometimes C introduces orthographical corrections:

P. 142,11 ἀργησάντων] ociosis C: occiosis JM

P. 146,13 σήραγγας] scissuras C: scisuras JM

MC in error against J:

Omission:

P. 142,3 ἐν] in J: *om. MC*

P. 142,14 γὰρ] enim J: *om. MC*

P. 144,2 ἦ] vel J: *om. MC*

P. 144,15 καὶ μὲν δὴ καὶ] et utique et J: et bis *om. MC*

P. 146,2 καὶ *ter*] et J: *om. MC*

P. 146,14 αὖται] hec J: *om. MC*

Varia:

P. 144,5 διαφέρουσι τῶν ὁμαλῶν] differunt ab equalibus J: ab equalibus differunt MC

P. 144,6 τὰ μόρια τοῦ δυσκράτως διακειμένου σώματος] preiacentis J (σώματος): preiacentes (μόρια) MC

P. 146,3 εἰς ἕτερον εἶδος] in aliam speciem J: in alias species MC

J in error against M/C:

P. 142,3 ὑδέροις] ydropise M : ydropisi J [ydropise facta in carne]

wrong gemination in J:

P. 142,7 τούτου δ' ἐστὶ τοῦ γένους] talis MC: tallis J

P. 142,13 θερμαινόμενις] calefactis MC: calle- J

P. 144,12 θερμαινόμενων]: calefactis MC: calle- J

P. 144,13 θερμαινόμενων]: calefactis MC: calle- J

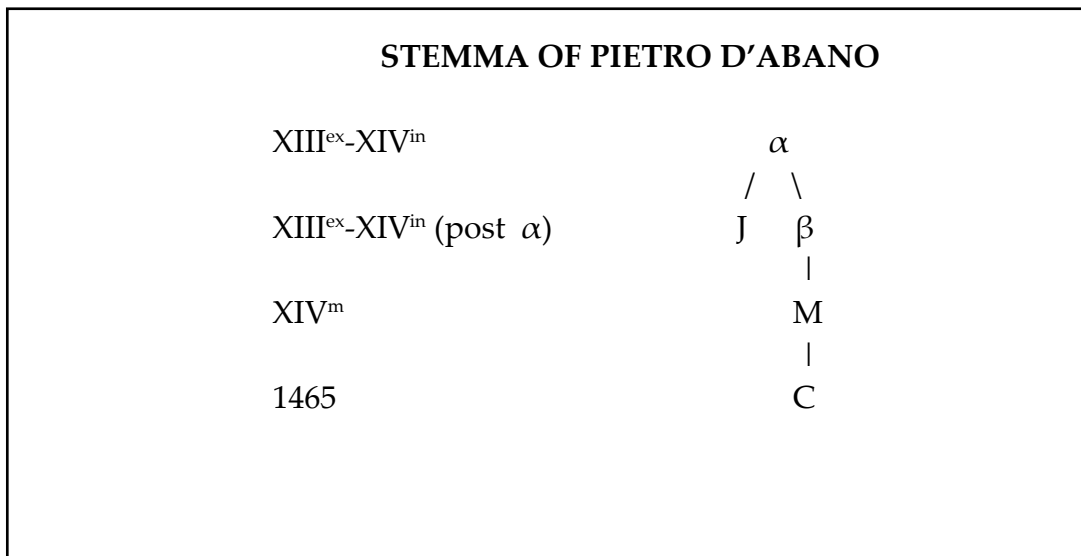
P. 146,1 χόνδροι] cartilagines MC: -illa- J

P. 146,3 ὁμοιομερῇ] consimiles MC: -ille- J

P. 146,6 ὁμοιομερῶν] consimilium MC: -illi- J

P. 146,9 ὁμοιομερὲς] consimilem MC: -ille- J

J presents a better text than M, and both of them independently come from a lost copy α:



4. The text of the translation.

D'Alverny²⁷⁸ remarks: "Il [Pet.] a essayé de suivre l'usage de la *translatio de verbo ad verbum*, en conservant l'ordre des mots de la phrase grecque." ... "Voulant mettre les traités grecs à la portée des scolaires il s'efforce d'écrire en latin; le scrupule du littéralisme nuisant malgré tout l'intelligibilité du texte."

²⁷⁸ Cf. "Pietro...", p. 43.

As for the rendering of this treatise, the translation is good and clear. The effort on finding Latin words seems positive to me, even considering that, by then, Greek words were introduced into the Latin medical lexicography. A good example is *quod post palmam*:

P. 144,16 καρπός τε καὶ μετακάρπιον καὶ δάκτυλοι: palma et quod post palmam et digiti (Nicholas of Reggio just transcribes the Greek words).

The text is divided into 12 chapters.²⁷⁹ In ms. J, space has been left for writing the initial rubricated letter, but the letter is missing. Ms. J contains the rubricated initial letter of every chapter, but there is no room for the titles that were inserted afterwards. Ms. C presents chapter numbers and titles,²⁸⁰ but ch. 2 is not indicated, because it was written in the left margin in ms. M, and the scribe of ms. C thought of it as a gloss. It is further proof of the dependence M → C.

This translation has not been printed.²⁸¹

5. The Greek exemplar

The Greek manuscript used by Pietro was the ancestor of the Mutinensis 109 (U, XV c.) His translation follows the principle *de verbo ad verbum* to the point that from time to time we can restore the text of the Greek exemplar, thus correcting the "new" errors of the Mutinensis. This also means that we shall make use of Pietro's translation just in those places where the Greek ms. does not agree with the Latin text, mainly because of omission.

Some readings peculiar to U:

P. 142,3 λεγομένοις PT: καλουμένοις LMz: γιγνομένοις U, cf. facta Pet.

P. 148,7 διὰ τῶν χιτώνων αὐτῶν PTz: διὰ τῶν κινούντων αὐτὸ χιτώνων LM: διὰ τῶν πόρων U, cf. per poros ipsos Pet. (he reads διὰ τῶν πόρων αὐτῶν)

P. 150,15 οὖν U, cf. igitur Pet.: om. cett., Nic.

P. 150,15 δύο U, cf. duobus Pet.: om. cett.

P. 150,18 καὶ Lz: καὶ εἰς U, cf. et in Pet.: ἢ εἰς PM

²⁷⁹ For a transcription of the text preserved in the three copies, see my Pietro d'Abano y su traducción del tratado de Galeno De inaequali intemperie, in: A. Bernabé, I. Rodríguez Alfageme, edd., φίλου σκιά. Homenaje a Rosa Aguilar, Anejo de CFC, serie gr. e ide., Madrid 2007, pp. 223-234.

²⁸⁰ Capitulum primum. de quibusdam divisionibus inequalis distemperantie et de distemperantia equalis complexionis et inequalis. [P. 1, 15] Capitulum secundum. de membrorum notitia in quibus convenient distemperantia predicandum. [P. 2, 8] Capitulum tertium. de modo generationis inequalis distemperantie.

²⁸¹ The catalogue of Kowalsky mentions the second Latin edition of Galeni opera, Venetiis 1502. I have checked the two volumes (Göttingen) and the inserted translation is De malicia complexionis.

P. 154,3 θᾶπτον] θάνατον U, *cf.* mortaliter *Pet.*

P. 154,12 δυσκόλως AP: χολή, μόγισ U, *cf.* cholera, vix *Pet.*: μόλις z, *et* *Ui.m.*

Omission:

P. 142,11 τοιοῦτον *om.* U, *Pet.*

P. 144,9 πρόκειται *om.* U, *Pet.*

P. 164,2-3 ἀμετρώτερον τοῦ αἵματος ἢ δι' ἑκκαυσίν τινα ἔξωθεν ἐκθερμαν -
θέντος *om.* U, *Pet.*

Word order change:

P. 146,11 ἀλλήλοις post ἐπιπίπτοντα *trasp.* U, *Pet.*

Sometimes it is possible to reconstruct the ancestor of ms. U in the XIII c. by means of *Pet.*:

P. 142,1-2 καὶ καθ' ὅλον τοῦ ζώου τὸ σῶμα] καὶ καθ' ὅλον *om.* U, *sed Pet. servat secundum* (καθ') animalis corpus

P. 144,9 σαφὴς ὁ λόγος γένηται] ἡ σαφὸν (*sic*) ὁ (*sic*) γένος U, *sed Pet. habet manifestus sit sermo*

P. 146,5 ἐλέγετο AP U, *cf.* dicebatur Nic.: λέλεκται z, *cf.* dictum est *Pet.* The reading in old U (=U^{Pet.}) was λέλεκται, as in z.

P. 146,12 φωράσαις] φωράσης U *et in m., sed senties Pet.* (φωράσεις)

P. 148,7 διὰ τῶν κινούντων αὐτὸ χιτῶνων LM: διὰ τῶν χιτῶνων αὐτῶν PTz: διὰ τῶν πόρων U, *sed per poros ipsos Pet.* (he reads διὰ τῶν πόρων αὐτῶν)

P. 148,10 αὐται PU, *sed ipse Pet.* (αὐταί): αὐταί *cett.*

P. 150,8 πέψει] πέμψει U, *sed digestionem Pet.*

P. 152,10 ἔνθα δὲ AP: ἐν δ' αὖ U, *sed hic vero Pet.*

P. 154,11 ῥαδίως] διως U, *sed Pet. facile*

A 9. THE GRAECO-LATIN TRANSLATIONS. NICCOLÒ DA REGGIO.

1. Author and date

In the fourteenth century, some years later than Peter of Abano, Nicholas²⁸² of Reggio, physician to the Angevin court, undertook the task of translating from the Greek a considerable amount of Galen's treatises.²⁸³ Thorndike places

282 For Nicholas of Reggio, *cf.* G. Sarton, Introduction, III, pars I, pp. 446-448, and Inventory, vol. V, pp. 394-395. R. Weiss, The translators from the Greek of the Angevin Court of Naples, Rinascimento 1, 1950, 195-226, = transl. Die Übersetzer griechischer Texte am Angevinischen Hof in Neapel, in: G. Baader, G. Keil, eds., Medizin ..., 95-124. G. Cavallo, pp. 233-235 and notes in: La trasmissione scritta della cultura greca antica in Calabria e Sicilia. A. M. Ieracci Bio, La trasmissione della letteratura medica greca nell' Italia meridionale fra X e XV secolo, in: Contributi alla cultura greca nell' Italia meridionale..., *passim*. N. Wilson, pp. 115-116 of Griechische Philologie in Byzanz, in Nesselrath, ed. Einleitung, pp. 104-116.

283 For his importance as Galen's translator, see R. Weiss, The translators..., and Medieval and Humanist Greek: Collected Essays, Padova 1977, pp. 124-135.

his translations between 1308 and 1345:²⁸⁴ In 1308²⁸⁵ Nicholas received payments for his translations of medical works from Charles II of Anjou (from Robert of Anjou afterwards).

Although the actual date of the translation of the *περὶ τοῦ ἀνωμάλου δυσκρασίας* cannot be fixed, we have some interesting information. The explicit of *De inaequali dyskrasia* in the Vaticanus palatinus latinus 1211, f. 55ra, reads as follows: Explicit liber de inequali *dyskrasia* translatus a magistro Nicolao de Regio de Calabria. capitulatus a magistro Francisco de Pedemonte. Since the physician Francis of Pedemonte died ca. 1320,²⁸⁶ that year is the terminus ante quem for the translation of *De inaequali dyskrasia* by Nicholas of Reggio. Thus we have to place it in the first ten years of his activity, considerably near to Peter of Abano's translations.

Incipit: Inequalis *dyskrasia* fit quidem et secundum totum animalis corpus quemadmodum anasarca ...

Explicit ... his qui secuturi sunt eam que de farmacis operam et post ipsam eam que therapeutice methodo.

2. The manuscripts.

A Erfurt: Amploniensis²⁸⁷ F 278, early XIV c., ff. 171 rb-172vb, 213 folios. An in-folio parchment codex containing a collection of Galenic treatises. The translation *De inaequali dyskrasia* is preceded by books vii-xiv of *De ingenio sanitatis*, i.e. the books of *De methodo medendi* translated by Burgundio, and followed by Hippocrates' *Aphorismi* and their Commentary by Galen.²⁸⁸ Incipit liber Galieni de inequali *dyskrasia*. A recentior hand adds: expl. lib. de inequali *dyskrasia* translatus de greco a Nicoalo (sic) de Gregio (sic) de Calabria. There are some glosses s.l. et i.m. by this recentior hand.

²⁸⁴ Cf. L. Thorndike, *Translations...* by Niccolo (1946) and R. Weiss, *The translators...*

²⁸⁵ See F. Lo Parco, pp. 257-258 of: Niccolò da Reggio Antesignano del Risorgimento dell' antichità ellenica nel secolo xiv da Codice delle Biblioteche italiane e straniere e da documenti e stampe rare, in: *Atti R. Accademia Arch. Lettere e Belle Arti di Napoli*, N.S. 2, 1910, pp. 243-317.

²⁸⁶ Cf. *Liste lateinischer Autoren und Anonymer Werke des 13. Jahrhunderts*, ed. P. Ch. Jacobsen, M. Schieber, E. Haag, T. Müller, S. Walther, in Erlangen: www.phil.uni-erlangen.de/~p2mitlat/liste/Autoren.htm, 26 March 2003.

²⁸⁷ W. Schum, *Beschreibendes Verzeichniss der Amplonianischen...* pp. 187-188. Diels 84 [12]. R. Durling, *Galenus Latinus II, Burgundio of Pisa's... De interioribus*, p. 15. *IP.

²⁸⁸ See Durling, *ibid.*

W London, The Wellcome Library, ms.²⁸⁹ 286, ca. 1348, ff. 132rb-133rb. A partially illuminated codex on vellum of Italian origin,²⁹⁰ 390x260 mm. in size, two columns to the page. Because of the existence in the marginalia of several references to Giovanni da Penna, who was a physician to the Angevin court and died in 1348, Nutton suggests a date ca. 1348²⁹¹. Written by several scribes in clear gothic book hands, in double column of 52-54 lines to a column (Moorat). The treatise is preceded by De temperamentis libri III, translated by Burgundio (De complexionibus), and followed by De accidenti et morbo. There is no mention of the translator of our treatise. Explicit lib. Galieni de inequali dyskrasia.

M Madrid, Biblioteca Nacional: Matritensis²⁹² 1978, ca. 1375, 91vb-93rb. A vellum ms., 385x265 mm. in size, 2 cols. It is a collection of (mostly) Galenic books, divided into two parts, the first (14 treatises) being ascribed to Burgundio and the latter (13) to Nicolao de Reggio de Calabria. The second part begins with a dedicatory of Galen's De flebotomia and De utilitate respirationis translated by Nicholas, to prince Robert, "Ierusalem et Sicilie regi primogenito" (f. 97ra); the terminus ante quem for the dedication is 1309, when Robert ascended the throne.²⁹³ De inequali dyskrasia (the author of the translation is not indicated in the explicit) is placed in the part attributed to Burgundio (beginning with De ingenio sanitatis seu therapeutica), being the seventh treatise, after De differentiis

289 Not in Diels. Cf. Sarton, Introduction..., vol. III, Part I, pp. 446-448. Durling, Corrigenda... II, p. 376, and A Guide to... IV, 360. Iter 4, p. 219a. S. A. J. Moorat, Catalogue of Western Manuscripts... pp. 180-183, treatise nr. 11. The ms. includes: Galen, de differentiis febrium, tr. Burgundio; de methodo medendi VII-XIV; de crisi; de diebus decretoriis, tr. Nic. de Reggio. Hippocrates, de natura pueri; fragm. Galen, de locis affectis, tr. Nic. de Reggio; de exercitio sphere (de parvae pilae exercitio). Hippocrates, iusiurandum (tr. Nic. de Reggio). Galen, de semine; de complexionibus; de inaequali dyskrasia; de accidenti et morbo; de naturalibus facultatibus (fragm.); de substantia naturalium facultatum (fragm.); de iuvamento anhelitus (de utilitate respirationis). Durling in pp. 92-93 of Linacre and Medical Humanism..., prints the beginning of the treatise in this ms. According to him (Burgundio of Pisa's... De complexionibus, pp. xvi-xvii), that treatise in the Wellcome 286 is written by two Italian scribes: "Both hands are clearly Italian, and typically Italian spellings abound, for example: preheminentis, peximam, paxionibus, scimpliciter, iddem, subtilix. This is an important university ms. containing a corpus of predominantly Graeco-Latin versions... Burgundio's and Niccolò's" (cf. also Durling, De interioribus, p. 15.) The Greek exemplar for De complexionibus is reported to be the parent of the Laurentianus graecus 74.5 (Durling, De complexionibus, p. xx), supposed to be written in the xiv c. until N. Wilson (1983) revised its palaeography, ascribing it to the XII c. The Laurentianus could be the exemplar itself of Burgundio, who wrote some notes on its folios.

290 *Vide infra*, Durling and Nutton.

291 See Nutton, De propriis placitis, CMG V,3,2, p. 35.

292 J. L. de Toro, Inventario general de manuscritos de la Biblioteca Nacional, vol. V (1599-2099), Madrid 1959, pp. 394-397, and V. Nutton, CMG V 3,2, p. 34 ("136 leaves, written in Spain about 1375"). Diels 84 [12]. Iter IV 523b. Durling, A Guide to .. IV, 360. *IP. Incipit: Inequalis dyskrasia fit quia et secundum totum animale corpus.

293 Cf. L. Thorndike, Translations... Niccolò, p. 214.

febrium. It is written in a clear gothic book hand and includes some marginalia, and corrections *supra lineam*. The rubricated initial letter is missing. In the second half of the treatise, we find three times room enough for a line and a big initial, that has been left empty except for a small letter, where the title and number of the chapter should have been. Explicit lib. de inequali *dyskrasia*.

Z Metz: Bibliothèque municipale, Mediomatricensis²⁹⁴ 178, xiv c., ff. 15va-16va. An in-folio paper codex, two columns to the page. Cursive writing. Glosses in margine et s.l. It has no incipit. The explicit mentions Niccolò. Explicit liber G. de inequali *dyskrasia* translatus a nicholao de reggio de greco in latinum. The treatise follows De virtutibus cibariorum. The next is tractatus de virtutibus et usu plantarum (incipit: circa instans negocium de simplicis medicinis).

O Munich: Bayerische Staatsbibliothek München, Monacensis²⁹⁵ latinus 490, a paper ms. in-quarto, dated 1488-1503, ff. 83v-92v. The scribe was H. Schedel. The ms. consists of 223 folios. In ff. 1-155 there are some fifteen of Galen's (or pseudo-Galen's) treatises. The explicit of De inaequali *dyskrasia* ascribes the translation to Niccolò. The text is divided into nine chapters with headings, and presents many marginalia. The treatise follows De exercitio parvae sphaerae, and precedes the Liber farmacorum Galieni. Explicit lib. de inequali *dyskrasia* translatus de greco a Nicolao de Regio de Calabria.

P Paris: Bibliothèque de l'Académie de Médecine²⁹⁶, ms. 51, second half or last quarter of the XV c., ff. 172v-178v. A paper ms., 260x205 mm., consisting of 327 folios, which belongs to a group of five codices (51-56) containing works by Galen and Hippocrates. It was written, according to Nutton, in Northern France or Flanders. The author is not mentioned. The treatise is divided into three doctrinae, with two, four and three chapters, i.e. nine chapters, as in Vat. 1211. It has been corrected and variants have been added. Explicit liber Galieni de *dyskrasia* inequali.

²⁹⁴ Catalogue général des manuscrits des Bibliothèques Publiques des Départements, tome V: Metz-Verdun-Charleville, Paris 1879, p. 80. Diels 84 [12]. T-K 742. Fichtner, 1985, p. 51.

²⁹⁵ C. Halm, G. Laubmann, Catalogus codicum latinorum bibliothecae regiae Monacensis, t. I Pars I, München 1868, p. 102. Diels 84 [12]. T-K 742. Thorndike, Translations... Niccolò, pp. 219-220. Durling, Linacre..., p. 93. For the precise date of 1488, see Nutton, CMG V 3,2, p. 34, and note 3.

²⁹⁶ Cf. A. Boinet, Catalogue général des manuscrits des Bibliothèques publiques de France, Bibliothèque de l'Académie de Médecine, t. I, Paris 1909, pp. 366-370. Cf. Nutton, CMG V 3,2, p. 25, and CMG V 8,1, pp. 30-31. For the date in the last quarter of the century, see M.Th. d'Alverny, p. 364 in: Review of Iohannis Alexandrini Commentaria in librum De sectis Galeni, ed. C. D. Pritchett, Leiden 1982, Scriptorium 38, 1984, pp. 361-366. (=La transmission des textes philosophiques et scientifiques au Moyen Age, ed. Ch. Burnett, Aldershot, 1994, p. XXI). Not in Diels. T-K 742. Durling, Corrigenda II, p. 376. V. Nutton, A forgotten ms. of Galenus Latinus, M. Treu, ed., Studia codicologica, Berlin 1977, pp. 332-340.

V Vatican City, Biblioteca Vaticana: Vaticanus palatinus latinus²⁹⁷ 1211, ff. 53ra-55ra, 2 cols. A paper codex of 182 + VI folios, 290 by 210 in size, containing a collection of medical treatises. It is divided into two parts: the first (ff. 5-88), being written in Italy in the last third of the fourteenth century, belonged to a ms. composed of more folios. The second was written ca. 1400. The treatise is placed in the first part, where three hands have written in *cursiva gothica* and *cursiva textualis*, and contains glosses and references by XIV and XV c. hands. There are Galen's treatises translated by Nicholas of Reggio, who is mentioned in their explicit and at the beginning of the series, f. 22ra: "Galienus, tractatus minores de Greco in Latinum translati a magistro Nicolao de Regio et a Stephano de Messina".

Twenty translations by Nicholas are included, with this manuscript being the most interesting among those which present a collection of his translations of Galen.²⁹⁸ *De inaequali dyskrasia* is copied in the ms. between *De euchimia et cachochimia* and *De tumoribus praeter naturam*. Explicit lib. Galieni de inequali dyskrasia translatus a magistro Nicolao de Regio de Calabria. For the division into chapters by Francis of Pedemonte, see above.

3. The printed text

The first and second edition of Galen's *opera omnia* in Latin contain the translation by Gerard of Cremona. The version by Nicholas of Reggio is printed in the third Galen edition,²⁹⁹ Pavia, 1515-1516: vol. I 1515, f. 39va-40va, in-folio, editor Rusticus Placentinus, printer J. de Burgofranco.³⁰⁰ It contains thirty-nine of Niccolò's translations of Galen, more than any single ms.

According to Durling³⁰¹ it is also printed in the second Juntine edition, 1528: Venice, Printer L. A. Giunta.

The ms. P is very close to the edition. See agreements, below.

4. The text of the translation

This version had a Greek text as model. Often the author just transcribes the Greek³⁰² word, as in *dyskrasia*, *passim*.

297 L. Schuba, *Die medizinischen...*, pp. 200-204. Not in Diels. T-K 742. Iter 6, 358. *IP. Thorndike, *Translations... Niccolo*, p. 226, n° 25. Durling, *Corrigenda I*, p. 466, and *Linacre...*, pp. 84 and 92 s. D'Alverny, *Pietro d'Abano...*, pp. 45, 48, 50-51, 55.

298 The other mss. being: Par. lat. 6865, Dresden, Landesbibl. Db. 92-93, and the 1515-1516 Pavia edition.

299 T-K 742. See Thorndike, *Translations... Niccolo*, p. 219. Durling, *Census*, p. 286.

300 I have checked the exemplar of the Wellcome Institute Library.

301 See Durling, *Census...*, p. 280.

302 D'Alverny points out: "Nic. a suivi fidèlement le modèle grec, et conservé des termes pour lesquels Pietro [d'Abano] avait cherché un équivalent latin." (Pietro d'Abano traducteur de Galien, p. 56).

P. 142, 6-7 οἰδισκόμενον ἢ φλεγμαῖνον ἢ γαγγραινούμενον ἢ <τῶ> ἐρυσιπέλατι κάμνον ἢ <τῶ> καρκίνῳ] ydemantem vel flegminantem vel cancrenantem vel erisipelade laborantem vel cancro.

P. 146,3 ὁμοιομερῇ omiomere (*vel h-*)

P. 146,13 σήραγγας sirangas

P. 150,7 διαφόρησις diaphoresis (evaporatio M)

P. 150,9 ἀπόστασις apostasis

P. 160,5 ἐπιείκειαν epikiam

Let us put side by side the description of the hand in the versions of Nic. and Peter d' Abano :

P. 1, 21 καρπός τε καὶ μετακάρπιον] carpus et metacarpium *Nic.*: palma et post palmam *Pet.*

In fact, the Monacensis (Nic.'s) presents *s.l.* in this passage the Latin version by Peter —or else just the common Latin words. In some cases, Nic. worked from a translation previously made by Pietro,³⁰³ as Pietro himself transformed some of Burgundio's versions.

Some translations of Greek words by Nic. in this treatise:

μέν quidem

δέ vero, autem

γάρ enim, nam (at sentence beginning)

ἢ vel, γε demum, διότι quoniam

καὶ μὲν δὴ καὶ et denique et quidem

καὶ δὴ καὶ et denique et

ὥστε quocirca, quapropter

ἐφεξῆς deinceps

τότε δὴ καὶ μάλιστα tunc utique et maxime

οὐκουν nequaquam igitur

καὶ γάρ et enim

μετά + Ac. post

causal ὅτι quoniam

ὥσπερ quemadmodum

οὕτως ita

οὐ μὴν non tamen.

303 L. Thorndike, *Translations... Peter of Abano*, 649-653 and *cf.* D'Alverny, *Pietro...* pp. 47-64; as for the versions of this treatise, she transcribes a fragment of the beginning and the end of both translations (pp. 54-56), on the grounds of Peter's Cesena SV4 (my B) and Nicholas' Paris Academy of Medicine 1005 (my P).

Nicholas translated *de verbo ad verbum*, keeping to the word order:³⁰⁴

P. 156,16-18 εἰ δ' ἐν χρόνῳ πλείονι τοῦτο πάσχοι, καὶ νικηθεῖν ποτὲ καὶ μεταβληθεῖν παντάπασιν, ὥς μηκέτι θερμαίνεσθαι μόνον, ἀλλ' ἤδη τεθερμάνθαι παρὰ φύσιν. Si vero in tempore ampliore hoc patiantur forsan utique³⁰⁵ vincentur quandoque et transmutabuntur omnifariam ut non adhuc calefiant solum³⁰⁶ sed iam calefacta sint preter naturam.

5. Division into Chapters.

PV ed., present the same division:

Liber Galeni de dyskrasia inequali. Cuius sunt iii doctrine.

Doctrina prima est de quibusdam cuestionibus³⁰⁷ necessariis ad suam doctrinam. Cuius sunt duo capitula.

P. 142,2. Capitulum primum. De quibusdam divisionibus discrasie inequalis et manifestatione sue intentionis³⁰⁸ circa ipsas.

Incipit: "Inequalis dyskrasia fit quidem et secundum totum animalis corpus quandoque³⁰⁹, quemadmodum "

P. 144,12. Capitulum secundum. De quibusdam diversitatibus membrorum et de³¹⁰ magis completa sua intentione³¹¹ et de³¹² necessitate predictae doctrine divisionis membrorum.

Incipit³¹³: Dividatur itaque³¹⁴ enim a nobis unaquaquam ex eis in³¹⁵ propinquas vocatas particulas ..

Doctrina secunda. de modo³¹⁶ generationis et de³¹⁷ natura discrasie inequalis distincte a parte subiecti exemplariter in flegmone musculi³¹⁸. Cuius sunt quatuor capitula.

304 For the style of the Latin versions from Greek, see Lorenzo Minio-Paluello, Iacobus Veneticus Grecus... The style of the translations by Nicholas of Reggio is examined by I. Wille, in *Ueberlieferung und Uebersetzung* (Tr. Gal. de temporibus morborum), in: *Helikon* 3, 1963, pp. 259-277, and K. Deichgräber, *Die griechische Empirikerschule...* pp. 10-11. Cf. as well Barigazzi, *CMG V* 1,1, pp. 26-27.

305 utique *om.* MP *ed.*

306 solum *om.* WP *ed.*

307 cuestionibus *om.* P.

308 intentionis sue P.

309 quandoque *om.* V.

310 de P.

311 intentione sua *ed.*

312 de *om.* V *ed.*

313 incipit V *paulo antea*: Quis igitur modus generationis est universis inequalibus discrasiis in hac scriptione preiacet pertransire. Ut autem... cognoscuntur.

314 denique P: *om.* *ed.*

315 ex eis in *om.* P.

316 modis V *ed.*

317 de V.

318 subiecti... musculi *om.* *ed.*

P. 148,2. Capitulum primum. De modo generationis discrasie particularis membri exemplariter in flegmone musculi.

Incipit: Confestim nimirum reumate calido descendente in musculum.

P. 152,12. Capitulum secundum. De modo generationis discrasie inequalis universalis scilicet febris.

Incipit: Igitur si quidem caliditas sanguinis³¹⁹ secundum flegminantem particulam mitis existit.

P. 156,2. Capitulum tertium. De natura discrasie inequalis.

Incipit: Et hee omnes discrasie corporis inequales fiunt.

P. 158,14. Capitulum quartum. De quibusdam incidentibus et de maiori specificatione termini discrasie inequalis.

Incipit: Si vero et hec quidem³²⁰ fuerit calidior earum, hec vero frigidior, sed non tantum tamen calidior ut contristet vicinantem, neque ita dolebunt ...

Doctrina tertia. De modo³²¹ generationis et de³²² natura discrasie inequalis distincte e parte³²³ corporis et essentie simplicis et composite e contrariis. Cuius sunt tria capitula.

P. 162,11. Capitulum primum. De modo generationis et de natura discrasie inequalis distincte a parte causarum.

Incipit: Redeo vero rursus ad inequalis discrasie differentias ...

P. 164,21. Capitulum secundum. De natura et de³²⁴ modis discrasie inequalis composite e duobus contrariis.

Incipit: Dolent autem et quicumque infrigidati fortiter a gelu vasto damnati sunt excalefacti cito seipsos.

P. 170,11. Capitulum tertium. De modo generationis et de³²⁵ natura discrasie inequalis simplicis.

Incipit: At relique vero febres omnes preter ethicas. Similiter autem et quicumque particule alicuius sunt egritudines cum tumore similiter flegmoni secundum dyskrasiam inequalem perficiuntur efficiuntur³²⁶.

Explicit: Hec sufficere mihi videntur precognita esse his qui assecuturi sunt eam que de pharmacis operam. Et post ipsam eam que therapeutice methodi.

The ms. of Metz has *in margine* some of the chapters' titles according to this series.

319 post sanguinis, qui *add.* PV.

320 quidem *om.* V.

321 modis PV.

322 de *om.* *ed.*

323 parte] precedente V *ed.*

324 de *om.* V.

325 de V.

326 perficiuntur P *ed.*

The Monacensis presents a similar division into nine chapters that agrees with PV ed. However there are no *doctrinae*, just chapters; the titles are similar to the former ones, but not exactly. See the contents of the last chapter (9th. ch.= 3d. *doctrina*, 3d. chapter in the other group):

in quo agit de modo generationis discrasie inequalis simplicis et de natura ipsius epilogan et imponens finem dictis.

It begins precisely in p. 170,11 of the Greek text, as the others.

The division into 9 chapters would appear in the Charterius edition, but the titles are not the same.

6. Text non-extant in our Greek mss.

P. 158,16 post *πλησιάζον* *add.* neque ita dolebunt *Nic., add.* οὐδὲ οὕτως ὀδυνησεται Fuchs. This commentator³²⁷ does not mention *Nic.*, but the 1515 edition of *Nic.*'s version was available in his time. I do not find it adequate for the text.

P. 158,16-17 καὶ <πάντα> τὰ κατὰ φύσιν ἔχοντα [τὰ] μόρια. I included *Nic.*'s *universe*. Its loss would be very easy in the -τα homoeoteleuton.

At times, the text lost in Greek is preserved both by *Hun.* and *Nic.*:

P. 144,9 σε *addidi*, *cf.* "to you", *Hun.*, *te Nic.* Lost in ἀναμνησαί <σε> by phonetic haplograpy -se se.

P. 158,15 after ἀλλὰ τοσούτω γε θερμότερον, *Hunayn* writes: "compared to that which is cold." *Nic.* reads: *hae vero frigidior*. *Charterius* —who obviously had within reach *Nic.*'s translation— added ἡ ψυχρότερον. Our *codd.* have lost those two words because of *saut du même au même*.

I have included some other additions of *Nic.* in my *Apparatus criticus*.

Text rightly omitted by *Nic.*:

P. 158,15-16 ὥς [μὴ] λυπεῖν τὸ πλησιάζον] μὴ *seclusi*, *cf.* *ut contristet vicinatem Nic.*

7. Relationships between the mss.

All the mss. derive from the same copy:

P. 150,7 πεφθέντος. ἀλλ' ἡ μὲν διαφόρησις] *vel digesto [secundum] diaphoresis quidem] add.* *secundum codd. ed.*

Agreements in error.

omission:

P. 142,1 Incipit liber Galieni de inequali dyskrasia AWOV: liber Gal. de dyskrasia inequali P ed.: *om.* MZ

P. 144,14 εἰ τύχοι] *si contingit: om.* WZOP ed.

P. 150,2 καὶ δυοῖν γε θάτερον] *et duorum demum alterum: demum om.* WMP ed.

³²⁷ See below, The Renaissance Commentaries.

- P. 152,2 ἐν τῷ μεταβεβλήσθαι τὴν <φύσιν> [κρᾶσιν], in eo quod transmutata est crasis: quod *om.* AWMV
- P. 152,5 (διαλλάττεται δὲ καὶ διαφθείρεται) τὴν φύσιν ἕκαστον] natura uniuscuiusque: natura singulare WV
- P. 152,14 τι] aliquo *om.* AZOPV *ed.*
- P. 154,1 μὲν] quidem *om.* WV
- P. 154,2 καὶ *bis*] et: *om.* WZOP *ed.*
- P. 154,6 ὥσπερ γε] quemadmodum demum: demum *om.* MP *ed.*
- P. 154,6 καὶ πῖ] et in: et *om.* ZO
- P. 156,11-12 ἀλλ' ἐν τοῖς τοιούτοις ἅπασιν πυρετοῖς, ἐκθερμαίνεται μὲν ἐνίοτε σύμπαν ἤδη τὸ αἷμα] sed in his omnibus febribus calefactus est quandoque universus sanguis. iam autem et *om.* AO
- P. 156,4 τᾶλλα] alia: *om.* AWOV
- P. 156,18 μόνον] solum *om.* WP *ed.*
- P. 158,6 οὕτω] ita *om.* AOV
- P. 158,8 καὶ δὴ καὶ] et denique et: et *bis om.* APV *ed.*
- P. 170,14 ἐξ ἐπιρροῆς] e superinfluentia AWVZ: ex influenza MOP *ed.*
- P. 172,6-7 γενήσεται μὲν εὐθὺς ἀνώδυνον] fiet quidem confestim indolorosum AMZOV: quidem *om.* WP *ed.*
- P. 172,7 ἐν χαλεπωτέρῳ δ' ἂν οὕτω γε διαθέσει] in difficiliore vero utique ita dispositione AWZOV: utique *om.* MP *ed.*
- P. 172,8 ἀρκεῖν μοι δοκεῖ] sufficere mihi videntur AWMPV *ed.*: videntur *om.* ZO

varia:

- P. 150,14 οὕτω] ita: fit AZO
- P. 152,8 ἤδη] iam: ita APV *ed.*
- P. 154,1 τὸ] is: hiis AMO
- P. 154,2 τὸ] is: hiis AMO
- P. 154,8] εὐαλλοιωτότατον] facillime: facile AMV
- P. 158,4 τοῖς ὑγροῖς humoribus] humidis AZO

The mss. are rather contaminated. The most obvious affinities are P *ed.*, AO, AV, ZO, WP, W *ed.*, in this order. Second to them is WV.

8. See Stemma on page 91.

9. The Greek model.

Agreements in error:

omission:

- P. 148,8 κενὰ Pz, cf. "hollows" Hun.: *om.* AU, *om.* Nic.
- P. 152,15 εἰ post ἢ LMP: *om.* TUz, *om.* Nic.

P. 168,5 οὔτοι U: *om.* APz, *om.* Nic.

P. 168,6 αἰσθάνονται Uz, *cf.* "perceive" Hun.: *om.* AP, *om.* Nic.

varia:

P. 142,2 ἐνίστε *post* γίγνεται μὲν PU (μὲν *om.* U): ἐνίστε *ante* καθάπερ Λ, *cf.* quandoque quemadmodum Nic.

P. 150,7 ὑγροῦ] ῥεύματος U, *cf.* reumate Nic.

P. 152,7 ἢ ΛU, *cf.* "or" Hun.: καὶ Pz, *cf.* et Nic.

P. 168,3 πυρέττουσιν P^{s.l.} Uz: διψῶσι AP^{i.l.}, *cf.* sitiunt Nic.

The original Greek ms. is not extant. The Greek ms. that solely agrees to Nic. is U. However, there are many places where U and Nic. do not agree:

P. 154,3 θᾶπτον, *cf.* citius Nic.] θάνατον U, *cf.* mortaliter Pet.

P. 154,15 διὰ τοῦτο γίνονται καὶ ὀδύναι *ante* πρώτως *add.* U, *cf.* propter hoc dolores fiunt Pet.: *non habet* Nic.

P. 154,16 χυμὸς *om.* U, Pet.: *habet* Nic.

Maybe Nic. included some of Peter of Abano's words, whose model was an ancestor of the Mutinensis, instead of checking U itself:

P. 150,7 ὑγροῦ] ῥεύματος U, reumate Pet., Nic.

The hypothesis of just one Greek copy would consist of a copy belonging to the Λ-family, contaminated by the Δ-group (rather contaminated!) This is the ordinate series of the mss. agreeing in error with Nic.: T L M P U z, being T the nearest.

The apparent eclecticism of Nic. could be based on the fact that he used more than one Greek exemplar. At times, a group of Nic.'s mss. presents one of two Greek readings, and a second group presents the other. Did Nic try to find more than one ms? That accords with the intense contamination presented by the Latin copies. Or else somebody wrote a variant reading on a ms., and it has been copied in several mss. as the good text, eliminating the old one. Nevertheless it could just be *lectiones faciliores* in a group of mss.

P. 144,10 ἀρξαμένους Pz, *et* ἀρξαμένων U, *cf.* incipientes Pet., Nic.^A: ἀρξάμενον Λ, *cf.* incipientem Nic.^{cett. ed}

P. 152,10 ἐνθα δὲ AP, *fortasse* U^{Pet}, *cf.* hic vero Pet., *cf.* hinc autem Nic.^{AMPed}: ἐν δ' αὖ U: ἐνθα δ' αὖ z, *cf.* hinc autem rursus Nic.^{WZOV}

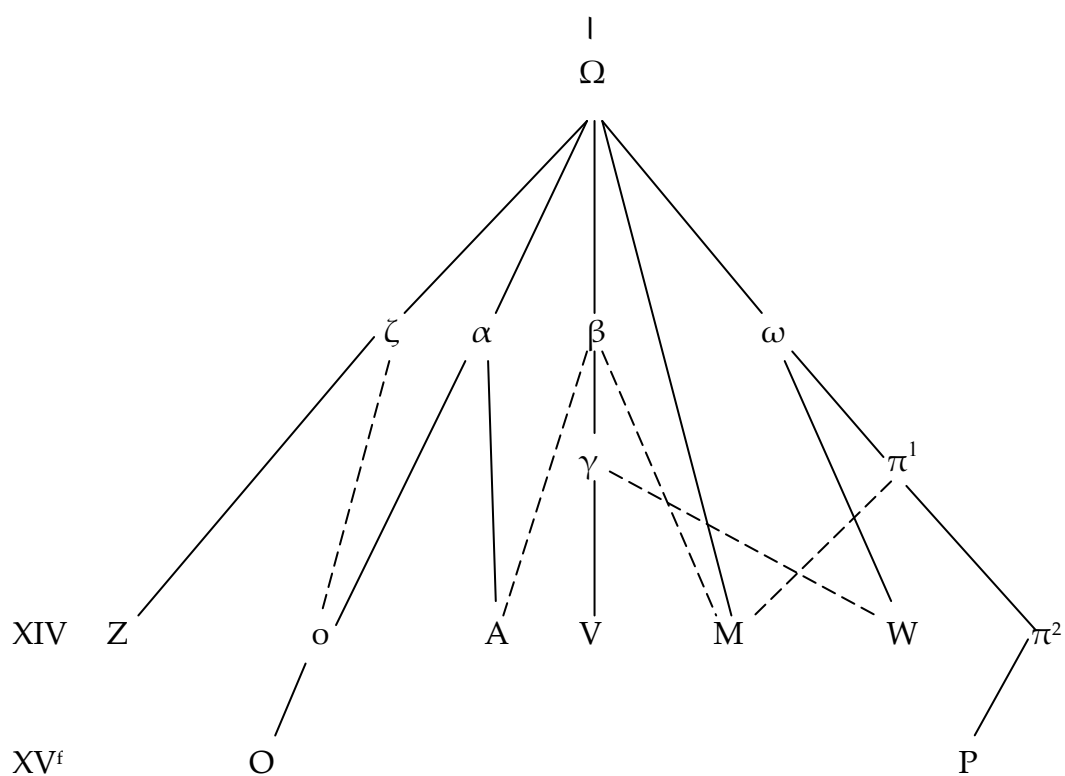
P. 154,8 εὐαλλοιωτότατον P^{s.l.} U, *cf.* alterabilissimus Pet., *cf.* facillime alterabile Nic.^{WZOPed}: εὐαλλοιώτον P^{i.l.} *cett.*, *cf.* facile Nic.^{AMV}

P. 156,12 δέδεκται APz, *cf.* recepit Nic.^{ZPVed}: δέχεται U, *cf.* recipit Nic.^{AWMO}

STEMMA OF THE LATIN VERSION BY NICCOLÒ DA REGGIO

ca. 1310-1320

Niccolò's translation



A 10. THE RENAISSANCE TRANSLATIONS

1. The Aldine edition was preceded by the studies of the treatise by Giorgio Valla (1447-1500), Niccolò Leonicensino (1428-1524), and Thomas of Linacre (1460-1524). In an effort to improve the Galenic text, widely known in Arabo-Latin versions, the three of them translated the treatise from the Greek. They were somehow or other related to Aldo Manucio.

Giorgio Valla³²⁸ was the first translator. Born in Piacenza (1447), he learned Greek from Konstantinos Laskaris in Milan and continued his studies in Pavia,³²⁹ where he started to teach as a Professor in 1466. He was transferred to the School of St. Mark in Venice, in 1485, where he died in 1500. He was a friend of Aldo.

The version by Valla, beginning *Distemperantia inaequalis*, predated that of his master, Leonicensino, by fifteen years. It was printed by Simon (Papiensis) Bevilacqua in Venice, 1498.³³⁰ In this same year the Arabo-Latin text was printed as well.

Inc. "Distemperantia inaequalis fit aliquando corporis animati sicut aqua intercutem languentibus obesa carne et eis quae putridae febres appellantur: ac fere omnibus aliis praeterque quae hecticae nuncupantur sit etiam in quolibet turgente membro ..."

Expl. "Sin totum omnino commutetur altereturque illico sine dolore evadet. In molestiori autem ita dispositione constituta. Haec mihi satis visa nosse eis qui medicamentum tractatus velint inspicere et curandi cum hoc habere disciplinam."

Most of his Galenic translations are collected as well in this edition³³¹. The Mutinensis gr. 109 (U), belonging to his collection³³² before reaching Modena's Library, provided the Greek³³³ text. This is easily checked by reading the

328 For his books, cf. L. Heiberg, *Beiträge zur Geschichte Georg Valla's und seiner Bibliothek*, Beihefte zum Zentralblatt für Bibliothekswesen 16, 1896, 353-481, and G. Cardenal, P. Landucci Ruffo, C. Vasoli, *Giorgio Valla tra scienza e sapienza*, Florence 1981.

329 A synopsis of the chronology of the life and works of Valla, in G. Cardenal, *Cronologia della vita e delle opere di Giorgio Valla*, in *Giorgio Valla...* pp. 93-97. Complete references in L. Heiberg, *Beiträge...*

330 T-K 438. Notice of this edition in pp. 147, 330, of A. C. Klebs, *Incunabula scientifica et medica*, in: *Osiris* 4, 1938, 1-358, and Durling, "Census...", p. 251. The title of the volume where this translation is included, is: Nicephorus, *Blemmida. (Logica) Epitome logikes*. G. Valla Placentino interprete. Venetiis, September 1498, folio 131r.

331 Checked issue: British Library. The book contains as well his translations of the Galenic *De optima corp. cons.*, *De bono habitu*, *De praesagitura* (the ending part of *De constitutione artis medicae*, supposed to be an independent treatise). See St. Fortuna, *Galen's De constitutione artis medicae in the Renaissance*, *Classical Quarterly* 43, 1993, 302-319.

332 Cf. V. Nutton, *John Caius and the Manuscripts of Galen*, Cambridge 1987, p. 25.

333 The first two translations of the 1498 edition have the Mutinensis gr. 109 as Greek exemplar. See Nutton, *John Caius...*, p. 25. His version of *De sectis ad introducendos* is also based on that ms.

beginning of his text, for the Mutinensis has lost some words of the first sentence. He used other clues to it as well.

2. **Niccolò Leonicensi**,³³⁴ who had the largest private library of his time, was collaborator³³⁵ with Aldus and Musurus in the edition of Aristotle, and in their projected edition of Galen". He was said to lend his own mss.³³⁶ to the Aldine presses.

His translation, beginning *Intemperatura inaequalis*³³⁷, was printed for the first time in Paris, 1514, ff. 27-32, by Henri Étienne³³⁸. The second edition was printed in Venice, 1524³³⁹, vol. II, ff. 177-180, by B. Vercellensis de Viano et B. Vitalis.³⁴⁰ The orthography was corrected. Leonicensi has used mss. both of family Λ and family Δ. He knew of the Mutinensis 109 as well.

Incipit. [Text= Paris 1514. V=Venice 1524]. *Intemperatura inequalis totum (om. V) corpus animalis aliquando (aliquando ante animalis V) obsidet, sicut in aqua inter cutem (intercutem V) quae Anasarca nominatur, et in febribus illis quae Hepialae vocantur, contingit. (non distinxit V) Quod etiam in omnibus aliis fere evenit, praeter eas quae ecticae id est habituales dicuntur. Fit autem et in unoquoque (uno quovis V) membro vel inflato vel inflammato vel Gangrenam vel Herisipelas vel cancrum (om. V) patiente.*

Explicit: Quod si totum per totum transmutatum fuerit, atque alteratum, protinus quidem dolore vacabit, sed in difficiliorem incidet dispositionem. Haec mihi visa sunt (fiunt V) necessaria praecognitu iis (his V) qui tractatum de medicamentis, atque una cum hoc alterum de (de om. V) curandi ratione sunt assecuti (assecuturi V).

3. The third Renaissance translation published before the Aldine edition was written by **Thomas of Linacre**. "Sometime toward 1485, William Selling, Linacre's old headmaster, was sent on an Embassy ... to pope Innocent VIII, and Linacre went along with him to Italy..."³⁴¹ While in Italy, Thomas met Lorenzo Medici, Giorgio Valla and Leonicensi, studied in the Vatican Library and collabo-

334 Biography and manuscripts of his library, in D. Mugnai Carrara, *La biblioteca di Niccolò Leonicensi: tra Aristotele e Galeno, cultura e libri di un medico umanista*, Firenze 1991.

335 V. Nutton, in p. 4 of: *The rise of medical humanism: Ferrara, 1464-1555*, in: *Renaissance Studies* vol. 11, 1997, 2-19.

336 Cf. V. Nutton, *The rise... Leonicensi translated 11 Galenic treatises*.

337 T-K 756.

338 Cf. Durling, *Census...*, p. 252. Checked exemplar: Wellcome Library. The volume includes as well *De differentiis morborum libri duo*, *De arte curativa ad Glauconem libri duo*, and *De crisi libri tres*.

339 Galeni *In Hipp. aphorismos. Ars parva. Therapeutica ad Glauconem. De crisi. De inaequali intemperatura. De naturalibus facultatibus*.

340 Checked exemplar: Wellcome Library.

341 W. D. Sharpe, *Thomas Linacre, 1460-1524: an English physician scholar of the Renaissance*, in: *Bulletin of the History of Medicine*, 34, 1960, 233-256, in p. 238.

rated with Aldo in the editio princeps of Aristotle³⁴². In Padua he graduated as Doctor of medicine. In 1491 the University of Oxford admitted him to its doctorate in medicine.³⁴³

His version,³⁴⁴ coupled by the translation of *De temperamentis*, was printed in Cambridge, 1521, by J. Siberch.³⁴⁵ The title, *De inaequali intemperie*, would be the universal denomination of the Galenic treatise. It was reprinted in the Basle Latin edition of 1549, vol. III, cols. 161-170; in the Venice edition of 1565, the fourth Juntas edition, vol. III, 43r-44v; and in 1576, the fifth Juntas, vol. III, f. 43r-44v.

Durling pointed out³⁴⁶ that his Greek exemplar was the *Laudianus graecus* 58 (my D), copied in Italy³⁴⁷ in the second half of the XV c. In fact he may have used that one or its copy, the *Vaticanus graecus* 282 (V), which was catalogued in the Vatican Library ca. 1472.³⁴⁸

P. 144,1 δυσκρασία DV: *om. cett.* A intemperies *Lin.*

P. 144,1 ὑπομνήμασιν *om.* DV *om.* *Lin.*

P. 146,14 παχὺ] πολὺ DV multum *Lin.*

P. 146,19 δὴ] οὖν DV ergo *Lin.*

P. 146,20 πεπονθότος] ῥευματισθέντος DV fluxione est affectum *Lin.*

P. 170,9 ἐκ δύο DV: καὶ U: διὰ AP ex duplici *Lin.*

P. 172,2 τοῦδε PU: οὕτω DV: ὁμ Λ sic *Lin.*

Where D and V disagree, Linacre keeps either to the text of D, as in p. 156, 20, or to V, as in p. 156, 6.

P. 156,20 ἅπαν, ὁδός TPU,D^{p.c.}: ἅπαν, εἰδός D^{a.c.} V: ἐπάνοδος ἐστίν LM via *Lin.*

P. 156,6 μήπω UV: μηδέπω AP: μὴ D non adhuc *Lin.*

Linacre may have checked other copies as well, such as the *Mutinensis* 109, a manuscript that seems to have been read by the three translators, unless Leonicensio and Linacre worked on the translation by Valla. If that is the case, he could have taken some readings from ms. U, such as p. 156, 6 μήπω UV, instead of consulting both ms., D and V, which would certainly be improbable.

342 He finished his PhD in Padua, and came back to England, where he was admitted to Oxford University for a second doctorate degree, in 1491. Cf. W. D. Sharpe, *Thomas Linacre*, p. 238. Biography as well in R. J. Durling, *Linacre and medical Humanism*, pp. 84-85, 91-93.

343 Sharpe, *Thomas Linacre*, pp. 238-240.

344 His way of translating is reviewed by Durling, *Linacre*, pp. 99 ff.

345 Reproduction of the facsimile in J. F. Payne, *Galenus pergamensis De temperamentis, et De inaequali intemperie libri tres Thoma Linacro anglo interprete*, Cambridge 1881 (with Introduction).

346 Cf. Durling, *Linacre...*, p. 92.

347 The scribe worked in Milan, Florence and Rome. See description of the codex in *The Greek manuscripts*, above.

348 According to Devresse, *Le fonds grec de la Bibliothèque Vaticane des origines à Paul V*, Cité du Vatican 1965, pp. 58, 94, 131, 348.

Linacre's translation is not divided into chapters, but in the 1549 ed. the text is divided according to Johannis Agricola into 12 chapters. It includes as well a different division into 9 chapters, indicated in the text. Venice 1565 and 1576 are divided into 9 chapters.

On the other hand, this translation underwent changes from one edition to the next.

Linacre-Incipient. Text=1521. B=Basle 1549. V=Venice 1565. Inaequalis intemperies alias in toto animalis corpore fit. veluti in ea hydropis specie, quam graeci ἀνασάρχα (-σαρκα V) vocant, et febribus iis, quas iidem hepialas appellant, febreque reliquis omnibus, exceptis quas hecticas nominant. Incidit autem et in unaqualibet parte, quum ea vel intumuit (oedemate V), vel phlegmone, gangrena, erysipelate, cancro, est affecta.

Linacre-Explicit. Quod si tota per tota mutata alterataque sint: fiunt quidem illico a dolore libera. In difficili (difficiliori V) tamen sic constituta sunt statu. Haec praenovisse his (iis BV) qui opus de medicamentis sunt percepturi, et post id medendi methodum, abunde mihi satis videtur.

Once the Aldine edition had been printed, those interested in the treatise would compare the earlier translations with the Greek text. Some of them wrote a new Commentary, some of them just corrected Linacre's version, adding notes, and at least two wrote a new -or no so new- version.

Janus Cornarius corrected Linacre's text in the 1549 Basle edition (162r-170r).

P. 142,12 *post προσπιπτόντων add. φαρμάκων Pz]* ex medicamentis iis Lin. Cornarius eliminated *medicamentis*, leaving *ex iis*.

Gadaldinus, in the Venice edition of 1565, the fourth Juntas edition, vol. III, 43r-44v, printed in the margin some corrected passages on the basis of the Aldine/Basle. The same is true for the fifth edition, Venice 1576, *ibid*.

P. 142,13 *πλεῖον L: πλείονες T AB]* plures *add.* Gadaldinus

The Latin translation printed by Charterius in his 1679 edition is Linacre's as well.³⁴⁹ The next two translators, Fuchs and Lalamantius, just changed some words of Linacre's version.

349 Charterius' Incipit includes some of the variations introduced in Linacre's: Inaequalis intemperies fit interdum et in universo animalis corpore, ut in hydrope quem aquam intercutem vocant, et febribus quas epialas appellant, et prope caeteris omnibus, iis exceptis quas hecticas nominant. Oboritur autem et in unaquaque parte, quum ea oedemate, vel phlegmone, vel gangraena, vel erysipilate, vel cancro obsidetur.

Charterius' Explicit is identical with Linacre's: Quod si tota per tota mutata alterataque sint, fiunt quidem illico a dolore libera. in difficiliori tamen sic constituta sunt statu. haec praenovisse iis qui opus de medicamentis sunt percepturi, et post id medendi methodum, abunde mihi satis videtur.

4. **Leonhart Fuchs**, 1501-1566, was a Professor at Tübingen University. 1537 is the date of the Preface written by him to the II volume of the 1538 Basle edition of the Opera omnia in Greek. A translation and commentary³⁵⁰ to De inaequali intemperie by L. Fuchs is printed in Paris, 1549, by J. Dupuys, in the first volume of (Galen) Aliquot opera ... a Leonharto Fuchsio ... Latinitate donata, & commentariis illustrata, pp. 1r to 12v.

"Linacre's version is often so obscure as to be unintelligible, without recourse to the original" writes Fuchs in Latin.³⁵¹ He uses the Linacre's version, but often changes it, on the basis of the Aldine/Basle edition, and Niccolò's translation, at least. He divided it into 10 chapters. He included a Commentary (see below).

P. 158,16 *post πλησιάζον add. neque ita dolebunt Nic., οὐδὲ οὕτως ὀδυνησεται add. Fuchs et Lalam. post Nic.*

Fuchs-incipit. Inaequalis intemperies nonnunquam (alias Lin.) fit in universo (toto Lin.) animalis corpore, velut in ea hydropis specie, quae anasarca dicitur (quam graeci ἀνασάρχα vocant Lin.) et febribus iis quas (iidem *add.* Lin.) hepialas vocant (appellant Lin.), fereque reliquis omnibus, exceptis quas hecticas nominant. Fit vero (Incidit autem Lin.) et in unaqualibet parte, quum ea vel oedemate (vel intumuit Lin.), vel phlegmone, vel gangraena, vel erysipellate, vel cancro laborat (est affecta Lin.).

Fuchs-explicit. Quod si vero tota per tota mutata et alterata fuerint (sint Lin.), dico quidem dolores expertia fiunt (fiunt quidem illico a dolore libera Lin.): in difficiliore tamen sic constituentur affectu (constituta sunt statu Lin.) Haec praeovissem iis qui opus de medicamentis sunt percepturi, et post id medendi methodum, abunde mihi satis videtur.

The Aldine edition provides the (real) divergences from Linacre's version:

P. 142,13 *πλεῖον L, πλείονες TA] plurimae add. Fuchs.*

P. 146,12 *πάνυ LTP^{ve} A: καὶ Δ maxime Fuchs*

P. 168,13 *γίγνεται μὴν ὁμως] μὴν MA: μὲν Lz: δὲ T?PU ὁμως] ὅλως A*
incidit vero omnino Fuchs

5. **Jean Lallemant** (Johannes Lalamantius, 1549-1578?), published a version of the treatise accompanied by corrections and conjectures to the Greek text,

350 R. J. Durling, Leonhart Fuchs and his Commentaries on Galen, *Medizinhistorisches Journal* 24, 1989, 42-47. "...his commentaries were preceded by editorial work on part two of the Basel 1538 collected edition ." (p. 44). Checked issue: Wellcome Library.

351 Cf. Durling, Linacre, p. 104, n. 1.

in Autun (Hedua) 1578, and in Geneva 1579,³⁵² apud Petrum Santandream.³⁵³ The Praefatio was written in 1578. Translation of the treatise in pp. 35-58, castigatio in 58-63.

Let us compare his Incipit with Linacre's.

Lallemant-Incipit. Inaequalis intemperies alias in toto animalis corpore fit, veluti in ea hydropis specie, quam graeci ἀνασάρκα vocant, et febribus iis, quas iidem hepialas appellant, fereque in (in *om.* Lin.) reliquis omnibus, exceptis iis (iis *om.* Lin.) quas hecticas nominant. Fit vero (Incidit autem Lin.) et in unaqualibet parte, quum ea vel oedemate (intumuit Lin.), vel phlegmone, gangrena, erisipelate cancrove, fuerit (est Lin.) affecta.

Lallemant-Explicit. He added several words (Linacre's below between brackets):

"quod si universa corpora simplicia tota per se tota mutata alterataque fuerint, [Quod si tota per tota mutata alterataque sint:] ipsa quidem illico erunt doloris expertia, at in difficiliore tamen statu constituta. [fiunt quidem illico a dolore libera. In difficiliore tamen sic constituta sunt statu.] Haec praemonuisse, sufficere putem iis qui tum ea quae in opere de medicamentis, tum quae post id in Methodo medendi tractantur, sunt assecuturi." [Haec praenovisse iis qui opus de medicamentis sunt percepturi, et post id medendi methodum, abunde mihi satis videtur.]

The divergences in the translation, and his corrections to the Basle Greek edition, are based on "two old codices" according to his own statement, most probably the translation of Gerard of Cremona in Venice 1490, and the 1515 edition of Nicholas of Reggio. Other corrections are his own. I have inserted some in the Apparatus criticus.

P. 146,9-10 καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν εἴρηται *om.* *Hun.*, *Ger.*, *delev.* *Lalam.*

P. 158,15 ἢ ψυχρότερον *add.* *Charterius*, *cf.* the colder *Hun.*, hae vero frigidior *Nic.*] aut frigidior *add.* *Lalam.*

6. An excerpt of the text, translated into Italian, is included in the Ms. **Wellcome 356**, dated ca. 1625, pp. 450-457. *Cf.* S. A. J. Moorat, Catalogue of Western Manuscripts, vol. I, p. 226. It is based on Linacre's version, corrected on the basis of the Aldine.

352 *Cf.* Durling, *Census*, 277. Cl. Galeni Pergameni Operum Omnium latine propediem edendorum specimen. Ex Joannis Lalamantii recognitione, et castigatione Graeci codicis locis innumerabilibus. 1. De optima corporis nostri constitutione. 2. De pleniori habitu. 3. De inaequali intemperie. 4. Quomodo simulantes morborum sunt deprehendendi. 5. De ptisana [Lalamantii de ptisana sui temporis libellus]. Emendata infinitis locis per eundem Lalamantium versio latina, et ad haec littera Graeca ad librorum calcem restituta.

353 The reference London 1579 is found in some sources. Checked issue: digitalised edition in www.gallica.bnf.fr. 12 February 2002.

P. 142,12 *post* προσπιπτόντων *add.* φαρμάκων Pz, ex medicamentis Linacre, "da medicamenti" We.

P. 146,14 παχὺ] πολὺ DV, multum Lin., crasso We.

7. Having in mind the chronology of the XVI c. Greek editions, Aldine 1525, Basle 1538, let us review the (first) date of the printed translations. See Table I, pag. 102 (T=Translation, C=Commentary).

A 11. THE RENAISSANCE COMMENTARIES AND ANNOTATIONES

New Commentaries and Notes were written on *De inaequali intemperie* after the Aldine (and the Basle) edition, most of them based on Linacre's translation. I mention them in chronological order (* checked).

*1. Leiden, 1538. Prospero Calani Sarzinensis, born 1480 in Sarzana, Italy, fl. 1524-1538.

Paraphrasis³⁵⁴ in librum Galeni *De inaequali intemperie*, Lugduni, apud Seb. Gryphium, 1538. Commentary in pp. 7-105. It includes the translation of Linacre in margine. It is a rather complete commentary, bringing forward Arabian and Greek auctoritates, as well as, say, Leoniceno and Manardi, "nostri temporis veteris Medicinae acerrimi instauratores."³⁵⁵

*2. Basle, 1539. Johannes Agricola Ammonius (Johann Bauer; born 1496 in Gunzenhausen, died 1570 in Ingolstadt).

Galen³⁵⁶ *de inaequali intemperie*, Thoma Linacro interprete cum commentariis Johannis Agricolae. Accedit concordantiae simpl. medic. in auct. praecip. Basle, apud B. Westheimer, 1539, in-8. He divided the treatise into 12 chapters (a division accepted in the Basle Latin edition of 1549, vol. III, cols. 161-170.) I have not yet seen that Commentary.

*3. Leiden, 1547. Hieremias Thrivervus Brachelius (Jérémie de Dryère), 1504-1554, Professor in Louvain.

³⁵⁴ See Ackermann p. lxxix. Not mentioned in Census. Issue: Universidad Complutense (digitalised).

³⁵⁵ On p. 21.

³⁵⁶ Ackermann lxxix. Census, p. 261. Cf. P. Dilg, Johann Agricola Ammonius' Kommentar zu Galens 'Methodus medendi', in: F. Kudlien, Galen's Method of Healing, pp. 190-205. Issue: Leiden University.

I. *Commentaria*³⁵⁷ in omnes Galeni libros de temperamentis. II. In omnes Galeni de temperamentis libros epitome, was published at the same time: Lugduni, apud Godefridum & Marcellum Beringos, fratres, 1547, in-16.

A second edition³⁵⁸ in 1557, also in Leiden, by the same eds., G. and M. Bering.

Commentary to *De inaequali intemperie*, in vol. I, pp. 352-400. He includes Linacre's translation and he comments sentence by sentence on the contents, with rather scarce references to other Galenic treatises or to other authors.

Issue: Universidad Complutense, Madrid (digitalised).

*4. Saragosa, 1548. Alfonso López de Corella, 1513-1584.

*Annotationes*³⁵⁹ in omnia opera Galeni, Caesar Augusta, P. Bernuz, 1548, pp. 61v-62v., and Caesar Augusta, P. Bernuz, 1565, pp. 61v-62v.

It includes excerpts from Linacre's version, and notes to them.

*5. Venice, 1548. Andres Laguna de Segovia, Spain (1499-1559).

*Annotationes*³⁶⁰ in Galeni interpretes quibus varii loci in quos hactenus impegerunt lectores, et explicantur, et summa fide restituuntur, Venetiis, apud Hieronymum Scotum, 1548.

In p. 7v, he corrects two passages of Linacre's version. He quotes Linacre by Juntas, Venetiis, 1541.

The notes are included as well in his *Epitome Galeni Pergameni Operum... / per Do. And. Lacunam... collecta... Accesserunt eiusdem And. Lacunae Annotationes in Galeni interpretes... Item de ponderibus & mensuris medicinalibus utilis commentarius*. Basileae : per Thomam Guarinum, 1571.

*6. Paris, 1549. Jacobus Sylvius Ambianus (Jacques Dubois), born 1478 in Amiens, died 1555 in Paris.

357 Census p. 267, the 1547 edition: in Census the city is supposed to be Lyons instead of Leiden. The 1557 edition is not mentioned. Issue: Universidad Complutense, Madrid (digitalised).

358 Issue: Universidad Complutense, Madrid (digitalised).

359 Cf. J. A. Sánchez Pérez, Alfonso López de Corella, médico español del siglo XVI, prototipo de la cultura española de su época, in: *Anales de la Universidad de Madrid*, 1, 1932, pp. 74-101, and J. Olmedilla y Puig, *Noticias bibliográficas referentes al médico y escritor español del siglo XVI*, Alfonso López de Corella, Madrid, M. Tello, 1910. Issue: Universidad Complutense, Madrid (digitalised).

360 Cf. J. L. García Hourcade / J. M. Moreno Yuste, eds., Andrés Laguna. Humanismo, ciencia y política en la Europa renacentista, congreso internacional, Segovia, 22-26 de noviembre de 1999, Madrid, 2001.

Cl. Galeni³⁶¹ Pergameni De temperamentis, De inaequali intemperie, Thoma Linacro Anglo interprete, cum isagoge in eosdem libros et scholiis marginalibus longe doctissimis per Iacobum Sylvium, apud Iacobum Gazellum, Parisiis 1549.

Beside the translation of Linacre, Dubois includes notes in margine, especially dealing with references to other treatises by Galen, in pp. 73-82.

There is another edition with the same title, date and contents, in Leiden: Lugduni, 1549 [sub scuto veneto], apud Gulielmum Rovillum. Text and notes in pp. 175-192.

*7. Paris, 1549. Leonhart Fuchs (1501-1566).

Galen³⁶² ... Aliquot opera/ a Latinitate donata & commentariis illustrata, vol. I, Paris, 1549, by J. Dupuys, pp. 1r to 12v.

As I mentioned above, Fuchs sometimes corrects the translation of Linacre on the basis of Nicholas' version and the Aldine edition (he took part in the Basle edition). In his scholarly commentary, he fiercely attacks Jérémie de Dryère, whose commentary appeared two years earlier.

*8. Antwerp, 1553. Antonius Busennius.

In Cl. Galeni librum de inaequali intemperie commentarii,³⁶³ Antverpiae, J. Richardus, 1553, in-8.

*9. Venice, 1562. Iohannes Baptista Rasarius, 1517-1578, physician in Padua.

Galen³⁶⁴ Omnia, quae extant: singulari studio, summaque diligentia Iohannis Baptistae Rasarii emendata, novo ordine, cuius etiam attulimus rationem, disposita, librorum nuper inventorum accessione aucta, et magna ex parte in latinum linguam conversa. Venetiis, apud Vincent Valgrisium, 1562 [4 vols.]

*10. Alcalá de Henares, 1567. Francisco del Vallés de Covarrubias (1524-1592).

361 <http://gallica.bnf.fr>. In the image the city is Leiden, but Lyons is wrongly written in the reference of the BNF. Census, p. 260, mentions a 1537 edition, in Paris, by C. Wechel. I have not found it. Census, p. 268: 1549, Paris, J. Gazellus, and 1549, Leiden (wrongly ascribed to Lyon), by G. Rouille.

362 Census, p. 269. See R. J. Durling, Leonhart Fuchs and his Commentaries on Galen, *Medizinhistorisches Journal* 24, 1989, 42-47. Checked issue: Wellcome Library.

363 Ackermann lxxx. Census, p. 271. Issue: Amsterdam University.

364 Census, p. 280, 1562-63. Issue: Wellcome Library. In Saragosa was printed a Cl. Galeni... Opera quaedam nunc recens inuenta ac latinitate donata... / Iohanne Rasario... interprete... Caesaraugustae: apud Antonium Furnium, 1567, in-8. De inaequali intemperie is not included. Cf. Census, p. 276. Issue: UCM.

Galenī Ars medicinalis, commentariis³⁶⁵ Francisci Vallesii ... illustrata, Commentariola in libellum Galeni de inequali intemperie, Compluti: excudebat Andreas de Angulo, 1567, pp. 187-229.

A different edition in the same year: Francisci Vallesii... Commentaria³⁶⁶ illustrata in Cl. Galeni ... libros subsequentes, I. Artem medicinalem, II. De inaequali temperie libellum, III. Tertium de temperamentis librum, IIII. Quinq[ue] priores de simplicium medicamentorum facultate libros, V. Duos de differentia febrium [et] Tractatus medicinales, I. De vrinis compendiaria tractatio, II. De pulsibus libellus, III. De febribus, IIII. Methodi medendi libri tres: omnia recens prima hac editione publicata opera & industria Ioannis Petri Ayroldi Marcellini ... , Compluti 1567.

Printed³⁶⁷ afterwards in Venice, 1591, by G. B. Giotti, and in Cologne, 1592, by Francisco de Franciscis & Ioannis Baptistae Ciottiare, and a second time in 1594.

Del Vallés works from Fuchs translation, correcting it: he changes words more than sentences. He divides the text into 13 chapters. The necessity of the Commentary is backed by his opinion that his predecessors have not understood what is the inaequalis intemperies: quo semel ignorato, necesse est, ut in tota libri enarratione delirent. The basis of the Commentary is a precise discussion of the Greek words. He attacks Arnaud, Jérémie, Fuchs, and brings forward Hippocrates, Aristotle, Celsus, and, of course, Galen himself.

[11. Johannis Riolani, in Angers, Andecavensis 461 (466), 1575, f. 7r-8v, Annotationes in librum de inaequali intemperie. Paper, 259x176, 265 folios.

*Catalogue général des manuscrits des Bibliothèques publiques de France, Départements, tome xxxi, Paris 1898, pp. 346. (Recueil de cours de médecine).

If J. Riolanus is the Jean Riolan who was born in 1577 (died 1657), obviously the reference in the Catalogue could not be 1575. I have asked thrice a copy from Angers, but I could not get it.]

See Table I for the Translations and Commentaries written in the Renaissance.

³⁶⁵ Ackermann lxxx. Census, p. 266. See Ana Isabel Martín Ferroso, El humanismo médico en la Universidad de Alcalá (siglo xvi), Alcalá 1995. Issue: Complutense University (digitalised).

³⁶⁶ Not included in Census.

³⁶⁷ Census, p. 279, for the last three editions.

**TABLE I. MEDIEVAL AND RENAISSANCE TRANSLATIONS AND
COMMENTARIES OF DE INAEQUALI INTEMPERIE**

IX ante 832 *Ayyūb al-Ruhāwī (Syriac T)
858-873 Ḥunayn (Arabic T)

ON THE ARABIC VERSION:

XII ca. 1157-1187 Gerardo de Cremona T

XIII^{2 m} David ben Caslari T
(Gerard's into Hebrew)
ca. 1290-95 Arnau de Vilanova C

ON THE GREEK TEXT:

XIV
ca. 1300 Bernard Engarra C
ca. 1297-1327 Dino del Garbo C

ca. 1300 Pietro d'Abano T
ca. 1310-1320 Niccolò da Reggio T

XV
1421 Ugo Benzi C
1490 ed. Gerardo

1498 Giorgio Valla T

XVI
1500 ed. Ugo Benzi
1504 ed. Arnau

1514 Niccolò Leonicensio T
1515 ed. Niccolò da Reggio
1521 Thomas of Linacre T
1525 ALDINE ED.
1538 Prospero Calani di Sarzana C
1538 BASLE ED.
1539 Johannes Agricola Ammonius C
1547 Hieremias Thriverus Brachelius C
1548 Alfonso López de Corella C
1548 Andres Laguna de Segovia C
1549 Jacobus Sylvius C
1549 Leonhart Fuchs TC
1553 Antonius Busennius C
1562 Iohannes Baptista Rasarius C
1567 Francisco del Vallés C
1578 Jean Lallemant T
1625 Wellcome 356 T
1649 CHARTIER ED.

A 12. THE GREEK INDIRECT TRADITION

1. Oribasius. Two passages of the treatise are collected by Oribasius. Sections 4-6: pp. 150,2 - 154,4 καὶ δυοῖν γε ... τὸ ζῶον αἷμα] = *Collectiones medicae* CMG VI 2,1 Raeder; 44,1,10,5 – 44,1,13,1: δυοῖν γὰρ ... τὸ ζῶον αἷμα (= 3.535.15 -537.6, Daremberg & Bussemaker).

Orib. omits:

P. 150,5 βέλτιον ... ἄρχεσθαι

P. 150,9-20 ἀφίσταται ... τοῖς σπλάγχνοις.

P. 152,3-11 πονεῖ ... λυομένης

P. 152,18 - 154,2 ἐκθερμαίνεται ... φλέβας

Book 44 is dedicated by Oribasius to inflammation, and composed of Galen's passages.³⁶⁸ Dealing with the effect of the *phlegmonê* on the whole body, Oribasius omits some of the personal commentaries of Galen, as we might expect: "for it is preferable to start from the better side" (p. 150,5). He does not include either the complete subject of the deposits (p. 150,9-20); there is just the naked fact of healing: "Double in this case will be the healing: either all the obstructed humidity being dissipated, or else being concocted. In fact, dissipation is the most adequate of the ways of healing. Coction, on the other hand, is necessarily followed by these two events: pus' formation and deposit" (p. 150,5-9).

He does not elaborate on pain and the effect of the (uneven) qualities on an organ, which is aligned by Galen with the loosening of continuity (συνεχείας λύσις), within the spectrum of anomalous *dyskrasia* (P. 3, 17-24). A last topic, the process of heating reaching the vessels first (P. 4, 5-7), is omitted. All in all, the process of fever from inflammation is rightly explained in Oribasius.

The quotation is literal. The most surprising fact is the agreement of Oribasius' text with the Δ-family. See above, A 3. Relationship between the Greek manuscripts (4.) The loci similes in Oribasius.

2. A second fragment is collected by Oribasius, and again by Paulus of Aegina:³⁶⁹

³⁶⁸ For the way of collecting by Oribasius, see R. de Lucia, *Doxographical Hints in Oribasius' Collectiones Medicae*, in Ph. van der Eijk, ed., *Ancient Histories of Medicine. Essays in Medical Doxography and Historiography in Classical Antiquity* ("Studies in Ancient Medicine", 20), Leiden, Boston, Köln, 1999, pp. 473-489, and p. 28 of: Oribasio di Pergamo, in: A. Garzya et alii, *Medici Bizantini*, pp. 19-251. See also A. Guardasole, *Nuovi escerti di Oribasio*, in: Ugo Criscuolo, ed., *Actes du Colloque international Cultura, società e diritto nel Tardoantico: da Costantino a Teodosio il Grande* (Naples, 26-28 avril 2001), Naples, D'Auria, 2003, pp. 177-196.

³⁶⁹ Paulus collected his material from Oribasius, as it happens in this quotation, al-

P. 158,4-8 καλεῖται μὲν ... τῶν μορίων = Oribasius, Synopsis ad Eustathium filium CMG VI 3 Raeder; 6,21,1,1 - 3,1. = Paulus Aeg., Epitomae 2,31,1,1 -4 Heiberg.

The text in Oribasius/Paulus presents slight differences from Galen's: it is just summarised a bit. The passage deals with the peculiarity of the *hektikos* fever.

I should remark the use of the participle τεθερμασμένων, which is presented by Orib./Paulus with the prefix ἐκ-. In fact, it is Galen who uses the composed ἐκτεθερμασμένος for indicating "having been completely heated", in De differ. febr. I 1: VII 276,4 -7 K.: λοιπὴ δὲ καὶ τρίτη τις ἐπ' αὐταῖς διαφορά, τῆς ἀερώδους οὐσίας μόνης ἐκτεθερμασμένης ἱκανῶς, τῶν δὲ ὑγρῶν καὶ στερεῶν σωμάτων θερμοινομένων μὲν ἔτι, ἐκτεθερμασμένων δὲ οὐδέπω. He refers to the heart's *pneuma* as already heated, while the humid and the dry matter are still being heated, that is, the humours and the solid parts.

The manner of collecting is rather clever. It keeps to the word as far as necessary for the contents, and just leaves the superfluous out -or the overly-styled sentences.³⁷⁰

3. As for Aetius Amidenus, scarce passages of our treatise appear in his books:

P. 164,21 - 166,3 ἀλγοῦσι ... ὀνύχων] There are similar passages in De loc. aff. II 5: VIII 81,5-11 K. and Meth. Med. XII 7: X 853, 12-14 K. The text in Aetius V: CMG VIII 2; V 101, 6-8 Olivieri, is nearer to De inaequali than to the others.

Aetius V 87 deals with the *êpialos* fever:

P. 168,2-3 ἔνιοι ... αἰσθάνονται, also appear in De diff. febr. II 6: 7.347, 5-9 K., and Aetius V: CMG VIII 2; V 87,5 Olivieri. However Aetius' text is more dependent on the latter.

P. 170,7-8 ᾧ δ' ἡγεῖται μὲν <τὸ> ῥίγος, ἔπεται δ' ὁ πυρετός = Aet. Amid.V: CMG VIII 2; V 87,7 Olivieri: προηγείται μὲν ῥίγος, ἔπεται δὲ πυρετός. This quotation presents in Aetius the same wording, although the context is not the same.

I checked the X book of Aetius in a handwritten copy of the Vaticanus graecus 282 (XV c.), provided by the research group of Antonio Garzya.

though sometimes he excerpted from Galen himself. See M. Lamagna, pp. 683-688 of: Paolo di Egina, in: A. Garzya et alii, Medici Bizantini, pp. 681-783.

³⁷⁰ For the way of composition in Oribasius' *Collectiones*, see Roberto de Lucia, *Doxographical hints in Oribasius Collectiones medicae*, in: Ph. v. d. Eijk, ed., *Ancient Histories...*, pp. 473-489: completeness and complementarity, "leaving out considerations and observations unnecessary to the exposition of the main subject" (ibid. 478). Cf. as well M. Grant, *Dieting for an Emperor*, Leiden, 1997, pp. 14-17.

Σ 4. The ms. P (Yalensis 1121, olim British Library, Phillipps 4614), XII^m c., ff. 54r-57v) presents *scholia*, written by the same hand in small characters with many abbreviations (half the vowels are absent), as is the case in the *supra-lineam* words and sentences. The *scholia* were written after the copy of all the treatises [by the first hand, Ioannikios] was completed, probably at the same time as the correction of the text. The *scholia* have not been corrected. Ioannikios had the *scholia* before him when he copied the text of *De inaequali intemperie*.³⁷¹

The *scholia* are somehow written in Galen's Greek, maybe by a writer-physician who imitated his style. Considering the language used, the two stemmata included in order to introduce διαίρεσεις, and some other features, I have proposed³⁷² for the *scholia* a date between the third and the sixth century A.D.³⁷³

When it includes a passage of the treatise, it agrees with the Δ-family, but not necessarily with P.

P. 142,4 ἐν ante ἅπασι *add.* z Σ

P. 158,7 ὁμοίως] ὁμοίων Σ

P. 172,5 καὶ Δ: *om.* Λ Σ Could it just be an independent omission of Σ?

P. 172,5 μῆπω PU Σ: μηδέπω zΛ

It has several passages from other Galenic treatises, such as *De diff. februm*, *De Med. Meth.*, and *De tumor. praet. nat.*

P. 170,4 *supra* ὥπται πολλάκις ῥίγος *scripsit* Σ: καὶ τὸ τοῖς παλαιοῖς ἀδύνατον εἶναι δοκοῦν, ὥπται πολλάκις. ἔστι δὲ τοῦτο τὸ χωρὶς πυρετοῦ ῥίγος, *e* *De diff. febr.* II 5: VII 346, 10-12 K.

R 5. Parisinus gr. 2283.

A paper ms., XVIth century, containing excerpta of twenty four treatises by Galen, and consisting of 141 folios.³⁷⁴ *Excerpta* of *De inaequali intemperie* in ff. 26v-27v. The palaeography is rather difficult, as if it were by a layman and not a scribe.³⁷⁵ The exemplar belongs to the Δ-family —perhaps the Aldine edition has been employed. There are some differences from the Galenic text, for the excerpts are not literal:

³⁷¹ See my *Les scholies marginales...*

³⁷² Cf. *Les scholies...*

³⁷³ These *scholia* are now included in *Ihm, Clavis...*, p. 258.

³⁷⁴ H. Omont, *Inventaire sommaire des manuscrits grecs de la Bibliothèque Nationale, Seconde partie, Ancien fonds grec*, Paris 1888, p. 229.

³⁷⁵ Cf. Alexanderson, *De crisibus*, pp. 16, 31, and De Lacy, *CMG V,1,2 (De elementis...)*, p. 34.

P. 142,3 καθάπερ] ὥσπερ R

P. 152,11 διασπᾶσθαι Δ: ἀνασπᾶσθαι ΛΑ: σπᾶσθαι R

There are isolate agreements with the Δ-family:

P. 166,18 δι' ἐλαχίστου Δ R: δὴ ἐλαχίστῳ ΛΑ

Some readings could be corrections:

P. 154,18 *post* ἐσφηνῶσθαι *add.* τὸν χυμὸν R. This one I have included, but it is obvious.

A 13. THE TWENTIETH CENTURY AND THE TREATISE

G. Helmreich started to prepare an edition of *De inaequali intemperie*. He had six of the seven Greek mss. (not P), and annotated the text and variants. Probably the Marcianus 282 was in a better state than nowadays, because he could precisely read some variants that are nearly illegible nowadays. He also read the translation of Nicholas of Regio in the Monacensis lat. 490, plus the 1528 (2nd. of Nic.) edition (Venice), and the version of Gerard of Cremona in this same ms., plus the 1490 edition (Venice). His papers have remained in the Berlin-Brandenburgische Akademie der Wissenschaften, and I have checked them. In 172,4 I found a reading that is not present in the extant witnesses: μέντοι] μὲν ἢ Helmreich. I have included it in the Critical Apparatus.

A clever English translation of the treatise by Mark Grant appeared in: *Galen on Food and Diet* (London, 2000). Its colloquial style approaches the text to a non-specialised public. However, as his understanding of the treatise is evident, the version is rather useful.

I have already mentioned the edition of the Commentary of the treatise (Arabo-Latin version) by Arnau de Vilanova, redacted by Luis García Ballester and Eustaquio Sánchez Salor, in Barcelona, 1985. Dr. Rosa M. Moreno, a physician and disciple of García Ballester wrote a Ph.D. dissertation on *De inaequali intemperie*, which was presented in 1984.³⁷⁶ I have quoted her printed papers when necessary. On the other hand, I have mentioned some of my (printed) preliminary results above, in notes.

³⁷⁶ El concepto de discrasia en la patología Galénica. Traducción y Comentario del tratado ΠΕΡΙ ΑΝΩΜΑΛΟΥ ΔΥΣΚΡΑΣΙΑΣ, Universidad de Granada, 1984 (unprinted).

B. THE AUTHOR AND HIS WORK

1. AUTHOR AND DATE

1. Galen indicates that *De inaequali* is his own, by mentioning it as such in several of his books.

Ars medica,³⁷⁷ 37; I 408,3 K.=Boudon, Galien II 388,17.

*De differ. febr.*³⁷⁸ II 14: VII 380,18 K. and II 15: VII 388,5 K.

*De tot. morb. temp.*³⁷⁹ 78, 12-13 Wille.

In Hipp. progn. comment.³⁸⁰ I 42: XVIIIb,107,6-7 K.=CMG V 9,2; 256,23-24 Heeg.

*De meth. med.*³⁸¹ II 2: X 15,4 K.;³⁸² II 6: X 122,6 K.; III 9: X 216,7 K., and X 7: X 694,18 K.

De simplic. medic. temp. ac facult. V 6: XI 723,2 K.³⁸³

De ordine libr. suor. 2; XIX 56,11 K.=Boudon-Millot I 94, 8-9.³⁸⁴

³⁷⁷ Galen quotes the treatise within a catalogue of his works, in *Ars medica*, 37; I 407-412 K. =Boudon-Millot, II, 388, 4 - 392,17: "Following *De temp.* ... a small book, *De inaequali intemperie*, and two others, small as well, *De optima corp. hum. const.*, *De bono habitu*." For the authenticity of *Ars*, see now V. Boudon-Millot, Galien II, pp. 158-159. As for the date, Ilberg situates it post 193, and V. Boudon agrees (Septimius Severus, 193→). See below for the catalogue in *De ordine libr. suor.*

³⁷⁸ Date: Second stay in Rome, since 169. Cf. García Ballester, Galeno, p. 267. Galen mentions the treatise when he refers to the genesis of inflammation, and the diathesis of the diseases with flux, coupling *De inaequali* with *De tumor. praet. nat.* in the second passage.

³⁷⁹ "In *De inaequali intemperie* and *De tumor. praet. nat.* has been explained how an excess of blood has been collected in the organ, producing inflammation". Date in Marcus Aurelius' reign, 176/177 - 180, cf. García Ballester, Galeno, p. 267.

³⁸⁰ In this commentary, both treatises are again mentioned when dealing with the genesis of inflammation: "...the obstructed blood provokes inflammation, filling in the first place the vessels, and after those, the next hollow cavities". The same date as the previous, Marcus Aurelius' reign, is proposed for the Commentary (García Ballester, Galeno, p. 267).

³⁸¹ Date: Books 1-6 are dated between 172 and 175 by Hankinson (Galen, *On the Therapeutic Method*, pp. xxxiii-xxxiv), a shorter period than the proposed by Ilberg: between 169, coming back to Rome, and Marcus Aurelius' death, 180. Nutton dates them no later than the first months of 196 (p. 9 of *Style and context in the Method of Healing*, in: F. Kudlien, R. Durling, Galen's *Method*, pp. 1-24). For books 7-14, Ilberg points to the beginning of Septimius Severus reign, 193 AD (see as well García Ballester, Galeno, p. 268), while Hankinson (*Therapeutic*, p. xxxiv), aims at the period of that Emperor, 193-200.

³⁸² In II 2: X 15, 4 K. (tr. Hankinson p. 9, Comm. in p. 92), Galen deals with such principles as four-element and four-quality theory, and quotes *De elem.*, *De temper.*, *De inaequali*, *De opt. corp. hum. cons.*, *NatFac*, *De morb. differ.* and *De sympt. differ.* In II 6: X 122,6 K. (tr. Hankinson p. 61, Comm. p. 200) Galen mentions again the same series, leaving out *De opt. corp. hum. cons.* and including *De usu partium*. In III 9: X 216,7-8 K., he deals with *dyskrasia*, and refers to *De inaequali*, while in X 7: X 694,18 K., the diathesis of inflammation is introduced, in a passage parallel to p. 2, 12-17.

³⁸³ Books 1-8 belong to the first stay in Rome, while Books 9-11 were written in the reign of Septimius Severus, 193-200 A.D. See García Ballester, Galeno, pp. 266-268. The mention of *De inaequali intemperie* occurs when he explains the drugs that eliminate pus by dragging the humid surplus from the hollow places.

³⁸⁴ Galen exhorts reading, after *De elem.* and *De Temper.*, the triad: *De inaequali*, *De*

De temper.³⁸⁵ II 6: I 645,4-5 K.= 85, 15-16 Helmreich: ἐφεξῆς οὕτω βιβλίον ὅλον ὑπὲρ ἀνωμάλου δυσκρασίας ἔγνωκα γράψαι. He states that he has in mind to write a complete book on the anomalous *dyskrasia*.

Thus, De temperamentis is prior to De inaequali, and was written in the fruitful period of the second stay in Rome, beginning 169 A.D.

As all the others treatises are posterior to De inaequali,³⁸⁶ the earlier would provide us with a *terminus ante quem*. De differ. febr. belongs to the second stay of Galen in Rome, beginning 169, as De simpl. medic. temp. ac facult., book 5. Books 1-6 of Meth. Med. were written *post quem* 172 AD. De totius morb. temp. and In Hipp. progn. comment., were written in Marcus Aurelius' reign (176/177 to 180). Ars and De ordine libr. suor. are later (195-205). Those data mark a *post quem* 169 A.D.

2. On the other hand, Galen mentions in our book, several treatises of his own. Some are mentioned as already written, providing a *terminus post quem*:

P. 144,1 and 146,16: De temper. is mentioned [I 509-694 K.=1-115 Helmreich]. Second Stay in Rome, *vide supra*.

P. 146,5; 146,9-10, and 156,7: De anat. admin. [=I 215-731 K.=Garofalo I-II plus Procedimenti anatomici, III (Arabic books)]. Among the 9 extant books in Greek (Garofalo, vol. I, p. ix), books 1-2 have a *post quem* 176, and an *ante quem* 180. Books 3-4 and 6-11, under Commodus, 180-192. Books 12-15, *ante* 192, written again under Septimius Severus (193-c.200). Books 10-15 are not extant in Greek.³⁸⁷

P. 172,8-9: τῇ τε περὶ φαρμάκων ἀκολουθήσειν πραγματείᾳ. Books 1-8 of De simplic. medic. temp. ac facult. (XI 379-892 K. and XII 1-377 K.), were written in the Second stay, beginning 169, while books 9-11 belong to Septimius Severus' reign, 193-c.200.³⁸⁸ De comp. medic. sec. loc. (XII 378-1007; XIII

opt. corp. hum. const., and De bono habitu, as he did in Ars (see above). He indicates as well that De simplic. medic. temp., De comp. medic. sec. locos and De comp. medic. sec. genera, should be read before the triad, having in mind that the third book of De temper. deals with the mixtures of the medicaments. He mentions that the properties of medicaments are explained in De sanit. tuenda as well. As for the triad, Galen indicates that he has dictated them on the request of friends. See De ordine libr. suor. 2, 9-15; XIX 55,18-56,14 K. = Galien I 93,15-95,6 Boudon-Millot. On the other hand, for the date 195-205 A.D., of De ord. libr.suo., see now V. Boudon-Millot, Galien, I 8-10, and Note 10, with all kinds of details.

385 Cf. Ilberg, Ueber die Schriftstellerei ..., II, pp. 504 y 513: Second Stay in Rome. See as well García Ballester, Galeno, p. 266. At the end of book 2, Galen announces that he shall write a treatise dealing with anomalous *dyskrasia*.

386 Ilberg, Ueber die Schriftstellerei ..., II, pp. 508 for the date of De inaequali, and pp. 504 y 513, for the date of De temper., De bono habitu, and De opt. corp. const., post 169.

387 See as well Garofalo, Galeno, Procedimenti anatomici, intr., transl. by, Milan 1991, vol. I, 1-67, spec. 1-23.

388 Cf. Garcia Ballester, Galeno, pp. 266-268.

1-361 K.), and De comp. medic. per gen. (XIII 362-1058 K.) were written under Septimius Severus, so that they could not be alluded in De inaequali.

P. 172,9: τῇ τῆς θεραπευτικῆς μεθόδου. Cf. De meth. med. X 1-1021 K. For the date, *vide supra*.

P. 162,2: ἀλλὰ περὶ μὲν τούτων ἕτερος λόγος. The sentence is placed in Section 11. The previous passage, p. 160,20 - 162,2: αὖξεται γοῦν ἅπαντα καὶ τρέφεται πρὸς τῶν ὁμοίων, ἀναιρεῖται δὲ καὶ φθίνει πρὸς τῶν πρὸς τῶν ἀνομοίων· καὶ διὰ τοῦτο ἢ μὲν τῆς ὑγείας φυλακὴ διὰ τῶν ὁμοίων, ἢ δὲ τῶν νοσημάτων ἀναίρεσις διὰ τῶν ἐναντίων. ἀλλὰ περὶ μὲν τούτων ἕτερος λόγος.³⁸⁹ "Hence, everything grows and is nurtured by similars, but is destroyed and perishes by dissimilars; and, in consequence, the watchfulness of health by means of similars, the destruction of diseases by means of opposites, will be done. However, concerning this, would be another account."

Probably the intended book is De sanitate tuenda (VI 1-452 K. =CMG V 4,2: 3-198 Koch). Second Stay in Rome (García Ballester, Galeno, p. 267). For the subject discussed, see prologue I 1: VI 1, 4-5 K.=CMG V 4,2: 3,2-6 Koch, where Galen states that Medicine has two main parts, the one dealing with health (τὸ μὲν ἕτερον αὐτῶν ὑγιεινόν), the other with therapy (τὸ δὲ ἕτερον θεραπευτικόν) "... and the task of the former is to watch the condition of the body, of the later, to change it"; farther on he deals with opposite and similar.

In De meth. med. he treats the subject again; cf. X 7: X 634,9-10 K., where Galen makes a statement similar to that included in De inaequali: ἀλλ' ὥσπερ τηρεῖται διὰ τῶν ὁμοίων, οὕτως ἀναιρεῖται διὰ τῶν ἐναντίων. "Such as it is watched by means of the similars, that way it is destroyed by means of the opposites". However, the last books were not written by the time De inaequali appeared. In the Commentary to NatHom, a synthesis of this doctrine is included:³⁹⁰ καὶ τῶν μὲν εὐκράτων ἢ εὐκρασία φυλάττεται διὰ τῶν ὁμοίων, τῶν δὲ δυσκράτων ἢ δυσκρασία διὰ τῶν ἐναντίων ἐπανορθοῦται. "Good krasis (health) is kept by the similars, bad krasis is overcome by the opposites". And the text quotes De sanitate tuenda:³⁹¹ διώρισται δὲ περὶ τούτων ἐν τῇ τῶν Ὑγιεινῶν πραγματείᾳ (II[1]: XV 116,4-5 K.)

Some of the books are mentioned in the Future tense, providing a second terminus ante quem:

P. 162,10-11. In p. 162,7-11: "but it is not possible to tell the manner of its genesis (of the symptom) in the present book, before having shown of the natural faculties, how many and of what kind they are, and what each of them does according to nature, but in «The causes of the symptoms» everything will

389 In ms. P, it is written *supra lineam* to ἕτερος λόγος: ἐν τῇ θεραπευτικῇ.

390 See In Hipp. Nat. Hom. comment. II [1]: XV 115,10-116,4 K. = CMG V 9,1 ; 60, 24-26 Mewaldt, where Hipp. Nat.Hom. VI 52, 4-11 L.= CMG I 1,3; 9,1-2: 188,3-10 Jouanna, is commented. It is a late treatise, from the reign of Commodus. See Garcia Ballester, Galeno, p. 268.

391 CMG V 4,2; 1-198 Koch.

be told (ἀλλ' ἐν ταῖς τῶν συμπτωμάτων αἰτίαις ὑπὲρ πάντων εἰρήσεται)". In fact, the aforementioned *rhigos* and its whereabouts are explained in *De sympt. causis* (VII 85-272 K.) Date: Second stay in Rome.³⁹²

P. 162,18 εἰρήσεται δὲ καὶ περὶ τῆς τούτων ἐπιτηδειότητος ἐτέρωθι. "And, of the disposition of these, it will also be told in another place". In *De compos. med. per genera*, Galen considers ulcers prone to putrefy and the drugs adequate to them.³⁹³ The treatise is a late book, as we have seen above. Could he be thinking toward it?

P. 164,16-17: εἰρήσεται δὴ καὶ περὶ τούτων ἐπὶ πλέον αὖθις, ἐν ταῖς τῶν νοσημάτων αἰτίαις = *De causis morb.*, VII 1-41 K. Second stay in Rome.³⁹⁴

P. 170,18-19 δηλωθήσεται <μὲν> γὰρ ἀκριβῶς ὑπὲρ τῆς κατ' εἶδος ἐν τούτοις διαφορᾷς ἐτέρωθι = *De morb. diff.* VI 836-880 K. In *ibid.* 11: VI 874,10 -876,4 K., he broadly deals with diseases accompanied by *rheuma*. Date: Second stay in Rome.³⁹⁵

3. Consequently, *De inaequali* is earlier than *De comp. med. per genera*, a late treatise, and was also written before *De sympt. causis*, *De causis morb.* and *De morb. differ.*: these three were written after 169. On the other hand, *De inaequali* is later than *De temp.*, than Books 1-8 of *De simplic. medic. temp. ac facult.*, and *De sanit. tuenda*, which belong to the Second Stay, beginning in 169. It must have been written after the earlier books of *De anat. adm.*, I-II, dated 177-179, and after the first six books of *Meth. Med.*, post quem 172 AD (172-175 Ilberg).

As *De inaequali* is mentioned in *Meth. Med.*, and *De inaequali* mentions *Meth. Med.*, the redaction of *De inaequali* has to be parallel to the first books of *Meth. Med.*, post quem 172. Being *Meth. Med.* 1-6 an extensive and complicated work, he may have written the short *De inaequali* along with the composition of the former. This accords with the fact that, at the end of *De inaequali*, Galen refers the reader to *Meth. Med.* in a non specific way because he has it in mind, while he specifically mentions *De inaequali* three times in *Meth. Med.* 1-6, the small treatise being written in a short period of time.

If *De inaequali* was written post 172, the books mentioned in it have to be dated post 172 at the least: *De temp.*, *De differ. febr.*, and the first books of *De simpl. medic.* The same happens with *De sympt. causis*, *De caus. morb.*, and *De morb. differ.* (provided this last is rightly estimated), mentioned in *De inaequali* as future books: B. Gundert dates this group (and *De sympt. diff.*) to

392 Garcia Ballester, Galeno, p. 267.

393 See XIII 768,8 - 773,14 K.

394 Cf. Garcia Ballester, Galeno, p. 267.

395 Garcia Ballester, Galeno, p. 266.

176-180 (after *De placitis* VII-IX, in Marcus Aurelius' reign).³⁹⁶ The rest of the books in question are dated not earlier than Marcus Aurelius' reign.

The date of the earlier part of *De anat. admin.*, post 176 and before 180, in Marcus Aurelius' reign, gives us a difficult point. All the treatises mentioned above would be dated post 176. However, Galen had written a first *De anat. admin.* in two books, dedicated to Flavius Boethus, during his first stay in Rome, ca. 161-166,³⁹⁷ as he himself writes at the beginning of *De anat. admin.*³⁹⁸ Would it be the book mentioned as *De anat. admin.* in *De inaequali*? If that is the case, the right reference for the date of *De inaequali* is the composition of the earlier books of *Meth. Med.*, post 172.

4. For the title of the treatise, see Commentary to 1,1.

B 2. CONTENTS

1. Element, quality.

As the wise person he is, Galen is not interested in disease unless he can explain in advance men and matter. In order to understand them, some clever Greeks reached the idea of system, a most necessary presupposition to the understanding of body, life or stars. When they conceived the world as a system, cosmos was born, that is, the whole world was said to be order and beauty. They could carve a man's body or conceive the proportion of the heavenly stars when they understood symmetry, that is, proportion. Micro- and macrocosm went hand in hand.

The depth of insight necessary to the abstraction of searching —outside Mythology—, for a first principle to everything, gives the Milesians a paramount rôle in the discovering of ourselves, and the foundations of science. The initial substance was conceived by the Milesians and the subsequent Pre-Socratic thinkers, as one, be it Fire, Water, Earth, Air, the Unbound, Number, Mind, or Atom.

As time went by, some of them imagined a multiple principle. Multiplicity was apt for taking into account a multiple world, such as it was, such as it is. As they explained the relations within the world, they started to muster the most useful and powerful device of Greek civilization: Greek language, a subtle language that permitted them to express complexity. Thus, it attained a level of accuracy that made possible subtle philosophy, medical definitions, political subtlety —no less than the delights of Comedy.

³⁹⁶ Cf. Gundert, CMG V 5,1, pp. 174-176.

³⁹⁷ See Garofalo, *Procedimenti*, vol. I, p. vii and notes.

³⁹⁸ Cf. *De anat. admin.* I 1; II 215,1 -216,2 K. = I 1,1-7 Garofalo.

Let us look back at the V century B.C.E., whose beginning saw the first of Alcmaeon and Empedocles. Some Greek physicians tried to understand man's nature as a system, whose balance or unbalance made the human body healthy or sick. We do not know the time when *dyskrasia* was first applied to disease, but we do know that probably Alcmaeon was the first to use *symmetros* krosis of qualities, as balanced mixture in men:³⁹⁹ τὴν δὲ ὑγείαν τὴν σύμμετρον τῶν ποιῶν κρᾶσιν.

The notion of *symmetria* that Polycletus applied to his Doryphorus by the middle of the V c., was alive in Art as it was in the composition of Tragedy, or in the last of Pindar's poetry. The Parthenon represents a visual sample of larger dimensions, exhibiting different proportions of harmony on the basis of the Golden Section that even Sophocles applied to his Ajax.⁴⁰⁰

Alcmaeon⁴⁰¹ explained the equilibrium of paired qualities: moist/dry, cold/hot, sour/sweet. He thought of health and disease in political terms, so that isonomy of the qualities meant health, while *monarchia* of any of them caused—or just was—disease.⁴⁰² The words *dynamis*, krosis, *symmetros*, entered the field of medicine. Empedocles proposed a fourfold principle of the cosmos: Earth, Water, Air/Aether, Fire, in order to take into account the activity/passivity in it. He envisaged as well the balance of the four roots⁴⁰³ and the four qualities: hot/cold, dry/wet.⁴⁰⁴

While Plato proposed an arithmetical model of the universe, on the basis of the Pythagorean concept, Aristotle professed a qualitative description. All the substances are combinations of the four elements, which in turn are combinations of the four qualities: earth is cold and dry, water cold and wet, air hot and wet, fire hot and dry. He proposed a fifth element, Aether, for the heavenly bodies, in order to account for their circular movements.⁴⁰⁵

The notion of mixture in the Stoics, as told to be by Chrysippus⁴⁰⁶ in his *De mixtione*, fr. 473 Arnim (*Frag. logica et physica* 473.101-107), is described

³⁹⁹ Fragment 4.9 D-K. Pythagorean as he was, he knew of *krosis* producing harmony. See Guthrie, 1.1.1., pp. 448 ff.

⁴⁰⁰ See Pilar Hernán Pérez, *La estructura arquitectónica del Ayante de Sófocles*, diss. PhD, Madrid, UCM, 2005.

⁴⁰¹ Acme ca. 450 B.C.E. according to G.E.R. Lloyd, p. 114 in: "Alcmaeon and the early history of dissection", *Sudhoffs Archiv* 59, 1975, pp. 113-147 (now in *Methods and problems*, pp. 164-193).

⁴⁰² See fr. 4 D-K.

⁴⁰³ Empedocles, ca. 490-430. Summary in NP, Empedocles [1], by J. Bollack. For the four roots, see Fr. 6 D-K. Other names given by Empedocles to the four roots in: M. R. Wright, *Empedocles. The extant fragments*, ed., New Haven-London 1981, p. 23.

⁴⁰⁴ For elements, qualities and humours in Diocles Carystius, see fr. 25-27 Eijk (7, 8c and 8a Wellmann) in *Diocles I*, and *Commentary in Diocles II* pp. 46-56. The fragments belong to Galen *Med.Meth.*, *De placitis*, and *Nat. Fac.*

⁴⁰⁵ A summary in G. E. R. Lloyd, *Early*, pp. 99-124.

⁴⁰⁶ III c. BCE. Summary in NP, Chrysippus [2]

this way: "Through the whole matter there is a *pneuma* that contains everything and keeps it together, and he states that, of the bodies mixed (μικγνυμένων) in the matter itself, the mixtures (μίξεις) of some of them, happen by juxtaposition, two or more matters being put together (in the same place) and side by side with one another; by junction, each of them keeping its own matter ..."

While Aristotle proposed four factors ("causes") for any object: matter, form, moving cause and final cause, for the Stoics "there is a highest notion ... the <something> followed by the four categories <substratum>, <quality>, <state> and <relative state>."⁴⁰⁷ The *pneuma* pervades it all: mixing with matter, *pneuma* gives it the qualities. The *continuum* of the Stoics is made possible by the *pneuma* that fills the cosmos, in a dynamic sense, so that *pneuma* is cohesive and makes cohesive.⁴⁰⁸

The notion of mixture is described by Aristotle as being uniform throughout, because the initial entities keep being *potentially* what they were before the mixture, and at the same time they *actually* are something different.⁴⁰⁹ On the other hand, the Stoics propose three kinds of mixture. The first is similar to Aristotle's "composition", where the substances keep being exactly as before. The third is fusion, where the result of the blending is a third substance, with new properties. The intermediate mixture produces a complete mixing (κρᾶσις δι' ὅλων) of the components, which keep their own properties:⁴¹⁰ this is the fundamental conception for the Physics of the Stoics and their followers. It is not a mixture of the qualities, but of the substances, each of them keeping its properties.

Plato, Zeno, Aristotle and Theophrastus, Eudemus, Cleanthes and Chrysippus, with many philosophers, who called themselves "Stoics, Peripatetic, or Platonic, conceived the body as air, fire, water and earth, or humid, dry, hot and cold, symmetrically mixed with one another (συμμέτρως ἀλλήλοις κεκραμένων)", according to Galen in Adv. Iulianum.⁴¹¹ In the same treatise,⁴¹² he attributes to Zeno, Aristotle and Plato, and many philosophers after them, the statement that health is the *eukrasia* of hot, cold, humid and dry, while disease happens when one of them is in excess or (partially) missing.⁴¹³

407 Cf. Sambursky, Stoics p. 17.

408 See Sambursky, Stoics, pp. 7-11.

409 Sambursky, Stoics, pp. 11-17.

410 In fr. 472 Arnim, 85-91, Chrysippus makes a fundamental account of *mixis* and *krasis*. For interesting research on the difference between *mixis* and *krasis* in Galen, see now V. Boudon-Millot, La notion de mélange dans la théorie humorale de Galien : Mixis ou Crasis ?

411 Adv. Iul. 5,10: XVIIIa, 269,11 -270,3 K.=50,17-21 Wenkebach.

412 Adv. Iul. 4,1: XVIIIa, 257,15 - 258,6 K.=42,9-17 Wenkebach= fr. 132 Zenon, Arnim.

413 In the V-IV c., εὐκρασία is applied to climate, pleasure, character or life, by Euripides, or Plato. See Euripides, fr. 504,2 Kannicht=Austin; fr. 772,2 Kannicht=Austin; fr. Phaeth. 7.23 Diggle, and cf. critical app. to fr. 981,2 Kannicht. Plato Tim. 24.c.6; Crit. 112.d.3; Ax. 371.d.4. Anaxagoras and Democritus (cf. testimonia 135.60 D-K II) are reported to attach εὐκρασία to

In Nat. Fac. I 2, Galen mentions Hippocrates as the first philosopher/doctor who demonstrated that "there are in all four mutually interacting qualities ... and that all these qualities undergo an intimate mingling with one another."⁴¹⁴ Earlier, Galen brings up Aristotle and Chrysippus as the pivots of the matter theory as far as qualities are concerned.⁴¹⁵

Galen states at the beginning of *De temperamentis*:⁴¹⁶ "That the animal body is a blending of the four qualities, is well known by the best old philosophers and doctors"; and adds that he himself has explained it in *De elementis* (ibid. 1, 4-7 Helmreich). For the notion of symmetry and asymmetry as health and disease, Galen⁴¹⁷ credits the schools of Plato, Aristotle, and Zeno, but precisely thanks Chrysippus for the gift of such a conception. For a detailed exposition of elements and qualities in Galen, and the state of the art since XIX^m c., cf. Kovačik, *Der Begriff der Physis*, pp. 89-98.

2. Humours.

Along with the principles of the world, the microcosm that is man, was provided with something similar to them. Sure, phlegm, bile and blood have been mentioned before — they appear throughout the Epic poetry. Four were the principles of the world according to Empedocles,⁴¹⁸ and four the qualities;⁴¹⁹

brain. In the Hippocratic Corpus, it is applied to climate (Aer. 24,5-6: Hippoc. II 2; 247, 4 – 248,3 Jouanna = II 90,3-7 L. = I 69,15 – 70,1 Kühlewein = CMG I 1,2; 80,7-11 Diller [247,4-7 Jouanna: ὅσοι... ἀλλήλοισιν Paris. 2047, non habent Littré, Kühlewein, Diller] and Vict. III 68: VI 600,5-6 L. = CMG I 2,4; 198,11-12 Joly), wine (Acut. sp. 14 L./38 Kühlewein: II 474,24 L. = 166,18-19 Kühlewein), and remedies (Nat.Mul. 32: VII 350,21 – 352,1 L. = 89,21 – 90,1 Trapp, and 51: VII 394,4 L. = 111,4 Trapp).

414 See Nat. Fac. I 2; II 5, 4- 13 K.= 104, 2-6 Helmreich=8, 14-19 Brock.

415 Nat. Fac. I 2: II 4, 14 - 5, 2 K.= 103,18- 104,2 Helmreich = 8, 4-14 Brock.

416 *De temper.* I 1: I 509, 2-6 K = 1, 2-5 Helmreich. According to Hunayn, Galen wrote two other treatises concerning mixture as well: 166, *Über die Mischungen nach der Ansicht des Hippokrates*, one book, and 178, *Über die Mischungen nach der Ansicht des Praxagoras*, one book. Cf. Bergsträsser, *Neue Materialien*, pp. 97-98.

417 *De placitis* V 2: CMG V 4, 1, 2: (300) 31,1 – 35,1 Lacy= V 439, 17 - 440, 15 K.

418 The grounds for the four elements, four qualities and four humours, as developed in Galen, are the theories of one, two, three and four *archai*, the number theory of the Pythagoreans, the opposites and the harmony theory of the Pythagoreans, Alcmaeon and Heraclitus, according to Schöner (Das Viererschema, pp. 4-14.) Elements were related to gods, qualities, colours, organs, and feelings, while humours were coupled with organs, qualities or colours.

419 Plato in his *Timaeus* makes cosmos and men come from the four elements, and he includes the four qualities (Tim. 88c-d). He mentions several types of bile, as well as phlegm and blood. Aristotle definitely relates the four elements to the four qualities (*vide supra*). Praxagoras puts the *pneuma* and his nine humours plus blood, in the centre of his Physiology, not in the tradition of the four humours. In the period 300-50 B.C.E., the Stoics held that the cosmos and the body consisted of the four elements or the four qualities, in a different way than Aristotle. They divided the qualities into active (hot/cold) and passive (dry/humid). Earlier, the four elements and the four qualities were mentioned as well by Diocles of Caristus, fr. 25-26, I pp. 46-47 Eijk, where *κεκῶσθαι* has the sense of balance.

four would be in the long run the constituents of the human body, as a pendant to the elements.

The number of humours⁴²⁰ necessary to explain the physiology of men was not fixed in the V-IV c.: it could be either one or two, or three, or four. In the Hippocratic Corpus, both the author of Diseases IV, the so-called C-author,⁴²¹ and the son-in-law of Hippocrates, Polybus (NatHom), conceived a system of four humours. Phlegm, yellow and black bile, and blood, as explained in NatHom,⁴²² would be the lasting ones, being assumed by Galen,⁴²³ and passing thereby to (Arabian and) European medicine.

In NatHom 4: CMG I 1,3; 2,1 -3,1 (172,15 -174,2) Jouanna, health is said to be based upon the *metriô*s proportion in [krasis and] *dynamis* and quantity, of the humours, being in a perfect mixture (μεμιγμένα): ὑγιαίνει μὲν οὖν μάλιστα, ὅταν⁴²⁴ μετρίως ἔχη ταῦτα τῆς πρὸς ἄλληλα⁴²⁵ δυνάμιος καὶ τοῦ πλήθους, καὶ μάλιστα μεμιγμένα ἦ. Pain,⁴²⁶ on the other hand, occurs when there is too much or too little of any of the humours, and it becomes isolated in the body and unmixed (μὴ κεκορημένον ἦ) with the others.

As the four humours were associated with the four Pre-Socratic *archai* or elements, to the former and the later the four qualities applied. For Aristotle, each element represented a pair of qualities, or else it was a pair of qualities to the extent of qualities being in fact the four elements themselves.⁴²⁷ Changing the qualities, one element gives way to another.

In fact, a complete explanation of the correlation elements-qualities-humours is found in Galen's *De elementis*.⁴²⁸ Blood is hot and humid, yellow bile is hot and dry, black bile is cold and dry, and phlegm is cold and humid. Humours were associated with elements. Phlegm was coupled by Water, yellow bile by

420 The system of humours is explained in several Hippocratic treatises, even if the authors do not necessarily agree on the number or the quality of the humours. For the system of four humours, cf. E. Schöner, *Das Viererschema*. I. M. Lonie (The Hippocratic treatises "On Generation"..., pp. 54-62) considered the relationship between the four elements and the four humours in the Hippocratic Corpus.

421 Grensemann distinguished in the gynaecological treatises of the Hippocratic Corpus three layers, A, B and C. The C-author happened to write as well *MorbIV* and *De natura pueri/De genitura*. See Grensemann, *Knidische Medizin*, I and II, and *Hippokratische Gynäkologie*.

422 The C-author included Water instead of Blood.

423 See J. Jouanna, *La postérité du traité Hippocratique de la Nature de l'homme*, in: Brockmann... *Aertze und ihre*, pp. 117-142, for the posterity of the four humours' theory, where he adds new testimonies. For the Commentary of the Hippocratic *De nat. hom.* by Galen, see A. Roselli, pp. 1554-1557 of: D. Manetti, A. Roselli, *Galeno commentatore di Ippocrate*, ANRW 37.2, 1529-1635.

424 ὁκόταν Littré.

425 κρίσιος καὶ post ἄλληλα *add.* MV: *om.* Gal Laurent. LIX 14, Jouanna.

426 Pain is a fundamental sign of disease for Galen, and the easiest to grasp.

427 For Galen, aether, the fifth Aristotle's element, was not necessary.

428 Ch. 1-5 deal with elements, ch. 6-9 with qualities, ch. 10-14 with humours. See de Lacy, CMG V 1,2.

Fire, and black bile by Earth. The association of blood with Air is posterior to Galen.⁴²⁹ In *De placitis*⁴³⁰ he states that the dominance of blood belonged to childhood and spring, yellow bile to youth and summer, black bile to adulthood and autumn, while phlegm is related to winter and old age.

When the natural or innate heat, cold, humidity, and dryness, increases/decreases, the system loses balance and disease appears. Like Aristotle, Galen considers change in quality as "motion" (κίνησις), "qualitative motion": κατὰ τὴν ποιότητα κινεῖσθαι.⁴³¹ It includes heating and cooling, drying and moistening, that is, alteration, ἀλλοίωσις.⁴³²

And he continues (*Nat. Fac. I 2*): "composed from them [alteration and transference] we have growth and decay (αὔξησις τε καὶ φθίσις), as when a small thing becomes bigger, or a big thing smaller, each retaining at the same time its particular form."⁴³³

3. *Dyskrasia*.

The first mention of *dyskrasia* seems to be by Theophrastus, in *De causis plantarum* V 8,2,5-6 Wimmer, where he refers it to climate: ὅταν ἢ χειμῶνες ὑπερβάλλοντες ἢ καύματα ἢ ἐπομβροαὶ ἢ ἄλλη τις δυσκρασία τοῦ ἀέρος. It is in this sense that it appears now and then in the texts.⁴³⁴ On the other hand, "Aristotle and Theophrastus have precisely defined on what grounds it is possible to predicate *eukraton* or *dyskraton* of the *physis*", Galen writes in *De temperamentis* I 3: I 535, 9-12 K. = 17, 10-13 Helmreich.

For *dyskrasia* as disease, Galen points in the first place to Hippocrates in *Meth. Med. II 5*: X 111, 5-11 K.: "That there are many kinds of morbid *dyskrasia* and that therapy is different accordingly, is attested not just by Hippocrates and many other physicians, but by Plato, Aristotle, Theophrastus, <Zeno and Chrysippus>...."⁴³⁵

In the II c. B.C., the Stoic Poseidonius⁴³⁶ relates disease to an excess of cold, heat, dryness or humidity,⁴³⁷ and explains that medicine is needed because of the *dyskrasia* of the qualities and the loosing of continuity (fr. 309a.121-125 Theiler). In fact, Galen states that the diseases of the homoeomers are ei-

429 Cf. J. Jouanna, *La posterité*, p. 121.

430 *De placitis* VIII 6: V 692, 18 - 693, 3 K. = CMG V 4, 1, 2; (516) 17,1 -18, 1 Lacy.

431 See *Nat. Fac. I 2*: II 3, 2-9 K. = SM III 102, 13-20 Helmreich = 4, 19-20 Brock.

432 *Nat. Fac. ibid.*

433 *Nat. Fac. I 2*: II 3, 12 - 15 K. = SM III 102, 23 - 103, 2 Helmreich = 6, 8-10 Brock.

434 Cf. *inter alios*, Plutarch, who employs it as an unbalance of the weather, but he applies it as well to the "elements" (στοιχεῖα), the body or the soul. See *Vitae, Alex. 2.2*: 58,1,3 Ziegler; *Dio 2.1*: 5,7,3 Ziegler; *Arat. 3.1*: 29,8,5 Ziegler.

435 Zeno, fr. 131 Arnim.

436 ca. 135-51 B.C.E. Summary in NP: Poseidonius [3], by Brad Inwood.

437 Cf. Schöner, 79-80.

ther *dyskrasia* or a loosening of continuity (see below, Commentary to section 5).

In the first century B.C., the Pneumatic school,⁴³⁸ under the influence of the Stoa, established the four qualities as the basis of Physiology and disease, and defined four simple *dyskrasia* and four composed.⁴³⁹ The qualities govern health, disease and death. Humours depend on them as well. On the qualities, they constructed a complex system dealing with elements, seasons, ages of men, humours, fevers. It is the largest system before Galen.⁴⁴⁰ Its shortcomings made it useless in many respects.⁴⁴¹

Galen's *dyskrasia* is produced by an unbalance of qualities/humours. In the homogeneous *dyskrasia*, the whole body gets uniformly sick, while in the anomalous⁴⁴² *dyskrasia* either a part, a humour in the whole body, or the body in a discontinuous way, gets sick in a heterogeneous way. The localised anomalous *dyskrasia* in a part, is produced by a displaced flux (humour) that invades the part and the hollows nearby, getting obstructed in it and producing *dyskrasia*, unless the body reacts by means of evaporation or deposits (*apostasis*). If not cleared, the local *dyskrasia* destroys the capacity of the part, as when inflammation is produced in a muscle, and the body cannot defeat it. Another result of local *dyskrasia* is general *dyskrasia*, as when inflammation produces fever.

The affected parts are the homoeomers and the hollows, be they inside the homoeomers, in between them, or in between the organs. Another form of disease of the parts, is an external injury that loosens the continuity, as the inner "injury" does from inside.

Being the best known anomalous *dyskrasia* of the body, fever is mainly produced from the body itself either by inflammation in a part, or by sepsis of the humours (other internal causes in Section 13). In both cases all the blood in the body gets heated. Fever may develop as well from external causes, such as a sun-stroke (*vide infra*). Galen emphasizes the fact of the solid parts not being heated in most fevers, the heat reaching just the pneuma and the humours: such *dyskrasia* is heterogeneous or anomalous, whereas during the *hektikos* fe-

438 Much data in J. Kollesch, Untersuchungen... See V. Nutton, NP, s.v. Pneumatists.

439 Schöner 81-85, and Wellmann, Die pneumatische Schule bis auf Archigenes in ihrer Entwicklung dargestellt, Berlin 1895, pp. 163-168.

440 In his non-humoral system, Aretaeus, who followed the Stoics, conceived *pneuma* as keeping together the fundamental qualities. The balance of those is *eukrasiê*, and the unbalance *dyskrasiê*. Cf. De caus. et sign. acut. morb. 2.12.4.1 Hude. In the II c. AD, Archigenes Med. (cf. fr. 14.27 Brescia), and Severus Iatrosophista (cf. De instr. inf. 5.14, 15.10, and 28.2 Dietz), deal with *dyskrasia*.

441 The pseudo-Galen's Definitiones medicae belong to this current. See Jutta Kollesch, Untersuchungen...

442 In the sense of internal unbalance, Democritus is reported to apply *anômalos* to *sugkrima* ("uneven compound") in A 93 D-K, while Anaxagoras is reported to speak of *anômalotês sugkrimatos* in A 77, 6-10 D-K. See DGE s.v.

ver, the solid parts get hot as well: that is the homogeneous *dyskrasia* (see Section 10, third block).

The treatise deals specially with the *êpialos* fever, produced by two *dyskrasia*, a hot and a cold one. Its peculiarity comes from the fact of *rhîgos* (cold) being present all the time as well as fever (hot). Galen insists on the fact of heat and cold being perceived at the same time by the patient: with his didactic bias, Galen compares the perception of cold and heat, in different body's parts, during some fevers, with that of somebody exposed to sun-heat, whom you throw cold water on.

The alteration of the qualities without the presence of a flux produces *dyskrasia* as well. The exterior causes of systemic anomalous *dyskrasia*, such as heat-stroke or ice-cold exposure, too much exercise or idleness, lack of food or drink, or an excess of such and such foods, produce a qualitative unbalance, i.e. an excess or default of hot, cold, dry, humid. Fever could be produced by extrinsic causes as well.

Galen does not define the anomalous *dyskrasia*. At the beginning of *De inaequali*, he presents it by means of oppositions: systemic/localised, with/without flux, simple/composed. At the same time, the opposition anomalous/homogeneous is underscored by the mention of the *hektikos* fever, due to the homogeneous *dyskrasia*,⁴⁴³ in front of the other fevers, caused by the anomalous one. Such mention is repeated in the treatise five times with the same words: "except for the so called *hectic* fevers".

He goes on to explain the process of local *dyskrasia* by means of inflammation of a muscle, that is, the most frequent local *dyskrasia*, as he will describe the "systemic" by means of fever, again the most familiar of them. The transformation of inflammation into fever exemplifies the process from local to "systemic" *dyskrasia*.

At the end of the book, the reader is able to distinguish anomalous from homogeneous *dyskrasia*, and to tell the differences between them. There is no definition, *dyskrasia* being at the same time a disease, a way of getting sick, and a syndrome.

4. Transformation and pain.

Transformation/pain⁴⁴⁴ is a subject second in importance to *dyskrasia* in the treatise, and closely related to it. In the homogeneous *dyskrasia*, once established, there is no ongoing change, while in the anomalous, change keeps occurring until the destruction of the capacity of the organ, unless the body

⁴⁴³ In the *hektikos* fever, the solid parts are reached as well, while the other fevers just attack *pneuma* and/or the humours.

⁴⁴⁴ See sections 5, 7, 8, 10.

overcomes the *dyskrasia* by evaporation, or *apostasis*.⁴⁴⁵ The anomalous *dyskrasia* has a role in every local disease (unless trauma happens), and most of the systemic ones.

The so-called *hektikos* fever⁴⁴⁶ is a perfect example of homogeneous *dyskrasia*. All the organs (that is, the solid parts as well) are equally heated by it, i.e. by a homogeneous *dyskrasia*, so that there is no pain or perception of it by the patient. The cause of the non perception of pain is not the incapacity of the organs of perception. Galen attributes it to the absence of ongoing change. When the alteration is complete — and finished —, pain is excluded: no ongoing change, no pain. Galen uses an Aristotelian expression in our treatise:⁴⁴⁷ τὸ μὲν ποιεῖ, τὸ δὲ πάσχει (p. 158,12-13). It is not that of the parts, "the one is active, the other, passive," for all of them have already become the same, and present a homogeneous *krasis*.

In the anomalous *dyskrasia*, change occurs during the process of disease, an alteration that only ends with the loss of (the capacity of) an organ, or with its recovery (*diaphorêsis* or *apostasis* in the *phlegmonê*).⁴⁴⁸ There is pain as long as there is alteration. In fact, he says that whenever a fever becomes chronic, a *hektikos* fever accompanies it, i.e., even the solid parts will be affected if fever keeps on without pause.

In Table II there is a synopsis of the relationship between change, disease, time and pain, and a second, relating change, disease, matter and pain.

In *De elementis*, Galen quotes twice⁴⁴⁹ the statement of NatHom 2,3: "I say that if man were one, he would never feel pain, for there would be nothing that would cause him pain if he were one" (trans. Lacy), introducing this way the relationship change-pain. He marvels at the cleverness and concision of the sentence — such reasoning in a minimum of words —, just as we do. The concision is similar to, say, the void for Aristotle: "in so far as it is void, admits no difference".⁴⁵⁰

We need in fact a matter apt to change, and time: a process apt to make matter change. The passages that Galen dedicates to pain in *De inaequali intemperie* are, in fact, dedicated to transformation.

"Pain will stop just when they (the parts) become identical to that which changes them, for not when they have been changed in their [*krasis*] nature, but in the process of changing do the parts feel pain (οὐ γὰρ ἐν τῷ μεταβεβλήσθαι

445 Find Section 4, Deposits.

446 Cf. Section 10.

447 It appears now and then in Aristotle. See inter alia, in the doctrine of the opposites, *De longitudine*, 465b.14 -16 (*Parva naturalia*, Ross): εἰ οὖν, ὅταν ἅμα ἦ τὸ ποιητικὸν καὶ τὸ παθητικόν, ἀεὶ τὸ μὲν ποιεῖ τὸ δὲ πάσχει, ἀδύνατον μὴ μεταβάλλειν.

448 Section 4, Deposits.

449 Cf. Table I.

450 Cf. Aristot. *Physic* 214 b.

**TABLE II. TIME, MATTER AND PAIN IN THE HIPPOCRATIC CORPUS
AND GALEN**

Change needs time to happen
Disease needs change to happen
Pain needs disease to happen
Pain needs time

".... Pain will stop as soon as they (the parts) become identical to that which changes them, for not when they have been changed in their nature, but in the process of changing, do the parts feel pain, as the admirable Hippocrates said: «in those getting changed and destroyed in their nature, pain is present.» And each part is being changed and destroyed in their nature, either becoming hot, or cold, or dry, or humid, or else having the continuity loosened." Gal. De inaeq. intemp. 5: 150,22-152,6 G^a Novo = 3; VII 739,5-12 K. Hipp. De loc. hom. 42: VI 334, 7-8 L.=Hipp. XIII: 71,21-72,1 Joly = 42,1; 78,18-19 Craik cf. Gal. De tremore 6: VII 620,6-8 K. cf. Gal. In Hipp.Epid. VI, comm. VI 6: XVIIb,334,2-4 K.=CMG V10,2,2; 343,2-4 Wenkebach cf. Gal. De sympt. causis I 6: VII 115,14-15, and I 5: VII 176,9-10 K.

Change needs matter to happen
Disease needs change to happen
Pain needs disease to happen
Pain needs matter

"I say that if man were one, he would never feel pain, for there would be nothing that would cause him pain if he were one." Hipp. NatHom 2,3; VI 2, 10-11 L.=CMG I,1,3: 168, 4-5 Jouanna cf. Gal. De elem. 2, 3-4; I 415, 15-16 K.=CMG V 1,2: 58,14-15 Lacy et 3, 32; I 434, 7-9 K.=CMG V 1,2: 76,21- 78,2 Lacy cf. Gal. In Hipp. NatHom. 1, 6; XV 35,16 - 36,2 K.=CMG V 9,1: 20, 25-27 Mewaldt

"In fact, this has been agreed upon by the philosophers of nature in their writings on perception: for neither without alteration, perception, nor in those completely altered, pain." Gal. De inaeq. intemp. 10: 158,8-10 G^a Novo = 5; VII 743,18 – 744,2 K.

τὴν <φύσιν> [κρᾶσιν], ἀλλ' ἐν τῷ μεταβάλλεσθαι πονεῖ τὰ μόρια), as the admirable Hippocrates said: «in those getting changed and destroyed in their nature, pain is present.» (τοῖσι γὰρ τὴν φύσιν διαλλαττομένοισι καὶ διαφθειρομένοισιν, αἱ ὀδύνη γίγνεται.) And each part is being changed and destroyed in their nature, either becoming hot, or cold, or dry, or humid, or else having the continuity loosened." (Section 5: 150,22-152,6). And "in fact, this has been agreed upon by the philosophers of nature in their reasonings on perception: for neither without alteration, perception; nor in that what have been completely altered, pain" (οὔτε γὰρ χωρὶς ἀλλοιώσεως ἢ αἴσθησις, οὔτ' ἐν τοῖς ἤδη τελέως ἡλλοιωμένοις ἢ ὀδύνῃ) (Section 10: 158,8-10).

A third aspect of the process of change is the alterability of humours and pneuma. In Section 7: 154,4-13, he ascertains the capacity for change in them, establishing a scale based upon other physical properties: not just the usual four, but the matter composed by thin/thick parts.

Having explained the qualities of the humours and pneuma in advance, his next subject is the question: "how hot is hot?" It had to be difficult to rely on heat and cold, since there were no thermometers available. Sambursky assured that all these qualitative theories have been demonstrated to be useless. Nevertheless, in the absence of reliable measures, the opposition hot/cold is still very important. Galen proposes to take boiling water as the peak of hot, and ice as the peak of cold, and he deems that the neutral state between them, would be the result of putting the two together, taking into account the external conditions, bien sùre.

In our treatise he ascertains the radical importance of hot and cold (active for Aristotle: δραστικώταται γὰρ αὗται αἱ ποιότητες, Section 5: 152,8), and tries to explain the relative heat of the humours during the presentation of a *phlegmonê* that becomes fever. His consideration is rather detailed (Section 6: 152,12 - 154,4). Let's take a look to it. He states four levels:

a=blood in the inflammation

b=blood in the whole body

- | a | | b |
|--|-----|---|
| 1. if a has an adequate heat | AND | b has a temperate krasis
THEN: b not easily heats up |
| 2. if a boils harder | OR | b is bilious
THEN: suddenly all of them heats up |
| 3. if a is hot enough | AND | b is bilious
THEN: it does happen much more |
| 4. if a is near the viscera with much blood | | THEN: b gets hot quicker. |

It is not accurate, but still he tries! Although thermometers were not available, observation was certainly at work.

5. The treatise *De inaequali intemperie*.

This small book focuses inflammation and fever, the most widely known affections produced by Anomalous *Dyskrasia*. Galen explains the one after the other, taking into account that fever can be produced by inflammation. As hot blood is the humour that causes both affections, the presentation of *dyskrasia* goes easily from local to general.

In order to reach his objective, the writer plans a continuous thread from beginning to end —AD— now and then inserting the necessary subjects that will help the reader understand *dyskrasia*: Anatomy (homoeomers and hollow places, vessels); Physiology: formation of deposits, alteration and pain, consequences of heat and cold, dryness and moisture on (a part of) the body; qualities (the four plus alterability and thinness or thickness of parts) of pneuma and humours; Moderate and immoderate differences of *krasis*; Compatibility and incompatibility between body's parts and humours: the concept (and use) of similars and opposites; Capability of perceiving heat and cold at the same time.

These subjects back the understanding of the physiology of *dyskrasia*, the local and the general, and remind the doctor-to-be of key notions in a more general spectrum. These advantages, coupled with a clear style and composition, substantiate the importance enjoyed by the treatise throughout the centuries: Oribasius and Paulus of Aegina; the ancient scholium in P; the translation by Hunayn, and the ca. 85 copies of Gerard of Cremona's version; the translations by Peter of Abano and Nicholas of Reggio in the beginning of the XIV c.; the early Commentaries on the Arabo-Latin translation; the different transliterations of the Greek text; the new Renaissance versions, and the surprising amount of Renaissance Commentaries: all bear witness to the appreciation of *De inaequali intemperie*.

B 3. COMPOSITION

1. Galen composes the treatise on the grounds of rhetorical devices such as frames, ring composition, and parallelism, using at the same time certain stylistic features, all of which help order the contents so as to be understood by the reader.

2. Frames.

The treatise consists of three topics: Anomalous *Dyskrasia* in the body (systemic), AD in a part (local), and Transformation of systemic into local AD.

TABLE III. COMPOSITION: SECTIONS, FRAMES AND RINGS

AD = anomalous dyskrasia S = section F= frame R= ring

S 1. Presentation: AD-body + AD-part 142,2-144,9

F F 1. AD-body 142,2-5

F F 2. AD-part: diseases 142,5-8

R-1. (outer) anomalous vs. homogeneous dyskrasia 144,5-7

R-2. (outer) genesis of AD 144,7-9

R-3. (inner) to explain anatomy for the sake of clarity 144,9-10

S 2. Anatomy 144,9-146,17

R'-3. (inner) to explain anatomy for the sake of clarity 146,16-17

R'-2 (outer) genesis of AD 146,17-19

R'-1 (outer) anomalous vs. homogeneous dyskrasia 146,19-20

S 3. Inflammation 146,17-150,2

R-4. (outer) *rheuma* wins 150,2-3S 4. Deposits 150,2-20 (defeated *rheuma*)R'-4. (outer) *rheuma* wins 150,20-21

F' 3 = S 5. Transformation-1 150,20-152,11

S 6. Inflammation to fever-1 152,12 -154,4

R-5 (inner) heat in the inflammation 152,12

S 7. Transformation-2 154,4-13

R-6 (inner) multifarious transformations 154,14-15

S 8. Transformation and inflammation 154,14-156,2

R'-6 (inner) multifarious transformations 154,23-156,2

S 9. Inflammation to fever-2 156,2-11

R'-5 (inner) heat in the inflammation 156,3-4

R 7 (outer) sepsis to fever 156,11-13

S 10. Transformation-3 156,13-158,10

R 8 (outer) *hektikos* fever, no change=painless 158,11-14

S 11. different is noxious, same helps 158,14-162,2

R' 8 (outer) *hektikos* fever, no change=painless 162,3-4S 12. AD heat+cold: fever (painful) + *rhigos* 162,4-14

R' 7 (outer) sepsis to fever 162,15-18

S 13. AD: heat: other causes of fever 162,19-164,17

S 14. AD: heat+cold: fever + *rhigos* 164,18-166,7S 15. AD: cold + heat: *rhigos* + *epialos* fever 166,7-168,10S 16. cold AD/no heat: *rhigos*/no fever 168,10-170,4S 17. AD: heat + cold: fever + *rhigos* 170,5-10 =

F' 1 (=S 17) AD-body 170,5-10

S 18. 170,11-172,7 =

F' 2 AD-part: diseases (Local AD) 170,11-172,5 +

F' 3 Transformation-4 172,6-9

[enough 172,8-9]

Galen will first explain local AD, then the transformation from local to systemic, and finally systemic AD. As local *dyskrasia* he presents inflammation, as systemic, fever (that is, hot *dyskrasia*). The central part of the book explains the transformation of inflammation into fever.

In order to underline these three topics, Galen utilizes three frames⁴⁵¹ in the book, which close at the end of the treatise. See Table III.

The first opens the book and embraces systemic AD (Frame 1: opening p. 142,2-5, closing p. 170,5-10), including the heterogeneous *dyskrasia* (HD). Immediately after, the second frame embraces local AD (Frame 2: opening p. 142,5-8, closing p. 170,11-172,5). The third frame, dealing with Transformation, opens at p. 150,20-152,11, and closes at p. 172,6-9, exactly after the two other frames.

The three frames keep to the order of presentation, at their close:

[¹ [² [³]¹]²]³. At the end, the frames pick up and amplify on their contents. They are not just ornamental pieces.

FRAME-1, opening, 142,2-5. AD in the body: fever/*êpialos* fever/nearly all fevers/*hektikos* excepted. ἡπιάλοις πυρετοῖς/σχεδὸν ἅπασι/ πλὴν τῶν ἐκτικῶν ὀνομαζομένων (HD)

FRAME-2, opening, 142,5-8. AD in a part: related diseases: οἰδισκόμενον, φλεγμαῖνον, γαγγραινούμενον, ἐρυσιπέλατι κάμνον, καρκίνω; ἐλέφας, φαγέδαινα, ἔρπης.

FRAME-3, opening, 150,20-152,11 Transformation-1: μεταβεβλήσθαι, μεταβάλλεσθαι/ παύσεται δ' ὀδυνώμενα τότε πρῶτον ὅταν ἐξομοιωθῇ τῷ μεταβάλλοντι.

FRAME-1, close, 170,5-10. AD in the body: fever/ *êpialos* fever +*rhigos*/nearly all fevers/*hektikos* excepted. ἡπιάλος/πυρετοὶ σχεδὸν ἅπαντες/ πλὴν τῶν ἐκτικῶν ὀνομαζομένων (=HD)

FRAME-2, close, 170,11-172,5. AD in a part: related diseases: φλεγμονή/ καρκίνος, ἐρυσίπελας, ἄνθραξ, ἔρπης, οἴδημα, φαγέδαινα, γαγγραινα

FRAME-3, close, 172,6-9. Transformation-4: ongoing/complete εἰ πᾶν ὅλον δι' ὅλου μεταβάλλοι καὶ ἀλλοιωθεῖ ... ἀνώδυνον

3. The Units.

Galen has composed the treatise by means of Units. Several Units, stylistically marked, are grouped into larger ones that I call Sections. The Units are mostly defined by linguistic features.

I collect here some of the Units' marks. I shall refer to them throughout the commentary.

⁴⁵¹ A Frame is defined by similar passages at the beginning and the end of a book, somewhat like the frame of a painting.

OPENING MARKS**STYLE:**

groups of particles καὶ μὲν δὴ καί, καὶ δὴ, μὲν οὖν, μὲν δὴ ...

anaphoric οὗτος, πᾶς

prolepsis

anteposed V_f (verbum finitum)

anteposed subordinate sentence

chiasm AB B' A' (from B' on)

absolute genitive

participle

absolute infinitive

STRUCTURE:

ring composition (opening)

parallel openings

CLOSING MARKS**STYLE:**

postposed (to end) grammatical subject

postposed main sentence (many a time)

absolute genitive

comparative subordinate sentence (postposed), with V_f or Participle

consecutive subordinate sentence (postposed), with ὥς, ὥστε + Infinitive

sentence introduced by ἀλλά

STRUCTURE:

ring composition (closing)

parallel closings

MENTION OF THE AUTHOR:

of himself/his books/the present book

UNITS, defined by:**SAME STYLE THROUGHOUT:**

repetition (words, schemes, structure), all kinds

triads

group of no-verb sentences

accumulation: of (syntactically equivalent) nouns, or verbs

MENTION OF THE READER:

in between, not at the beginning, not at the end

MENTION OF ANOTHER AUTHOR:

in between, not at the beginning, not at the end.

4. Units and Textual Criticism.

The election of variants is often backed by the features of the Units.

Example 1. At the end of an Unit, p. 146,9-10, the Greek mss. present the title of Anat. Adm.: καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν εἴρηται, omitted by Ḥunayn. The same book has been mentioned earlier, on p. 146,5. However, Galen often puts an end to Units by mentioning his books. Therefore, the text transmitted by the Greek mss. is correct.

Example 2. P. 164,20-21 καὶ μὲν δὴ καὶ ὥς ἀλγοῦσιν οὗτοι πάντες, οὐδὲ τοῦτ' ἄδηλον. A typical opening, underlined by the initial group of particles and the anteposed declarative sentence with ὥς. As subject of the verb, the Δ-family and Ḥunayn present οὗτοι ("these" *Hun.*), while the Λ-family has οὕτω. As Galen uses anaphoric οὗτος in the openings, the pronoun is correct, the emphasis being carried out by those who feel pain, not by the kind of pain.⁴⁵²

Example 3. P. 148,7-10. κὰν τούτῳ πίμπλονται ῥεύματος αἱ μεταξὺ χώραι κεναὶ τῶν πρώτων σωμάτων, ὥστε καὶ θερμαίνεσθαι καὶ περικλύζεσθαι πανταχόθεν ὑπὸ τῆς ὑγρότητος ἅπαντα. Ḥunayn does not have ἅπαντα at the end of the sentence. However, the composition of the treatise backs the use of this pronoun as anaphoric, closing or opening blocks.

5. Sections (see Table III and IV) are marked by compositional devices such as ring composition,⁴⁵³ and parallelism:⁴⁵⁴ these devices bring forth similarity of words, but avoid exact repetition, making good the Greek technique that I have called "symmetry and variation."⁴⁵⁵ As against "chapters" that cut the texts into pieces, the limits of the sections are not clearly cut, having at times transitional sentences that lead from the one to the next, for the sake of clarity. Sections do not cut a text: they compose it. Sections are also character-

452 οὕτω is anaphoric as well, but second to the pronoun.

453 For Ring composition, see B. A. Van Groningen, *La composition littéraire archaïque grecque*, Amsterdam, 1958, and I. Beck, *Die Ringkomposition bei Herodot und ihre Bedeutung für die Beweistechnik*, Hildesheim-New York, 1971. For Greek medicine, the research by O. Wenskus, *Ringkomposition, anaphorisch-rekapitulierende Verbindung und anknüpfende Wiederholung im hippokratischen Corpus*, Frankfurt-am-Main 1982, is outstanding.

454 In the ring, opening and closing deal with the same subject, which ends at the close, and several rings may keep to the order 1, 2, 3, core, 3', 2', 1'. On the other hand, the parallel passages open or close two successive subjects (Units, Sections), in the order ABC, core/ A'B'C', core'.

455 See my: *Simetría y variación en el teatro y en el arte griegos: el problema de las libertades de responsión o Responsionsfreiheiten*, in: *Dramaturgia e messa in scena del dramma greco*, edd. E. García Novo, I. Rodríguez Alfageme, Ediciones Clásicas, Madrid, 1998, pp. 121-150. As for variatio, the specific study is that of J. Ros: *Die METABOAH (variatio) als Stilprinzip des Thukydides*, Paderborn 1938.

TABLE IV. SECTIONS (S) AND INDEPENDENT RINGS (R)

AD = Anomalous Dyskrasia

- S. 1. AD: PRESENTATION 144,9 – 146,17
- S. 2. ANATOMY 144,9 – 146,17
- S. 3. INFLAMMATION 146,17 -150,2
- S. 4. DEPOSITS 150,2–20
- S. 5. TRANSFORMATION-1 150,20 – 152,11
- S. 6. INFLAMMATION TO FEVER-I 152,12 -154,4
- S. 7. TRANSFORMATION-2 154,4-13
- S. 8. TRANSFORMATION AND INFLAMMATION 154,14 – 156,2
- S. 9. INFLAMMATION TO FEVER-II 156,2-11
- R. 7. SEPSIS TO FEVER 156,11-13
- S. 10. TRANSFORMATION-3 156,13 – 158,10
- R. 8. *HEKTIKÓS* FEVER 158,11-14
- S. 11. DIFFERENT IS NOXIOUS, SAME HELPS 158,14 – 162,2
- R. 8'. *HEKTIKÓS* FEVER 162,3-4
- S. 12. AD: HEAT+COLD = FEVER + RHÎGOS 162,4-14
- R. 7'. SEPSIS TO FEVER 162,15-18
- S. 13. AD: HEAT = FEVER 162,19 – 164,17
- S. 14. AD: HEAT+COLD = FEVER + RHÎGOS 164,18 – 166,7
- S. 15. AD: COLD + HEAT = RHÎGOS+ ÊPIALOS FEVER 166,7 – 168,10
- S. 16. AD: COLD AD/NO HEAT = RHÎGOS/NO FEVER 168,10 – 170,4
- S. 17. AD: HEAT + COLD = FEVER + RHÎGOS 170,5-10
- S. 18. LOCAL AD + TRANSFORMATION-4 170,11 – 172,7
- ENOUGH 172,8-9

ised by stylistic features of their own. At the same time, they show opening- and closing-marks as Units do.

6. Ring composition presents several types. I divide it into *inner* and *outer* rings, inner being those that belong to the same subject as the passage in between. It is the usual form of ring composition elsewhere, but it is not very important in the treatise. Outer rings do not deal with the subject embraced.

The first three sections provide us with a series of rings that encircle each other. The author wants to separate the second Section, Anatomy, from the rest of the book, which deals with *dyskrasia*, so that the reader does not get confused. Therefore he draws three circles around it (R-1, R-2, R-3), a unique feature in the treatise, and a remarkable trait of composition.

SECTION 1 Presentation 142,2-144,9:

(142,2-144,5.....)

RING-1, outer: open., 144,5-7 Anomalous (AD) vs. homogeneous *dyskrasia* HD):
τῷ μὴ κατὰ πάντα τὰ μέρη τοῦ δυσκράτως διακειμένου σώματος ὡσαύτως
ὑπάρχειν

RING-2, inner: open., 144,7-9 To explain genesis of AD: ὁ τρόπος ... τῆς
γενέσεως

RING-3, inner: open., 144,9-10 For the sake of clarity, some anatomic
descriptions are needed: σαφὴς ὁ λόγος, ἀναμνησαί <σε> χρῆ.

It opens SECTION 2. Anatomy 144,9-146,17.

RING'-3 inner: close, 146,16-17 For the sake of clarity, some anatom-
ic descriptions were needed: ἀναγκαῖον ὑπομνησαι σαφηνείας
ἔνεκα. It closes SECTION 2.

RING'-2 inner: close, 146,17-19 To explain genesis and kinds of AD (τρόποι
τῆς γενέσεως), beginning SECTION 3. Inflammation 146,17-150,2.

RING'-1, outer: close, 146,19-20 Anomalous vs. homogeneous *dyskrasia* (HD)
μία κρᾶσις οὐκ ἔστιν ἐν ἅπασιν ...

The inner ring (R-3) presents and closes Section 2 (Anatomy, see
above). At the opening of rings 2-3, we find two periods of anteposed hypo-
tactic sentence: 144,7-10.

R-2 ὅστις <μὲν> οὖν ὁ τρόπος ἐστὶ τῆς γενέσεως ἀπάσαις ταῖς
ἀνωμάλοις δυσκρασίαις, ἐν τῷδε τῷ γράμματι πρόκειται <μοι> διελθεῖν.

R-3 ἵνα δὲ σαφὴς ὁ λόγος γένηται, ἀναμνησαί <σε> χρῆ πάντων τῶν
τοῦ σώματος μορίων, ἀρξαμένους ἀπὸ τῶν μεγίστων,

The ἵνα-sentence (R-3) was associated with the former clause by Ge-
rard of Cremona (translating from the correct Arabic passage), but the close

of ring 3 in p. 146,16-17 leaves no doubt of the dependence of ἵνα on the next ἀναμνησαί <σε> χρή.

The medium inner ring (R-2) presents the intention of the book: “to explain the genesis of AD”, both before and after the Anatomical exposition, in order to pick up the thread of the book. At the same time, Section 3 begins precisely at the close of Ring 2: the genesis of inflammation.

The outer ring (R-1, see above), refers to the homogeneous *dyskrasia*, contrasting it with the anomalous. The author is very interested in the understanding of Anomalous versus Homogeneous *dyskrasia*, but he does not refer to the second in those three sections.

7. Section 8 (pp. 154,14-156,2), Transformation and Inflammation, is encircled by R-6, an inner ring: transformations upon inflammation are multifarious.

Γ R-6, p. 154,14-15 ὥστ’ ἀνάγκη πολυειδεῖς γίγνεσθαι τὰς ἐπὶ ταῖς φλεγμοναῖς ἀλλοιώσεις, ὅτι καὶ πολυειδῶς διάκεινται τὰ σώματα “so that alterations in the inflammations necessarily happen of many kinds, because also of many kinds are the humours”.

⊥ R’-6, pp. 154,23-156,2 ὥστ’ ἀνάγκη πολυειδεῖς γίγνεσθαι τὰς ἀλλοιώσεις, ἑτέρου τε <σώματος> πρὸς ἕτερον παραβαλλομένου ... “so that necessarily the alterations happen of many kinds, a humour compared with another, and compared as well with itself”.

At the end of the section, there are pronouns in masculine/neutral form.⁴⁵⁶ The opening of the Ring shows that they refer to “body” (τὰ σώματα), meaning the humours, or more precisely, blood itself. The rings are an important ally for Textual criticism.

8. Some rings consist of a brief sentence that starts two (independent) sections of similar contents. That is the case of R-5 in sections 6 (pp. 152,12-154,4) and 9 (p. 156,2-11), which refer to the process “inflammation to fever” (1 and 2), presenting at the beginning the heat of the blood in the inflamed part. It is an inner ring.

Γ R-5, p. 152,12 ἥ τε θερμότης τοῦ αἵματος ἢ κατὰ τὸ φλεγμαῖνον μόριον “the blood’s heat in the inflamed part”

⊥ R’-5, p. 156,3-4 ἐκπεπυρωμένου τοῦ κατὰ τὴν φλεγμονὴν αἵματος “being too much heated the blood in the inflammation”

This way, Ring-5 defines as well the end of the preceding sections, 5 and 8.

456 The last pronoun is transmitted as ἐαυτόν or ἐαυτῷ. I corrected it to ἐαυτό.

9. Some outer rings present a new subject that is not treated in between. The importance of the theme is underlined in this way. The first sample is Ring 1 (see above).

After the end of Section 9, inflammation to fever-2 (p. 156,2-11), and the end of Section 12, heat+cold (fever+*rhîgos*, p. 162,4-14), sepsis as a cause of fever is presented (R-7):

Γ R-7 sepsis →fever (p. 156,11-13), ἐν τοῖς τοιούτοις ἅπασιν πυρετοῖς ... τὴν ἐκ τῆς σηπεδόνοϋ τῶν χυμῶν “(in all such fevers) ... starting from the putrefaction of the humours”

⊥ R'-7 sepsis →fever (p. 162,15-18), ἐπὶ σήψει μόνῃ χυμῶν ... πυρετός “fever, just upon putrefaction of the humours”.

Similarly after section 10, Transformation-3 (p. 156,13), and Section 11, “different is noxious, same helps” (pp. 158,14-162,2), a Ring is introduced to state that the *hektikos* fever is unperceivable to the patients:

Γ R-8 (p. 158,11-14) οἱ ἐκτικοὶ πυρετοὶ πάντες ... ἀναίσθητοι τοῖς κάμνουσιν

⊥ R'-8 (p. 162,3-4) ὁ δ' ἐκτικὸς ... πυρετός ἀναίσθητος τῷ κάμνοντι

These two Rings, 7 and 8, are not included in the nearby Sections.⁴⁵⁷ In fact Sections 9, 10, 11 and 12 are defined at their end by the insertion of these rings, no less than sections 10, 11, and 12 are defined by them at the beginning.

10. Other rings present a new item that will be considered after the close of a Section. We have seen Ring 2, above. Section 4, Deposits, i.e. defeated *rheuma*, p. 150,2-20, is encircled by R-4, which mentions the victory of *rheuma*:

Γ R-4 (p. 150,2-3) νικήσαντος ῥεύματος

⊥ R'-4 (p. 150,20-21) νικηθείῃ πρὸς τοῦ ῥεύματος

This ring ensures the reader an understanding of the opposition between hot blood in the inflammation acting upon the body's blood, and so passing into fever (*rheuma* wins), and inflammation cleared by the body, giving way to evaporation or deposits (defeated *rheuma*). At the same time, Galen wanted to isolate *apostasis* as a good outcome of inflammation, from systemic *dyskrasia* (fever), provoked by it.

⁴⁵⁷ See note 87 to General remarks.

11. Sections 12 to 17 deal either with fever or *rhîgos*:

┐ S 12. AD heat + cold = fever + *rhîgos* 162,4-14

S 13. AD: heat = other causes of fever 162,19-164,17

┐ S 14. AD: heat + cold = fever + *rhîgos* 164,18-166,7

└┐ S 15. AD: cold + heat = *rhîgos* + *êpialos* fever 166,7-168,10

S 16 cold AD/no heat = *rhîgos*/no fever 168,10-170,4

└ S 17. AD: heat + cold = fever + *rhîgos* 170,5-10

Sections 13 (heat) and 16 (cold) consist of one of them, while the others explain both. Their limits are defined by their contents. The items' order is inverted in S. 15.

See Section 12, Commentary, for the composition and correspondence of the whole passage.

12. Throughout the Commentary, I refer to Units, Sections and Rings. There are other rings as well as many other compositional features not mentioned here, which will be dealt with in the Commentary.

B 4. LANGUAGE AND STYLE

1. A present-day book of Pathology consists of an objective description. However, this study of the heterogeneous *dyskrasia* presents the vivacity of oral speech, as it includes timeless description next to temporal narration.

The verb εἰμί points to the existence or the quality of an entity, i.e., to description, while γίγνομαι points to a process, i.e., to narration. Description reflects space and is timeless, while narration implies time next to space. Whenever time and space meet, a flash of reality happens, reflecting a concrete fact, not a generic one. The process of a disease can be narrated, because process implies change, and change implies time.

At the beginning of the treatise, Galen refers four times to *dyskrasia* as an entity in process (γίγνεται, "it happens"), so that the whole passage focalises the anomalous *dyskrasia*. At the same time, it is the grammatical subject of the sentences.

P. 142,2-5 ἀνώμαλος δυσκρασία γίγνεται μὲν ... γίγνεται δέ ...

P. 142,10 ἀνώμαλος γίγνεται δυσκρασία

P. 142,12-13 ἀνώμαλοι δυσκρασίαι τοῖς σώμασιν ἡμῶν πλεῖον ἐγγίγνονται

The references to past, future and present time, chain the book to other sequences of reality.

When the author includes his readers in the treatise, placing a scene in the future by means of Indicative Future in the second person, he is addressing the research to the time when a disciple will put his hand on the heart's left ventricle in order to perceive the extra heat (Section 9, p. 156,2-11):

... τὴν καρδίαν, καὶ ταύτης μάλιστα τοῦ κατὰ τὴν ἀριστερὰν κοιλίαν, εἰς ἣν εἰ ὑγιαίνοντος ἔτι τοῦ ζώου καὶ μήπω πυρέττοντος, ἐθελήσας ἐμβαλεῖν τοὺς δακτύλους ... σφοδροτάτης αἰσθήσης θερμασίας. "...and of that, specially the blood in the left ventricle: where, if being the animal still healthy and not yet with fever, YOU would want to put your fingers, as it is written in the Anatomical Procedures, YOU will perceive a very strong heat".

The grammatical Future points to an individual fact, not to a general one, the author being an accomplice of the reader.

In a similar way (Section 2, p. 146,12-13), the doctor-to-be may find the bones' cavities. An Aorist Optative in the Second person aims at him:

ὅσα δ' <ἐστὶ> σκληρὰ καὶ ξηρά, πάνυ φωράσας <ἂν> αὐτῶν αἰσθήσει τὰ διαλείμματα. "... whereas in those that <are> hard and dry, YOU would fully discover the intervals of them by means of perception ..."

The Section on Anatomy, is addressed to a second person (p. 144,9-10): ἵνα δὲ σαφὴς ὁ λόγος γένηται, ἀναμνησαί <σε> χρὴ πάντων τῶν τοῦ σώματος μορίων, ἀρξαμένους ἀπὸ τῶν μεγίστων.⁴⁵⁸ "In order to make clear the explanation, it is necessary to remind you of all the parts of the body..."

The second person is again used in two potential periods:

"In this way, YOU would even kill a scorpion, spitting on it with an empty stomach" (p. 160,17-18).⁴⁵⁹ "For not even if, having placed a man under the hot sun, would YOU douse him with cold water, (it is) impossible for him not to perceive at the same time the heat from the sun and the cold from the water" (p. 166,12-14).⁴⁶⁰

With the use of the imperative mood in the third person, Galen switches to narration, going into the imagined world of professor and students. He creates the illusion of an oral class. Such verbal moods are alien to description. As opposed to the objective world, expressed by the referential function of language, the impressive message tries to influence the receptor or reader:

P. 144,12-13 τεμνέσθω δὴ πάλιν ὑφ' ἡμῶν ἐν ὅτι οὖν ἐξ αὐτῶν εἰς τὰ προσεχῆ καλούμενα μόρια: "Let us in turn get anyone of them cut up into the so-called contiguous parts".

⁴⁵⁸ Hunayn keeps the pronoun "you" that disappeared by phonetic haplography (ἀναμνησαί <σε>). The pronoun is present in loc. sim. of Galen.

⁴⁵⁹ οὕτω γ' <ἂν> καὶ σκορπίον ἀναιρήσειας ἐπιπτόων νῆστις.

⁴⁶⁰ οὐδὲ γὰρ εἰ στήσας ἄνθρωπον ἐν ἡλίῳ θερμῷ, προσραίνεις ὕδωρ ψυχρόν, ἀδύνατον αὐτῷ τὸ μὴ οὐχ ἅμα καὶ τῆς ἀπὸ τοῦ ἡλίου θερμῆς αἰσθάνεσθαι καὶ τῆς ἀπὸ τοῦ ὕδατος ψύξεως.

P. 150,4-5 καὶ δὴ καὶ νικάσθω πρότερον τὸ ῥεῦμα· "Let the flow be overcome first, for it is preferable to start from the better side".

The use of *χρή* + Infinitive is a way of expressing an order or exhortation.⁴⁶¹ Galen addresses the exhortation to the readers and himself, and especially to the reader who asked for the treatise, by using *χρή* + Infinitive as well as a plural participle: ἀναμνησαί <σε> χρή ... ἀρξαμένους ("it is necessary to remind YOU of all the parts of the body, beginning with ...").

2. When the author mentions his ongoing treatise, he inserts the book in the chain of time. By means of the perfect tense, what has been indicated in a preceding section is present to the author as the result of a performed act:

P. 146,19-20 ὅτι μὲν δὴ μία κρασις οὐκ ἔστιν ἐν ἅπασιν τοῖς μέρεσι τοῦ ῥευματισθέντος σώματος, ἔμπροσθεν εἴρηται. "The fact of not being just one *krasis* in every part of the body so affected, has been told before".

P. 162,12-14 ὅπως μὲν οὖν ἐπὶ φλεγμονῇ γίγνεται πυρετός ... ἤδη μοι λέλεκται. "Hence, how fever is produced upon inflammation ... has already been said by me".

The present tense places the book into the cosmic present of the author, looking forwards or backwards:

P. 144,7-9 ὅστις <μὲν> οὖν ὁ τρόπος ἐστὶ τῆς γενέσεως ἀπάσαις ταῖς ἀνωμάλοις δυσκρασίαις, ἐν τῷδε τῷ γράμματι πρόκειται <μοι> διελθεῖν. "Now, of what kind is the genesis for all the anomalous *dyskrasias*, in this book is set before me to go through".

P. 162,11-12 ἐπάνειμι δὲ πάλιν ἐπὶ τὰς τῆς ἀνωμάλου δυσκρασίας διαφοράς· "I am returning to the differences in the anomalous *dyskrasia*."

An Imperfect linked to a Future shows the importance of clarity in Galen's exposition:

P. 146,16-17 ταυτὶ μὲν οὖν ἀναγκαῖον ἦν ὑπομνήσαι σαφηνείας ἕνεκα τῶν μελλόντων λεχθήσεσθαι. "Of these, certainly, it was necessary to remind (you), for the sake of clarity of the things to be explained".⁴⁶²

The verbal adjective in -τέον looks forward:

P. 146,17 περὶ δὲ τῆς ἀνωμάλου δυσκρασίας ἤδη ῥητέον ... "Of the anomalous *dyskrasia* it is time to explain..."

Indicative Present and Imperfect link an ongoing explanation ("the text already shows that ...") to a similar process presented before:

P. 164,9-12 καὶ πῶς ὁ λόγος ἤδη δείκνυσιν ὡς ἐνίστε ... ὥσπερ ἐπὶ τῶν φλεγμαινόντων ἐλέγετο· "And somehow the text already shows that, at times ... as it was told in the case of a part getting inflamed".

⁴⁶¹ Cf. p. 140 of my: "Relación entre infinitivo y modos en la oración de πρίν, tomando como ejemplo el Corpus Hippocraticum", in: CFC II (N.S. Griega) 1992, pp. 137-164.

⁴⁶² The link to oratory is reflected as well by the form ταυτί. See K.J. Dover, The evolution of Greek prose style, Oxford 1997, p. 63.

3. An important feature of Galen's books is his way of mentioning them in the ongoing treatise. As he readily uses many nominal sentences, the presence of a finite verb is worthy of consideration. Let us look into his use of the Perfect tense:

P. 146,9-10 καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν εἴρηται ("and all of them have been explained in the Anatomical Procedures")

P. 146,16 ἐν τοῖς περὶ κράσεως εἴρηται ("... has been explained in On *krasis*")

The author indicates with this tense the validity of his work. His books are present as a constant reference.

The Imperfect expresses the continuity of the author's work: he refers to it not as a punctual fact, but as a process in its duration or its iteration, and so continuous in its permanency:

P. 144,1-2 καθότι κὰν τοῖς περὶ κράσεως ὑπομνήμασιν ἐδείκνυτο. "as it was shown in the treatise On *krasis*".

P. 146,5 καθότι κὰν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν ἐλέγετο. "as it was told in my Anatomical Procedures".

Validity and continuity: that is Galen's message. For the author, the ensemble of his books forms a standing system of continuous worth. Of course, his planned books also belong to a system that lives in past, present and future:

P. 162,7-11 εἰπεῖν δ' οὐκ ἐγχωρεῖ τὸν τρόπον αὐτοῦ τῆς γενέσεως ἐν τῷ νῦν ἐνεστῶτι λόγῳ πρὶν ἀποδείξαι περὶ τῶν φυσικῶν δυνάμεων, ὅποσαι τ' εἰσὶ καὶ ὅποια καὶ ὅ τι δρᾶν ἐκάστη πέφυκεν. ἀλλ' ἐν ταῖς τῶν συμπτωμάτων αἰτίαις ὑπὲρ ἀπάντων εἰρήσεται.

"... it is not possible to tell the way of its genesis (of the symptom) in the present book, before having shown of the natural faculties, how many and of what kind they are, and what each of them does according to nature, but in «The causes of the symptoms» everything will be told".

See as well Commentary to p. 164,16-17: εἰρήσεται δὴ καὶ περὶ τούτων ἐπὶ πλέον αὖθις, ἐν ταῖς τῶν νοσημάτων αἰτίαις, and 172,8-9: ταῦτ' ἀρκεῖν μοι δοκεῖ προεγνώσθαι τοῖς μέλλουσι τῇ τε περὶ φαρμάκων ἀκολουθήσειν πραγματείᾳ, καὶ μετ' αὐτὴν τῇ τῆς θεραπευτικῆς μεθόδου.

4. Galen's use of tenses is very precise.

While referring to transformation, Galen makes an opposition of present vs. aorist and perfect tense:

Section 10: p. 156,13-16 οὐ μὴν οὐδ' οἱ χιτῶνες τῶν ἀρτηριῶν ... ἤδη πω τελέως ἡλλοίωται τὴν κράσιν, ἀλλ' ἔτι καὶ μεταβάλλεται καὶ ἁλλοιοῦται θερμοαινόμενα. "Nevertheless, neither the coats of the arteries and veins ... have already been completely altered in their *krasis*, but are still changing and being altered, as they are becoming heated".

Perfect (result (not) reached): They have (not yet) been completely altered / Present (durative): The alteration is ongoing.

Section 10: p. 156,16-18 ... εἰ δ' ἐν χρόνῳ πλείονι τοῦτο πάσχοι, καὶ νικηθείη ποτὲ καὶ μεταβληθείη παντάπασιν, ὥς μηκέτι θερμαίνεσθαι μόνον, ἀλλ' ἤδη τεθερμάνθαι παρὰ φύσιν. "But if they suffered that for a longer while, even they would be overcome and changed completely, so as not to keep being heated, but to have already been unnaturally heated".

Aorist tense (punctual): they would be overcome and changed completely / Present tense (durative): so as not to keep being heated / Perfect tense (result): but to have already been unnaturally heated.

5. In order to establish a dependence among different notions, he makes a productive use of some Greek devices.⁴⁶³

Grammatical Subject of a verb in Nominative, against Accusative and oblique cases. In Section 2, the organs are introduced in Accusative:

P. 144,11-12 χειρὰς γάρ τοι καὶ πόδας καὶ γαστέρα καὶ θώρακα καὶ κεφαλὴν

while the homoeomers are presented in Nominative. They are the focus:

P. 144,16-146,2 ὅστ' αὖ καὶ χόνδροι καὶ σύνδεσμοι, καὶ νεῦρα καὶ ἀρτηρίαι καὶ φλέβες, ὑμένες τε καὶ σάρκες καὶ τένοντες, ὄνυχές τε καὶ δέρμα καὶ πιμελή.

Section 1: the presentation of AD, consists of coordinate sentences that have the key-words ἀνώμαλος δυσκρασία, as subject in Nominative, placed in the first position of the sentence, while the names of diseases are introduced for the most part in Gen. or Dat., so that they are subordinated to the focus, i.e. AD.

P. 142, 2-4 Ἀνώμαλος δυσκρασία γίγνεται ... ἐν τε τοῖς ἀνασάρκα λεγομένοις ὑδέροις, καὶ τοῖς ἡπιάλοις καλουμένοις πυρετοῖς ...

Contrariwise, in Section 18, the names of diseases of local *dyskrasia* are nouns in Nominative —they are the focus, now—, while AD is coupled by a preposition:

P. 170,12-14 κατὰ δυσκρασίαν ἀνώμαλον ἀποτελεῖται· καρκίνος, ἐρυσίπελας, ἄνθραξ, ἔρπηξ, οἰδημα, φαγέδαινα, γάγγραινα.

6. Verbs: *verba finita* in front of Infinitive and Participle

Section 4. P. 150,2-20 Galen explains in a chiasm the good or bad outcome of inflammation in a muscle, presenting it as a victory or defeat of the flux that provokes them. At the beginning, the agent, *rheuma*, is coupled by participle (AB: νικήσαντος, νικηθέντος).

⁴⁶³ D. Nickel comments some important linguistic features of Galen, in: Sprache und Stil, Galeni de foetuum formatione, CMG V 3, 3, pp. 44-46.

However, as action approaches, the author turns to a finite verb (BA: νικάσθω, νικηθείη). The flux is more and more important.

A νικήσαντος μὲν τοῦ ῥεύματος, φθορὰν τῶν νικηθέντων σωμάτων· "overcoming the flow, destruction of the overcome parts".

B νικηθέντος δέ, τὴν εἰς τὸ κατὰ φύσιν ἐπάνοδον τῷ μυῖ. "the flow being overcome, return of the muscle to its natural state".

B' καὶ δὴ καὶ νικάσθω πρότερον τὸ ῥεῦμα· "Now, hence, let the flow be overcome first"

A' εἰ δὲ νικηθείη τὰ σώματα πρὸς τοῦ ῥεύματος, εἰς τοσαύτην μὲν ἀφίξεται δηλονότι δυσκρασίαν, ὥς καὶ τὴν ἐνέργειαν αὐτῶν ἀπολέσθαι καὶ φθαρῆναι τῷ χρόνῳ· "If the parts were overcome by the flow, they would certainly result in such an enormous *dyskrasia* as to their capacity perishing and being destroyed in time".

7. Galen's use of the Infinitive is remarkable. His πρίν- and ὥστε- sentences just present Infinitive. His declarative sentences more often than not present an Infinitive. He often uses Infinitive sentences introduced by an article, in any grammatical case.

The Infinitive sentence allows subject and object to be presented at the same level. Thucydides is a master of these sentences. The author does not want to show his preferences in his chronicle of the Peloponnesian War: he simply lets two enemies or cities or generals stay in Accusative. I should call Thucydides' style journalistic. Galen is rather good at this as well:

P. 144,5-7 ὅτι δ' αἱ τοιαῦται δυσκρασίαι διαφέρουσι τῶν ὁμαλῶν <μόνον> τῷ μὴ κατὰ πάντα τὰ μέρη τοῦ δυσκράτως διακειμένου σώματος ὡσαύτως ὑπάρχειν, ἄντικρυς δῆλον. "That such *dyskrasias* differ from the homogeneous, <just> in the fact of all the parts of the body not being likewise affected by *dyskrasia*, is plainly evident".

P. 170,15-18 διαφέρει δέ, τῷ τὰ μὲν, ὑπὸ φλεγματικοῦ χυμοῦ, τὰ δέ, ὑπὸ χολώδους, ἢ μελαγχολικοῦ χυμοῦ, τὰ δέ, ὑφ' αἵματος ἥτοι θερμοῦ καὶ λεπτοῦ καὶ ζέοντος, ἢ ψυχροῦ καὶ παχέος, ἢ πως ἄλλως διακειμένου, γίνεσθαι. "On the other hand, they differ from each other in the fact that some happen by the phlegmatic humour, some by the bilious or the melancholic humour, some by blood, being hot, thin and boiling, or cold and thick, or in any other state".

8. When Galen wants to stress a process, not an object, he introduces verbs everywhere.

In Section 3 (pp. 146,17-150,2), the physiology of inflammation is marked by groups of verbs (tri- or tetrasyllabic), in duos or trios, whose subjects are flux (blood), vessels, homoeomers and hollows. Some of them:

αὐτίκα γέ τοι ῥεύματος θερμοῦ κατασκήψαντος εἰς μῦν, πρῶται μὲν αἱ μείζους ἀρτηρίαι τε καὶ φλέβες ἐμπίμπλανταί τε καὶ διατείνονται· "sud-

denly a hot flux having fallen upon a muscle, first the larger arteries and veins get filled up and stretched out".

... ἐν αἷς ὅταν ἰσχυρῶς σφηνωθῇ καὶ μηκέτι στέγηται τὸ ρεῦμα ... διηθεῖται πρὸς τοῦκτός· κὰν τούτῳ πίμπλονται ρεύματος ... ὥστε καὶ θερμαίνεσθαι καὶ περικλύζεσθαι πανταχόθεν ὑπὸ τῆς ὑγρότητος ἅπαντα. "when the flow gets violently constricted and is no longer held ... runs to the exterior: this way ... get filled up with flow, so as to get hot and soaked all around from every place by the humidity, all of them".

... καὶ γὰρ ἔνδοθεν ὑπὸ τοῦ ρεύματος θερμαίνονται τε καὶ διατείνονται καὶ διασπῶνται, κὰκ τῶν ἔξωθεν θερμαίνονται τε ἅμα καὶ θλίβονται καὶ βαρύνονται "from inside, by the flux they get heated, stretched out and torn asunder, while from outside, they get heated, compressed and overloaded".

9. There are four sections on transformation: three out of the four (Sections 5, 10 and 18), include a display of verbs of change, PROCESS being reflected this way:

Section 5 (p. 150,20-152,11): μεταβάλλοντι, μεταβεβλήσθαι, μεταβάλλεσθαι, διαλλαττομένοισι καὶ διαφθειρομένοισιν, διαλλάττεται δὲ καὶ διαφθείρεται.

Section 10 (p. 156,13-158,10): ἡλλοίωται, καὶ μεταβάλλεται καὶ ἄλλοιούται, μεταβληθείη.

Section 18 (172,6): μεταβάλλοι καὶ ἄλλοιωθείη.

10. Nominal sentences, where a noun is associated with qualifications, or an adjective with several nouns, stresses the quality, not the process. Such is the case in Section 7, on transformation, which resorts to the adjectives εὐαλλοίωτον/ δυσαλλοίωτον "easily altered /difficult to alter", cold/hot, and λεπτομερῆς /παχυμερῆς "of thin/thick parts", predicated of substances (pneuma and humours):

P. 154,8-9 εὐαλλοιωτότατον μὲν οὖν τὸ πνεῦμα, διότι καὶ λεπτομερέστατον·

θερμοτάτη δὲ φύσει <ή> ξανθὴ χολή, ψυχρότατον δὲ τὸ φλέγμα·

P. 154,13 τὸ μὲν λεπτομερές ἅπαν, εὐαλλοίωτον· τὸ δὲ παχυμερές, δυσαλλοίωτον.

"most alterable the pneuma, because also thinnest;

hottest by nature the yellow bile, coldest the phlegm";

"everything formed by thin parts, easily alterable, everything formed by thick parts, difficult to alter".

11. Anteposed hypotactic sentences bring into focus their contents.

The transition to the second section (p. 144,5-10) is marked by three complex clauses with an anteposed hypotactic sentence (HS), a favourite of Galen.

1. ὅτι δ' αἱ τοιαῦται δυσκρασῖαι διαφέρουσι τῶν ὁμαλῶν <μόνον> τῷ μὴ κατὰ πάντα τὰ μέρη τοῦ δυσκράτως διακειμένου σώματος ὡσαύτως ὑπάρχειν, ἄντικρυς δῆλον.

2. ὅστις <μὲν> οὖν ὁ τρόπος ἐστὶ τῆς γενέσεως ἀπάσαις ταῖς ἀνωμάλοις δυσκρασίαις, ἐν τῷδε τῷ γράμματι πρόκειται <μοι> διελθεῖν.

3. ἵνα δὲ σαφὴς ὁ λόγος γένηται, ἀναμνησαί <σε> χρὴ πάντων τῶν τοῦ σώματος μορίων

He stresses in this way the importance of:

1. the difference between AD and Heterogeneous D, capital for the understanding of AD.

2. the intention of the book, that is, to explain the genesis of AD.

3. the necessity of including some Anatomy, for the sake of clarity.

12. Clarity is a must for Galen. He often uses parallel expressions in a row: he just changes the key words while keeping to the syntax. Many oppositions are included in this kind of presentation.

In Section 4, p. 150,2-20, there are only three finite Verbs: ἀφίσταται, ἔστιν (2), συρρήγνυται / ἐκρήγνυνται, which structure it. Once mentioned the first, we find parallel expressions beginning εἰς +Ac., 9 times (i.e. "the deposit goes to ..."), κατὰ (3), and ὑπὸ (3), coupled by Ac., where ἀφίσταται has to be understood:

ἀφίσταται δέ

ποτε μὲν, εἰς τὴν μεγίστην τε καὶ ἀκυροτάτην τῶν παρακειμένων κοιλιῶν ...ἐνίοτε δ' εἰς μεγίστην μὲν, οὐ μὴν ἄκυρον,

ἢ εἰς ἄκυρον μὲν, οὐ μεγίστην δέ

καλλίστη τῶν ἀποστάσεων ἔστιν, ἢ εἰς τὴν ἐντὸς εὐρυχωρίαν, μοχθηρὰ δέ

ἢ ὑπὸ τὸ περιτόναιον.

... ἢ μὲν οὖν εἰς τὰς ἐμπροσθίους δύο κοιλίας, ἀγαθή,

μοχθηρὰ δέ

ἢ τε ὑπὸ τὰς μήνιγγας

καὶ ἢ εἰς τὴν ὀπισθεν κοιλίαν.

αἱ δὲ κατὰ τὰς πλευρὰς ἀποστάσεις, εἰς τὰς τοῦ θώρακος εὐρυχωρίας

He often repeats schemes changing the contents. Some causes of fevers are introduced by means of 4 parallel Absolute Genitives in Section 13, p. 162, 20-164,3:

ποτὲ μὲν λιγνυώδους διαπνοῆς ἐπισχεθείσης·

ποτὲ δ' ἐκ γυμνασίων πλειόνων ἢ πόνων αὐξηθέντος τοῦ θερμοῦ·

ποτὲ δ' ἐπὶ θυμῷ ζέσαντος ἀμετρότερον τοῦ αἵματος

ἢ δι' ἑκκαυσίν τινα ἔξωθεν ἐκθερμανθέντος.

13. A good way to remember a notion is to repeat it in different forms: In Section 6 (p. 152,12-154,4) the process of inflammation into fever begins. HEAT is the word: θερμότης, συνεκθερμαίνεται, ἐκθερμαίνεται, θερμόν, ἐκθερμαίνεται, θερμότερον, συνεκθερμαίνεται.

14. The stylistic marks of Units that I included in the previous chapter ("Composition"), are linguistic features.

B 5. GENERAL REMARKS

The Chapter dedicated to the Sources of the Text is rather long because the transmission is rather profuse and complicated.

As for orthography, I wrote γίγνεται, γινώσκειται and τέτταρες. For the elisions I usually follow Δ or its mss., or L, but I am not happy with the remaining hiatus. I leave out of the Critical apparatus some minor misprints, accents, or evident errors.

Unless otherwise stated, translations from the Greek are mine. As for the translation of the treatise, I have tried to represent the very words of the original, including word order —as much as possible.⁴⁶⁴ Most of the names of diseases I have left in transliterated Greek and explained the Galenic notion in the Commentary, including the present-day definition in a note.

As the treatise is *composed* of units (sections, rings) and not *divided* into chapters, I present the Greek text and, consequently, the translation, *undivided*. I just introduce the siglum S for Section, and its number,⁴⁶⁵ in the margin, with the sign || in the text. The traditional chapters are introduced between brackets in the margin, with the sign | in the text.

The Arabic version has been edited and translated into Spanish by Prof. Cristina Alvarez Millan. I use my English version of the Spanish text.

In the Commentary, I chose to explain Galen through Galen himself, introducing related passages of other treatises and translating them. Of course, I have included philosophers and physicians as well, but my focus is on Galen.

The Index verborum includes clues to a number of interesting subjects that are not indicated by the mere presence of a precise word. At the same time, I have classified the functions of some classes of words (article, adjective, pronoun, conjunction) so as to present a useful tool for language itself.

⁴⁶⁴ Galen's word order is no more unusual than Joyce's at his best.

⁴⁶⁵ Whenever two correlative sections are not contiguous because an outer ring falls between them, I also include in the text the ring (R) and its number (R'-8 S 12 R'-7 S 13).

3. TEXT AND TRANSLATION

GALENI DE INAEQUALI INTEMPERIE

CONSPECTUS SIGLORUM ET COMPENDIORUM

- L =Laurentianus gr. 74.5; s. XII^{m-f}
 P =Yale, Beinecke Library ms. 1121; s. XII^m
 T =Trivultianus 685; s. XIII^f -XIVⁱⁿ
 U =Mutinensis graecus 109 ; s. XIV-XV c.
 D =Laudianus graecus C 58; s. XV^{m-f}
 V =Vaticanus graecus 282; s. XV
 M =Marcianus graecus 282; ca. 1468-1472

 Σ =Scholia in P (fortasse s. IV)

 Λ = consensus codicum LTM
 Δ = consensus codicum PUDV
 z = consensus codicum DV

 Raro citatur
 R =Parisinus gr. 2283; s. XVI (excerpta)

 A = editio Aldina, Venetiis, a. 1525
 B = editio Basileensis, a. 1538
 Ch = editio Charterii, Lutetiae Parisiorum, a. 1649
 K = editio Kühnii, Lipsiae a. 1824

Orib.= excerptum ab Oribasio e Galeni libro sumptum
 Oribasii collectionum medicarum reliquiae, apud Raeder
 Oribasii synopsis ad Eustathium et libri ad Eunapium, apud Raeder
 Orib.^R =Ravennas

Hipp. = Hippocratis lectiones
 M = Hippocratis codex Marcianus Gr. 269; X c.
 V = Hippocratis codex Vaticanus Gr. 276; XII c.

Hun. = versio tractati ab Hunaino ibn Isaq, s. III/IX, apud editionem Cris-
nae Alvarez Millan.

Hun^A = Ayasofya 3593; s. V-VI/XI-XII
 Hun^P = Parisinus 2847; a. 614/ 1217-1218
 Hun^S = Scorialensis 879/2; s. VII/XIII.
 Hun^E = Scorialensis 848/2; s. VIII/XIV

Hun^L = Lisbona, Acad. Med., Vermelho 292-293, s. VIII/XIV^m

Hun^M = Matritensis 5011, s. IXⁱⁿ/XVⁱⁿ.

Ger. = Gerardus de Cremona, traductio ab Arabo in Latinum (s. xiii^{exeu}), a pluribus codd. servata

Ger^{ed} = editio Ph. Pintii, a D. Bonardo curata, Venetiis 1490.

Dav.= David ben Caslari, traductio e Gerardii versione latina in Hebraeum, servata in codice Bodleiano Opp. Add., s. XV.

Nic. = Niccolò da Reggio, versio e Graeco in Latinum, ca. 1310-1320

Nic.^A = Amploniensis F 278; s. XIVⁱⁿ.

Nic.^Z = Mediomatricensis 178; s. XIV

Nic.^W = Wellcome 286; ca. 1348

Nic.^M = Matritensis 1978; ca. 1375

Nic.^O = Monacensis 490; a. 1488-1503

Nic.^P = Paris, Académie de Médecine 51; s. XV

Nic.^V = Vaticanus palatinus 1211; s. XV

Nic.^{ed} = ed. Pavia, 1515

Pet. = Pietro d'Abano, versio e Graeco in Latinum, s. XIVⁱⁿ.

Pet.^M = Malatestianus S V 4, s. XIV^f.

Pet.^C = Malatestianus S XXVI 4, a. 1465

Pet.^J = Jagellonicus 800, a. 1279

Val. = nova versio latina a Giorgio Valla

Leo. = id. a Niccolò Leonicensino

Lin. = id. a Thomas of Linacre

Fuchs = id. a Leonhardt Fuchs

Lal. = id. a Jean Lalemant

Valles = commentaria in Cl. Galeni De inaequali temperie

Corn. = correctiones vel coniecturae Cornarii in editione Aldina (Jena)

Caius = correctiones vel coniecturae Caii in editione Basileensi (Eton College)

Helmreich = correctiones vel coniecturae in notis servatae in Academia Scientiarum Berolinensis et Brandenburgensis

ΓΑΛΗΝΟΥ
ΠΕΡΙ <ΤΗΣ> ΑΝΩΜΑΛΟΥ 'ΔΥΣΚΡΑΣΙΑΣ

VII 733 K.

[1] S 1

Ανώμαλος δυσκρασία γίγνεται μὲν ἐνίοτε καὶ καθ' ὅλον τοῦ ζώου
τὸ σῶμα, καθάπερ ἔν τε τοῖς ἀνασάρκα λεγομένοις ὑδέροις, καὶ τοῖς
ἡπιάλοις καλουμένοις πυρετοῖς, καὶ σχεδὸν ἅπασιν τοῖς ἄλλοις, πλὴν τῶν
ἐκτικῶν ὀνομαζομένων. γίγνεται δ' <ἐνίοτε> καὶ καθ' ἓν ὅτιον μόριον, 5
οἰδισκόμενον ἢ φλεγμαῖνον ἢ γαγγραινούμενον ἢ <τῷ> ἐρυσιπέλατι
κάμνον ἢ <τῷ> καρκίνῳ. τούτου δ' ἐστὶ τοῦ γένους καὶ ὁ καλούμενος
ἐλέφας καὶ ἡ φαγέδαινα καὶ ὁ ἔρπης. ἀλλὰ ταῦτα μὲν ἅπαντα μετὰ
ῥευμάτων· ἄνευ δ' ὕλης ἐπιρρύτου, μόναις ταῖς ποιότησιν ἀλλοιουμένων
734 τῶν μορίων, ἀνώμαλος γίγνεται δυσκρασία, ἢ ψυγέντων, ἢ ἐκκαυθέντων, 10
ἢ γυμνασμένων ἐπὶ πλέον, ἢ <πάντως> ἀργησάντων, ἢ τι τοιοῦτον ἕτερον
παθόντων. οὐ μὴν ἀλλὰ καὶ τῶν ἔξωθεν προσπιπτόντων ἀνώμαλοι
δυσκρασίαι τοῖς σώμασιν ἡμῶν πλεῖον ἐγγίγνονται, θερμαινόμενοις,
ἢ ψυχομένοις, ἢ ξηραίνόμενοις, ἢ ὑγραίνόμενοις. ἀπλαῖ μὲν γὰρ αὗται

2-5 ἀνώμαλος - ὀνομαζομένων] *cf. infra*, p. 170, 9-10 2-10 ἀνώμαλος - δυσκρασία] *cf.*
Gal. De meth. med. IX 17: X 660,2-6 K. 5-8 οἰδισκόμενον - ἔρπης] *cf. infra* p. 170,13-14 *cf.*
inter alia Gal. De temp. III 3: I 664,4 -5 K.= 97,11-13 Helmreich *cf.* Gal. De tumor. praeter nat.
5: VII 719.3-4 K. *cf.* Gal. De sympt. causis III 3: VII 223,18 - 224,5 K. *cf.* Gal. De meth. med. II
2: X 82,19 - 83,1 K. *et* III 10: X 221,17-222,2 K. 8-10 ἀλλὰ - μορίων *et* 14 - p. 144,1 ἀπλαῖ -
αὐτῶν] *cf.* Steph. Alex. In pr. Gal. Therap. Glauc. comment. I 242, 24 - 26 Dietz. 9 - p. 144,5
ἄνευ - ξηραίνόμενων bis] *cf.* Gal. De sympt. causis II 5: VII 175,16 - 176,2 K. 9-10 μόναις -
δυσκρασία] *cf.* Gal. De meth. med. I 17: X 660,3 K. *et* I 17: X 660,7 -9 K. *cf.* Gal. De morb. diff. 5:
VI 848,16-18 K. 12-14 καὶ - ὑγραίνόμενοις] *cf. inter alia*, Gal. De opt. corp. nostri const. 3: IV
742,6-10 K. *cf.* Gal. In Hipp. De nat. hom. II 5: XV 127,10 -12 K. = CMG V 9,1; 66,6-8 Mewaldt.
12 - p. 144,5 ἀνώμαλοι - ξηραίνόμενων bis] *cf.* De temper. I 8: 31,27-32,4 Helmreich= I 559, 5-9
K. *et* II 1: 40,4 -10 Helmreich=I 572,4 -573,1 K. *cf.* De sanit. tuenda I 13: VI 69,7 -11 K.= CMG
V 4,2; 32,12-16 Koch *cf.* De Loc. Aff. III 5: VIII 149,5-7 K. 14 - p. 144,2 ἀπλαῖ - αὐτῶν] *cf.* De
propr. plac. CMG V 3,2: 66, 20-21 Nutton 14 - p. 144,5 ἀπλαῖ - ξηραίνόμενων] *cf.* Gal. De
praesag. ex puls. III 1: IX 331,5 -7 K.

1 τῆς *add.* Caius 2 ἐνίοτε] *post* μὲν PU: *ante* καθάπερ Λ, *cf.* Nic. *ante* quemadmodum καὶ
καθ' ὅλον *om.* U, *sed* καθ' (secundum) *servat* Pet. 3 λεγομένοις TP, *cf.* known as, Hun.:
καλουμένοις LMz 4 καλουμένοις, *cf.* called, Hun. *post* ἄλλοις *add.* fevers Hun. 5 δ' οὖν P^{a.c.}
ἐνίοτε *add.* 6 οἰδισκόμενον] when in it (the organ) occurs oedema –which is the phlegmatic
tumor-, Hun. 6-7 τῷ *pr. et bis add.* ἐρυσιπέλατι κάμνων U, *correxī*: ἐρυσιπελατούμενον *cett.*
7 καρκίνῳ PU (*et* *on* s.l. *ut videtur* U): καρκινούμενον *cett.* P^{s.1} *post* καρκίνῳ *add.* πάσχον
P ἐστὶ *om.* Λ 9 ἀλλοιουμένων] ἀλλοιω- L 10 ἀνώμαλος γίγνεται δυσκρασία P^{a.c.}, *cf.*
anomalous dyskrasia happens, Hun.: ἀνώμαλοι γίνονται δυσκρασίαι P^{p.c.} UL, *cf.* *inequales*
fiunt discrasie Nic. 10 ψυγέντων LTP: ψυχθέντων *cett.* ἐκκαυθέντων LMU: ἐγκαυθέντων
TPz 11 πάντως *add.*, *cf.* p. 168,15, *et* (or a calm or inactivity) that surpasses the convenient,
Hun. τοιοῦτον *om.* U 12 παθόντων *om.* Hun. *post* προσπιπτόντων *add.* φαρμάκων Pz
13 πλείον L: πλείονες T: *om. cett.*, Hun., Nic. ἐγγίγνονται MUz: ἐγγίγνεται L: γίνονται TP
ante θερμαινόμενοις *add.* ἢ U 14 ἀπλαῖ] simple and singular Hun. γὰρ *om.* P

GALEN
ON <THE> ANOMALOUS DYSKRASIA

733

[1] S¹ 1. Anomalous *dyskrasia* happens sometimes even in the whole animal body, as in the dropsy known as *anasarka*,² in the fevers named *êpialoi*, and in nearly all of them, except for the fevers called *hektikoi*. On the other hand, swelling, inflammation, *gangraina*, *erysipelas* or *cancer*, can sometimes happen in any part. Of this kind is so-called *elephantiasis* as well as *phagedaena* and *herpes*. Now, all of these, (happen) with flux. Without fluid substance, the parts being altered
734 just in their qualities, anomalous *dyskrasia* happens, | (the parts) either cooled down, or heated up (by the sun), or too much exercised, or having been completely inactive, or affected in another similar manner. Nevertheless, even from external (agents) falling upon our bodies, more anomalous *dyskrasias* happen in them, being heated or cooled or dried or moistened. These four *dyskrasias* are simple,

1 S = Section. [1] = traditional Chapters R-1 = Ring between Sections

2 I just transcribe the Greek names of diseases, indicating that I do not mean that the names used today refer to the same diseases. I include the present-day definitions in notes, and indicate the Galenic notion in the plain text of the Commentary.

<τέτταρες εἰσι> δυσκρασίαι, καθότι κὰν τοῖς περὶ κράσεως ὑπομνήμασιν
 ἐδείκνυτο· σύνθετοι δ' ἐξ αὐτῶν εἰσιν ἕτεραι τέτταρες, ἢ θερμαινομένων
 τε ἅμα καὶ ὑγραιομένων, ἢ θερμαινομένων τε ἅμα καὶ ξηραιομένων,
 ἢ ψυχομένων τε ἅμα καὶ ὑγραιομένων, ἢ ψυχομένων τε ἅμα καὶ
 ξηραιομένων. ὅτι δ' αἱ τοιαῦται δυσκρασίαι διαφέρουσι τῶν ὁμαλῶν 5
 <μόνον> τῷ μὴ κατὰ πάντα τὰ μόρια τοῦ δυσκράτως διακειμένου σώματος
 ὡσαύτως ὑπάρχειν, ἄντικρυς δὴλον. ὅστις <μὲν> οὖν ὁ τρόπος ἐστὶ τῆς
 γενέσεως ἀπάσαις ταῖς ἀνωμάλοις δυσκρασίαις, ἐν τῷδε τῷ γράμματι
 S 2 πρόκειται <μοι> διελθεῖν. ἢ ἵνα δὲ σαφὴς ὁ λόγος γένηται, ἀναμνησαί <σε>
 χρὴ πάντων τῶν τοῦ σώματος μορίων, ἀρξαμένους ἀπὸ τῶν μεγίστων, 10
 ἃ δὴ καὶ τοῖς ιδιώταις γνωρίζεται. χεῖρας γάρ τοι καὶ πόδας καὶ γαστέρα
 735 [2] καὶ θώρακα καὶ κεφαλὴν, οὐκ ἔστιν ὅστις ἀγνοεῖ. ἢ τεμνέσθω δὴ πάλιν
 ὑφ' ἡμῶν ἐν ὅτιοῦν ἐξ αὐτῶν εἰς τὰ προσεχῆ καλούμενα μόρια· σκέλος
 μὲν εἰ τύχοι, εἰς μηρόν <τε> καὶ κνήμην καὶ πόδα· χεῖρ δ' αὖ, εἰς βραχίονά
 τε καὶ πῆχυν καὶ ἄκρην χεῖρα. καὶ μὲν δὴ καὶ ἄκρας χειρὸς οἰκεῖα μόρια, 15
 καρπὸς τε καὶ μετακάρπιον καὶ δάκτυλοι· δακτύλων δ' αὖ πάλιν, ὅστ' α

1 κὰν - ὑπομνήμασιν] cf. De temper. 1-115 Helmreich= I 508-694 K. 5-10 ὅτι - μορίων] cf. *infra*, p. 146,16-20 9-10 ἵνα - μεγίστων] cf. Gal. De meth. med. II 7: X 149,9-10 K. cf. Gal. In Hipp. Progn. comment. III 10: XVIIIb,251,6-9 K.=CMG V 9,2; 340,14-15 Heeg cf. Gal. De meth. med. X 6: X 695,1-2 K. cf. Gal. Ad Glauc. med. meth. II 6: XI 105,13-14 K. 16 - p. 146,2 δακτύλων - πιμελή] cf., *inter alia*, Gal. De const. art. med. 3: I 235,1-4 K.=CMG V 1,3; 3,5: 62,19-20 Fortuna cf. Gal. De element. I 6: I 465,14 -466,4=CMG V 1,2: (6,29,2-30,1) 110, 18-21 De Lacy et I 8: I 479,10-480,6 K.=CMG V 1,2: (8,11,1-12,1) 126,1-5 De Lacy cf. Gal. De nat. fac. I 7: II 16,11-15 K.=SM III; 112,17-21 Helmreich cf. Gal. De morb. differ. 3: VI 841,2-4 K. cf. Gal. De meth. med. III 9: X 216,14-16 K.

1 τέτταρες εἰσι add. δυσκρασίαι z, cf. dyskrasias, Hun. κράσεως LP, cf. on temperament, Hun.: κράσεων cett., cf. crasibus Nic. 2 εἰσιν om. Uz ἢ om. P 3 τε ἅμα καὶ pr. z: ἅμα καὶ cett. ὑγραιομένων PU, cf. gets wet, Hun.: ξηραιομένων Az, cf. exsiccantur Nic. θερμαινομένων LUz, cf. gets hot Hun.: ξηραιομένων P τε ἅμα καὶ bis TM: καὶ LPz ξηραιομένων U, cf. gets dry Hun.: ὑγραιομένων Az: θερμαινομένων P 4 τε ἅμα καὶ pr. Λ: ἅμα καὶ Pz ὑγραιομένων LU, cf. gets wet, Hun.: ξηραιομένων cett. ψυχομένων bis ΛΔ, cf. gets cold, Hun., in frigidantur Nic.: θερμαινομένων TM τε ἅμα καὶ bis LT: ἅμα καὶ P 5 ξηραιομένων LU, cf. gets dry Hun.: ὑγραιομένων cett., cf. humectantur Nic. 6 μόνον add., cf. only Hun. ante τὰ μόρια add. εἶναι P, del. P^{p.c.} ante σώματος add. τοῦ P 7 ὡσαύτως om. LTP^{i.l.} U Hun. ὑπάρχειν om. P^{i.l.}, scr. P^{s.l.} ὅστις] τις Uz μὲν add. post ἐστὶ add. δὲ P ut videtur 7-8 ἐστὶ ante ἀπάσαις Λ 8 γράμματι] συγγράμματι z 9 πρόκειται om. U μοι add., cf. Hun. my (intention), et XIV 106,5 K. σαφὴς ὁ λόγος γένηται] ἢ σαφὸν (sic) ὁ (sic) γένος U, sed Pet. (ut) autem manifestus sit sermo 10 σε add., cf. to you Hun., te Nic. πάντων LMP, cf. all of them Hun., omnium Nic^A, om. Nic^{cett.}: περὶ Tz ante μορίων add. ἀπάντων TUz ἀρξαμένους Pz: -μένων U: ἀρξάμενον Λ 11 γνωρίζεται Pz: γιγνώσκεται ΛU γάρ] μὲν L 12 ὅστις] ὃς LM δὴ PU: δὲ cett. 13 ἐξ αὐτῶν om. P μόρια Λ: μέρη Δ σκέλος Δ: σκέλους LM 14 τύχοι] τύχη LMP εἰς P^{s.l.} z τε add. χεῖρ P^{p.c.} z: χειρὸς Λ 16 αὖ om. PU εἰς om. Λ 15 οἰκεῖα om. P^{i.l.} z, restituit P^{s.l.} 16 τε καὶ P δάκτυλοι ΜΔ: δάκτυλος LT

as it was shown in the treatise *On krasis*. Composed from them are four others, either being both heated and moistened, or both heated and dried, or both cooled and moistened, or both cooled and dried. That such *dyskrasias* differ from the homogeneous, <just> in the fact of all the parts of the body not being likewise affected by *dyskrasia*, is plainly evident. Now, of what kind is the genesis for all the anomalous

S 2 *dyskrasias*, in this book is set before me to go through. || In order to make clear the explanation, it is necessary to remind you of all the parts of the body, beginning with the largest, which in fact even to laymen are known. In fact, nobody is

735 unaware of arms, legs, stomach, thorax, and head. | Let us in turn get anyone of them cut up into the so-called contiguous parts. Leg, for example, into thigh, calf and foot; arm, further into upper arm, forearm and hand. Now, then, parts peculiar to the hand: carpus, metacarpus and fingers. Fingers again in turn: bones,

καὶ χόνδροι καὶ σύνδεσμοι, καὶ νεῦρα καὶ ἀρτηρίαι καὶ φλέβες, ὑμένες τε καὶ σάρκες καὶ τένοντες, ὄνυχές τε καὶ δέρμα καὶ πιμελή. ταῦτα δ' οὐκέτ' ἐγχωρεῖ τέμνειν εἰς ἕτερον εἶδος, ἀλλ' ἔστιν ὁμοιομερῇ τε καὶ πρῶτα, πλὴν ἀρτηριῶν τε καὶ φλεβῶν· αὗται γὰρ ἐξ ἰνῶν σύγκεινται τε καὶ ὑμένων, καθότι κὰν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν ἐλέγετο. καὶ μὲν δὴ 5 καὶ ὡς χώραι κεναὶ πολλαὶ τινες μεταξὺ τῶν εἰρημένων ὁμοιομερῶν τε καὶ πρῶτων μορίων ὑπάρχουσι, <οὕτω> καὶ τούτων ἔτι πλείους τε καὶ μείζους ἐν τῷ μέσῳ τῶν ὁργανικῶν τε καὶ συνθέτων. ἐνίστε δὲ καὶ καθ' ἓν ὅτιοῦν ὁμοιομερὲς μόριον, ὡς ἐν ὁστῷ τε καὶ δέρματι. καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν εἴρηται. τὰ μὲν οὖν μαλακὰ τῶν σωμάτων 10 ἀλλήλοις ἐπιπίπτοντα, τὰς μεταξὺ χώρας <κενὰς> ἀδήλους ἐργάζεται πρὸς τὴν αἴσθησιν· ὅσα δ' <ἐστὶ> σκληρὰ καὶ ξηρὰ, ἢ πάνυ φωράσαις <ἂν> αὐτῶν αἰσθήσει τὰ διαλείμματα, καθάπερ ἐν ὁστοῖς τὰς σήραγγας. ἔχουσι δ' αὗται κατὰ φύσιν ὑγρὸν ἐν αὐταῖς παχὺ καὶ λευκὸν εἰς θρέψιν τοῖς ὁστοῖς παρεσκευασμένον. οἱ δ' ἐν τῷ δέρματι πόροι, καθ' ὅντινα 15 γίνονται τρόπον, ἐν τοῖς περὶ κράσεως εἴρηται. ταυτὶ μὲν οὖν ἀναγκαῖον ἦν ὑπομνήσαι σαφηνείας ἕνεκα τῶν μελλόντων λεχθήσεσθαι. ἢ περὶ δὲ τῆς ἀνωμάλου δυσκρασίας ἤδη ῥητέον, ὅποια τέ τίς ἐστὶν ἡ φύσις αὐτῆς καὶ <ὅπ>όσοι τρόποι τῆς γενέσεως. ὅτι μὲν δὴ μία κράσις οὐκ ἔστιν ἐν ἅπασιν τοῖς μέρεσι τοῦ πεπονθότος οὕτω σώματος, ἔμπροσθεν εἴρηται. 20 ἀλλὰ τοῦτο μὲν κοινὸν ἀπάσης ἀνωμάλου δυσκρασίας· αἱ διαφοραὶ δὲ ταῖς

5 κὰν - ἐγχειρήσεσιν] cf. Gal. De anat. adm. II 215-731 K.= Garofalo I-II, *et* Procedimenti anatomici III (Arabi codd.) 9-10 ἐν - ἐγχειρήσεσιν] cf. Gal. De anat. adm. II 215-731 K.= Garofalo I-II, *et* Procedimenti anatomici III (Arabi codd.) 16 ἐν τοῖς περὶ κράσεως] cf. De temper. 1-115 Helmreich = I 508-694 K. 16-20 ταυτὶ - εἴρηται] cf. *supra*, p. 144,5-10 18-19 ὅποια - γενέσεως] cf. Gal. De temper. I 1: X 509,8-510,2 K.= 1,8-9 Helmreich

3 πρῶτα] πρῶτον U *ut videtur, sed recte prime Pet.* 4 γὰρ] δὲ P σύγκεινται *ante* τε καὶ P: post ὑμένων *cett.* τε *om.* Pz 5 καθότι Δ: καθὼ Λ ἐλέγετο ΛPU, cf. *dicebatur Nic.*: λέλεκται z, U, cf. *dictum est Pet.*, cf. I have said, *Hun.* 6 ὡς] cf. (I also have written in this book) that *Hun.* τινες Pz: *om.* ΛU εἰρημένων *om.* Δ *Hun.* τε *om.* L 7 ὑπάρχουσαι P^{p.c.} οὕτω *add.* 8 ἐν *om.* Pz ὅτιοῦν *om.* *Hun.* 9 μόριον *om.* Pz τε καὶ z: καὶ *cett.* 9-10 καὶ - εἴρηται *om.* *Hun.* 11 κενὰς *add.*, cf. *hollow, Hun.*, et *supra* l. 6 ἐργάζεται] ἐργάζονται P 12 ἐστὶ *add.* ξηρὰ καὶ *om.* L, *scr.* L¹ s.l. *ante* σκληρὰ, ξηρὰ καὶ σκληρὰ U πάνυ LTP^{ve}: κὰν Δ, cf. *maybe, Hun.* φωράσαις] φωράσης U, et *in m.*, *sed senties Pet.* (φωράσεις) 13 ἂν *add.* αὐτῶν Λ, cf. *in them Hun.*: τούτων Δ αἰσθήσει] αἰσθήσεσι L διαλείμματα] διαστήματα U 14 καὶ *ante* αὗται *add.* P ὑγρὸν *ante* ἐν P: post αὐταῖς *cett.* αὐταῖς Uz: ἑαυταῖς *cett.* παχὺ] πολὺ DV 16 κράσεως U, cf. *temperament, Hun.*: κράσεων *cett.* ταυτὶ] ταῦτα Pz 17 ὑπομνήσαι PU: ἀναμνήσαι *cett.* ἕνεκα Pz: ἕνεκεν LT 18 ῥητέον] εἴρηται P^{ve} τέ Λ: *om.* Δ ἐστὶν *ante* ἡ φύσις U: post αὐτῆς ΛP 19 ὅπόσοι *scripsi*: ὅσοι *codd.* τῆς Δ: *om.* Λ δὴ] οὖν z 20 ἅπασιν *om.* *Hun.* πεπονθότος: ῥευματισθέντος z οὕτω Λ P^{s.l.}: ἤδη U: *om.* *cett.* post σώματος *rasuram vel spatium in litt. habet* P 21 κοινὸν] general and common, *Hun.* (*sed commune et participativum Ger.*) κοινόν *ante* ἀπάσης Δ: post δυσκρασίας Λ αἱ *om.* LT

cartilages, ligaments, nerves, arteries and veins; membranes, flesh and tendons; nails, skin and fat. Then those it is no longer possible to cut into another shaped part: they are homoeomer³ and primary, except for arteries and veins, for these are composed of fibres and membranes, as it was told in my Anatomical Procedures. Now then, as there are many hollow places among the so-called homoeomer and primary parts, <likewise> there are more of them and larger amidst the organic and composed parts; sometimes even inside any single homoeomer part, as in bone and skin. And of all of them, in the Anatomical Procedures, have been told. Now, the soft bodies, colliding into each other, make the <hollow> places in between, in-
 736 conspicuous to perception, whereas in those that <are> hard and dry, | you would fully discover their intervals by means of perception, such as the (medullary) cavities in the bones. These (cavities) have by nature in themselves a thick and white fluid, for nutrition prepared by the bones. The pores in the skin, how they come to be, has been explained in *On krasis*. Of these it was necessary to remind (you), for
 S 3 the sake of clarity of the things to be told. || Of the anomalous *dyskrasia* it is time to tell of what kind its nature is, and how many are the types of its genesis. The fact of not being just one *krasis* in every part of the body so affected, has been told before. Now, that is common to every anomalous *dyskrasia*, whereas the differences follow

³ I.e. of similar parts.

- [3] τῶν πεπονθότων σωμάτων ἔπονται φύσεσιν. ἄλλως μὲν γὰρ ἡ ἀπλῇ σὰρξ, ἄλλως δ' ὁ σύμπας μῦς, εἰς ἀνώμαλον ἀφικνεῖται δυσκρασίαν. Ἰ αὐτίκα γέ τοι ῥεύματος θερμοῦ κατασκήψαντος εἰς μῦν, πρῶται μὲν αἱ μεΐζους ἀρτηρίαι τε καὶ φλέβες ἐμπίμπλανται τε καὶ διατείνονται· μετὰ ταύτας δ' αἱ σμικρότεραι, καὶ τοῦτο γίγνεται μέχρι τῶν μικροτάτων· ἐν αἷς ὅταν 5
737 ἰσχυρῶς ἰ σφηνωθῇ καὶ μηκέτι στέγηται τὸ ῥεῦμα, τὸ μὲν τι κατὰ τὸ στόμα, τὸ δέ τι καὶ διὰ τῶν κινούντων αὐτὸ χιτώνων διηθεῖται πρὸς τοῦκτός· κὰν τούτῳ πίμπλανται ῥεύματος αἱ μεταξὺ χῶραι κεναὶ τῶν πρώτων σωμάτων, ὥστε καὶ θερμαίνεσθαι καὶ περικλύζεσθαι πανταχόθεν ὑπὸ τῆς ὑγρότητος ἅπαντα. νεῦρα δ' ἐστὶ ταῦτα καὶ σύνδεσμοι καὶ ὑμένες καὶ σάρκες· αὐταί 10
τε πρὸ τούτων αἱ ἀρτηρίαι καὶ αἱ φλέβες, αἱ δὲ καὶ πρῶται καὶ μάλιστα ποικίλως ὀδυνῶνται· καὶ γὰρ ἔνδοθεν ὑπὸ τοῦ ῥεύματος θερμαίνονται τε καὶ διατείνονται καὶ διασπῶνται, κὰκ τῶν ἔξωθεν θερμαίνονται τε ἅμα καὶ θλίβονται καὶ βαρύνονται· τὰ δ' ἄλλα μόρια, τὰ μὲν τῷ θερμαίνεσθαι μόνον ἢ θλίβεσθαι, τὰ δὲ τῷ συναμφοτέρῳ κάμνει. καὶ καλεῖται μὲν τὸ νόσημα 15
φλεγμονή, δυσκρασία δ' ἐστὶν ἀνώμαλος τοῦ μυός. τὸ μὲν γὰρ αἷμα τὸ κατ' αὐτὸν ἤδη ζέει· συνεκθερμαίνει δ' αὐτῷ, πρώτους μὲν καὶ μάλιστα

2-5 αὐτίκα - μικροτάτων] *cf.* Gal. In Hipp. Progn. comment. I 42: XVIIIb 107,2-14 K.= CMG V 9,2; 256,19- 257,4 Heeg *cf.* Gal. De crisibus III 12: IX 693,12-13 K.=159,19-20 Alexanderson *cf.* Gal. Meth.Med. XIV 3: X 877,15-17 K. *cf.* Gal. De tumor. praeter nat. 2: VII 707,3-714,18 K. 2-7 αὐτίκα - τοῦκτός] *cf.* Gal. Meth.Med. XI 6: X 695,1-8 K. 2 - p. 150,2 αὐτίκα - πάντα] Gal. De const. artis med. 14: I 274,1-7 K.= CMG V 1,3; 98,25-29 Fortuna.

1 ἡ *om.* Pz 2 δυσκρασίαν U, κρᾶσιν P *et* δυσ P^{re}, *cf.* dyskrasia Hun., *cf.* Gal. IX 309,4: κρᾶσιν *cett.* 3 πρῶται P^{il} U, *cf.* prime Pet.: πρῶτον *cett.*, *cf.* primum Nic. 4 τε *pr.* P^{s.l}. ἐμπίμπλανται *codd.*, *correxī* τε *bis om.* P^{il}. (rest. P^{s.l}) z ταύτας *correxī*: ταῦτα *codd.* 4-5 μετὰ - γίγνεται *om.* P^{il}, *scrip.* P^{s.l}. *et im.* 5 ὅταν ἰσχυρῶς σφηνωθῇ, *cf.* cum fortiter incuneatum fuerit Nic., *sed* when it is too much in excess Hun. 6 τὸ *bis om.* P 7 καὶ LPU τῶν κινούντων αὐτὸ χιτώνων LM: τῶν χιτώνων αὐτῶν TPz, *cf.* per tunicas earum Nic.: from the veins' bodies themselves Hun.: τῶν πόρων U, *sed cf.* per poros ipsos Pet. (αὐτῶν) διηθεῖται] διηροῦται P^{s.l} 8 τούτῳ] οὕτῳ P^{a.c.} *ut videtur* κεναὶ Pz, *cf.* hollow Hun.: *om.* ΛU ὥστε] *sed cf.* up to (happening), Hun. (adeo donec accidat Ger.), *cf.* ut (calefiant) Nic. 9 πανταχόθεν ὑπὸ τῆς ὑγρότητος] πανταχόθεν *post* ὑγρότητος U 10 ἅπαντα *om.* Hun. *ante* νεῦρα *add.* τὰ T σύνδεσμοι καὶ ὑμένες z, *cf.* ligaments and membranes, Hun.: ὑμένες καὶ σύνδεσμοι AP αἱ *ante* σάρκες *add.* z *post* σάρκες *distinx.* PU Hun.: *post* αὐταί Λz Nic. αὐταί P, U *sed ipse* Pet. (αὐταί): αὐταί *cett.*, *cf.* themselves Hun. 11 τε P: ἔτι τε z: τε καὶ U: *om.* Λ πρὸ] πρὸς L: *om.* P^{il}. *post* πρὸ *habent* δὲ P^{re} Uz πρὸ τούτων AP^{re}, *cf.* before that Hun.: πρῶται P αἱ *ante* ἀρτηρίαι *om.* U αἱ *ante* φλέβες TPz πρῶται Pz: πρῶτως ΛU πρῶται καὶ μάλιστα, *cf.* first- and especially Hun] μάλιστα πρῶται P, *et* καὶ *s.l.* 12 ποικίλως *om.* Hun., *sed* diversos *servat* Ger. ὀδυνῶνται P 12-13 τε ... τε *om.* LM 13-14 τε ἅμα καὶ θλίβονται *om.* M τε *om.* LTz 14 ἐν *ante* τῷ *add.* Λz 15 συναμφοτέρῳ M P?: συναμφοτέρεα LTz: συναμφοτέροις U κάμνει AP^c.U: κάμνειν P^{a.c}.z 15 τὸ νόσημα] τὰ νοσήματα z 16 *post* φλεγμονή *add.* which is the hot tumor, Hun. τὸ *bis om.* U 17 αὐτῷ *codd.*, *correxī* *post* αὐτῷ *interpunxit* L πρῶτους Λ: πρῶτως Uz: πρῶτα P^{a.c.} *ut videtur*

the nature of the affected parts.⁴ For in one way the simple flesh, in another way the
 [3] complete muscle, result in the anomalous *dyskrasia*. | Suddenly a hot flux⁵ having
 fallen upon a muscle, first the larger arteries and veins get filled up and stretched
 out; after them, the lesser ones, and that happens up to the minimal ones, in which,
 737 when the flow gets violently | constricted⁶ and is no longer held, a part of it runs to
 the exterior through the orifice,⁷ another through the coats that move it:⁸ this way,
 the hollow places in between the primary bodies get filled up with flow, so as to
 get hot and soaked all around from every place by the humidity, all of them. These
 are nerves, ligaments, membranes and flesh, and above all those arteries and veins,
 which, in fact, in the first place and especially, are affected by manifold suffering.
 For in fact, from inside, by the flux they get heated, stretched out and torn asunder,
 while from outside they get heated, compressed and overloaded. Of the other parts,
 some get affected just by getting hot or by being compressed, and some by both of
 these. And the disease is called inflammation, and it is an anomalous *dyskrasia* of
 the muscle. For the blood in it already boils, and heats with it, first and especially,

4 Galen sometimes uses the Greek word for body ($\sigma\omega\mu\alpha$) for referring to parts and even to humours.

5 The blood.

6 Literally: "wedged".

7 "of the vessels".

8 That is, the blood.

S 4 τοὺς χιτῶνας τῶν ἀρτηριῶν καὶ τῶν φλεβῶν· ἤδη δὲ καὶ τὰκτὸς αὐτῶν,
 738 οἷς περικέχυται πάντα. || καὶ δυοῖν γε θάτερον ἀναγκαῖον ἀπαντῆσαι·
 νικήσαντος μὲν τοῦ ῥεύματος, φθορὰν | τῶν νικηθέντων σωμάτων·
 νικηθέντος δέ, τὴν εἰς τὸ κατὰ φύσιν ἐπάνοδον τῷ μυϊ. καὶ δὴ καὶ νικάσθω
 πρότερον τὸ ῥεῦμα· βέλτιον γὰρ ἀπὸ τῶν κρειττόνων ἄρχεσθαι· διττὸς 5
 δ' οὖν ἐν τούτῳ ὁ τρόπος ἔσται τῆς ἰάσεως, ἢ διαφορηθέντος ἅπαντος
 τοῦ κατασκήψαντος ὑγροῦ, ἢ πεφθέντος. ἀλλ' ἢ μὲν διαφόρησις, ἢ
 εὐκτασιότης τῶν ἰάσεων ἔστιν· τῇ πέψει δὲ δύο ταῦτ' ἐξ ἀνάγκης ἔπεται,
 πύου τε γένεσις καὶ ἀπόστασις. ἀφίσταται δέ ποτε μὲν, εἰς τὴν μεγίστην τε
 καὶ ἀκυροτάτην τῶν παρακειμένων κοιλιῶν, ἥπερ δὴ καὶ <ῆ> βελτίστη τῶν 10
 ἀποστάσεων ἔστιν· ἐνίοτε δ' εἰς μεγίστην μὲν, οὐ μὴν ἄκυρον, ἢ εἰς ἄκυρον
 μὲν, οὐ μεγίστην δέ. τοῖς μὲν οὖν κατὰ <τὴν> γαστέρα, <ῆ> καλλίστη τῶν
 ἀποστάσεων ἔστιν, ἢ εἰς τὴν ἐντὸς εὐρυχωρίαν, εἰς ἣν καὶ συρρήγνυται
 τὰ πολλά· μοχθηρὰ δ' ἢ ὑπὸ τὸ περιτόναιον. οὕτω δὲ καὶ τοῖς κατὰ τὸν
 ἐγκέφαλον· ἢ μὲν οὖν εἰς τὰς ἐμπροσθίους δύο κοιλίας ἀγαθὴ, μοχθηρὰ 15
 δ' ἢ τε ὑπὸ τὰς μήνιγγας καὶ ἢ εἰς τὴν ὀπισθεν κοιλίαν. αἱ δὲ κατὰ τὰς
 πλευρὰς ἀποστάσεις, εἰς τὰς τοῦ θώρακος εὐρυχωρίας ἐκρήγνυνται· καὶ
 739 τῶν μὲν μυῶν, ὑπὸ τὸ δέρμα· τῶν δὲ σπλάγχνων, ἢ εἰς | τὰς ἀρτηρίας καὶ
 τὰς φλέβας τὰς ἐν αὐτοῖς, ἢ ὑπὸ τὸν ὑμένα τὸν περιέχοντα, καθάπερ τι
 S 5 δέρμα καὶ αὐτὸν ὑπάρχοντα τοῖς σπλάγχνοις. || εἰ δὲ νικηθεῖ τὰ σώματα 20
 πρὸς τοῦ ῥεύματος, εἰς τοσαύτην μὲν ἀφίξεται δηλονότι δυσκρασίαν, ὥς
 καὶ τὴν ἐνέργειαν αὐτῶν ἀπολέσθαι καὶ φθαρῆναι τῷ χρόνῳ· παύσεται

2 – p. 154,4 καὶ δυοῖν - αἵμα] = Orib. Collect. med. XLIV 1: CMG VI 2,1; 10,5 – 13,1 Raeder
 3 νικήσαντος - σωμάτων] cf. *infra*, 20-22 20-21 εἰ - ῥεύματος] cf. Gal. De tum. praet.
 nat. 3: VII 715, 10-11 K. 20-22 εἰ - χρόνῳ] cf. *supra*, 3 21-22 ὥς - χρόνῳ] cf. *infra*, p.
 156,18-19

1 τῶν ante φλεβῶν U τὰκτὸς P?z: τὰς ἐκτὸς L 2 πάντα] σύμπαντα U γε AP: om.
 cett.: cf. γὰρ Orib. ἀναγκαῖον ἀπαντῆσαι Az, cf. Orib.: ἀπαντῆσαι ἀναγκαῖον PU 3 post
 φθορὰν add. γίνεσθαι Az (non habet Orib.): add. ἀναγκαῖον ἀκολουθῆσαι φθορὰν U, cf.
 necessarium est sequi corruptionem Pet. 4 τῷ μυϊ] cf. τῶν πεπονθότων Orib. καὶ δὴ καὶ
 P^{p.c.} cf. Orib.: καὶ δὴ cett. 6 δ' Uz οὖν P^{s.l.} δ' οὖν non habet Orib. ὁ L ἔσται] ἐστὶ U,
 cf. happens, Hun. (sed erit Ger.) τρόπος ἔσται] ἔσται ὁ τρόπος L^{a.c.} τῆς ἰάσεως ἔσται z
 7 κατασκήψαντος om. U ὑγροῦ, cf. humidity Hun.] ῥεύματος U, cf. reumate Nic. ἢ bis
 P^{s.l.} cf. Orib. 8 ἔπεται post ἀνάγκης traduxi: ante ἐξ ἀνάγκης U: ante δύο cett., cf. Orib. 9 τε
 pr. Uz, cf. Orib. τε bis z 10 ἀκυροτάτην M: -ω- cett. Σ κοιλιῶν PU: κοιλοτήτων cett. καὶ
 bis om. U ἢ add. 11 τὴν ante μεγίστην add. ΔPU 12 οὐ μεγίστην δέ] sed cf. not being the
 largest nor the nearest Hun. οὖν om. U τὴν ante γαστέρα add. ἢ add. 13 ἢ TMz, cf.
 the best is that which Hun.: ἢ LP: om. U ἐντὸς] ἐν L καὶ om. U συρρήγνυται P: -νυνται
 (-γνῦ- U) cett. 14 δ' ἢ om. P^{il.}, rest. P^{s.l.} καὶ] κὰν Pz 15 οὖν U, cf. igitur Pet. ἐμπροσθίους]
 προσθίους P δύο U, cf. two Hun., duo Nic. 16 τε P ἢ Pz 18 ἢ] ἢτοι γ' z 19 καὶ Lz,
 cf. et Nic.: καὶ εἰς U (et in, Pet.): ἢ εἰς MP 20 τοῖς σπλάγχνοις ὑπάρχοντα z τὰ σώματα]
 τὰ μόρια coni. Lalam. 21 ἀφίξεται] sed has arrived Hun. δηλονότι om. z 22 αὐτῶν om. z

the coats of the arteries and the veins, then as well their outside, and consequently
 S 4 everything gets drenched all around. || And one of these two (processes) necessarily
 738 happens: overcoming the flow, destruction | of the overcome parts;⁹ the flow being
 overcome, return of the muscle to its natural state. Now, hence, let the flow be over-
 come first, for it is preferable to start from the better side. Double in this case will be
 the way of healing: either all the obstructed humidity is dissipated, or else it is being
 concocted. In fact, dissipation is the most adequate of the ways of healing. Concoct-
 tion, on the other hand, is necessarily followed by these two events: pus formation
 and deposit.¹⁰ The deposit is formed sometimes into the biggest and less important
 of the cavities nearby: this is precisely as well the best of deposits. At times (it is
 formed) into a very big and important¹¹ (cavity), or else into a non-important and
 not very big either. Now, for those (deposits) by the belly, the best is the deposit
 into the ample inner space, towards which most of them break away together; the
 one formed under the peritoneum is bad. In the same way those by the brain, for
 the one (that is formed) into the two front cavities is good, but the one under the
 meninges, and that into the back cavity are bad. And the deposits by the ribs break
 away together into the ample spaces of the thorax; (those) of the muscles, under the
 739 skin; (those) in the viscera, either into | the arteries and veins in them, or else under
 S 5 the membrane that contains them ---as being a sort of skin for the viscera. || If the
 parts¹² were overcome by the flow, they would certainly result in such an enormous
dyskrasia as to their capacity perishing and being destroyed in time. Pain will stop

9 Literally "bodies".

10 *Apostasis*.

11 Literally "a non-unimportant".

12 Again, "bodies".

δ' ὀδυνώμενα τότε πρῶτον ὅταν ἐξομοιωθῇ τῷ μεταβάλλοντι. οὐ γὰρ
 ἐν τῷ μεταβεβλήσθαι τὴν <φύσιν> [κρᾶσιν], ἀλλ' ἐν τῷ μεταβάλλεσθαι
 πονεῖ τὰ μόρια, καθότι καὶ ὁ θαυμασίος Ἱπποκράτης ἔλεγεν· «τοῖσι γὰρ
 τὴν φύσιν διαλασσομένοισι καὶ διαφθειρομένοισιν, αἱ ὀδύναι γίνονται.»
 διαλλάττεται δὲ καὶ διαφθείρεται τὴν φύσιν ἕκαστον, ἢ θερμαίνόμενον, ἢ 5
 ψυχόμενον, ἢ ξηραίνόμενον, ἢ ὑγραίνόμενον, ἢ τῆς συνεχείας λυόμενον· ἐπὶ
 μὲν ταῖς ἀνωμάλοις δυσκρασίαις, διὰ τὸ θερμαίνεσθαι ἢ ψύχεσθαι μᾶλλον·
 δραστικώταται γὰρ αὗται αἱ ποιότητες· ἤδη δὲ καὶ διὰ τὸ ξηραίνεσθαί τε καὶ
 ὑγραίνεσθαι· ἐν δὲ τῷ πεινῇ ἢ διψῇ, ἐπιλειπούσης ἔνθα μὲν τῆς ξηρᾶς
 οὐσίας, ἔνθα δὲ τῆς ὑγρᾶς. ἐν δὲ τῷ τιτρώσκεσθαι καὶ ἀναβιβρώσκεσθαι 10
 740 [4] καὶ τείνεσθαι καὶ θλίβεσθαι καὶ διασπᾶσθαι, τῆς συνεχείας λυομένης ἰ.
 S 6 ἢ εἰ μὲν οὖν ἢ τε θερμότης τοῦ αἵματος ἢ κατὰ τὸ φλεγμαῖνον μόριον
 ἐπιεικῆς ὑπάρχοι, καὶ τὸ περιεχόμενον αἷμα καθ' ὅλον τοῦ ζώου τὸ
 σῶμα μετρίως ἔχει κράσεως, οὐ πάνυ τι ῥαδίως συνεκθερμαίνεται τῷ
 πεπονθότι· εἰ δὲ [τοι] ζέοι σφοδρότερον ἢ εἰ καὶ τὸ καθ' ὅλον τὸ ζῶον αἷμα 15
 χολῶδες ὑπάρχοι, παραχρῆμα σύμπαν ἐκθερμαίνεται· πολὺ δὲ μᾶλλον
 ἐπειδὴν ἄμφω συνδράμη, καὶ τὸ κατὰ τὴν φλεγμονὴν αἷμα θερμὸν
 ἱκανῶς εἶναι, καὶ τὸ καθ' ὅλον τὸ ζῶον <αἷμα> χολῶδες. ἐκθερμαίνεται

3-4 Ἱπποκράτης - γίνονται] = Gal. De sympt. causis 5: VII 176,8-10 = Gal. De tremore 6: VII 620,6-8 K. = Gal. In Hipp. epid. VI comment. VI 5: XVIIb,334,2-4 K. = CMG V 10,2,2: 343,1-2 Wenkebach = Gal. De sympt. causis I 6: VII 115,14-15, et I 5: VII 176,9-10 3-4 τοῖσι - γίνονται] = Hipp. De loc. hom. 42; VI 334, 7-8 L. = Hipp. XIII: 71,21-72,1 Joly = 42,1; 78,18-19 Craik 6 τῆς - λυόμενον] cf. Gal. De caus. morb. 11: VII 37, 10-13 K. 7-9 διὰ τὸ - ὑγραίνεσθαι] cf. Gal. De constit. art. med. 8: I 252, 10-15 K. = CMG V 1,3; 80,8-9 Fortuna 10-11 ἐν - λυομένης] cf. Gal. De constit. art. med. 5: I 238,12-15 K. = CMG V 1,3; 66, 7-10 Fortuna cf. Gal. In Hipp. de fract. comment. III 34: XVIIIb 586,5-8 K.

1 τότε MP^{p.c.}Uz, cf. tunc Nic.: τὸ LTP^{a.c.} 2 φύσιν scripsi: κρᾶσιν codd., cf. Orib., cf. mixture Hun. 3 καθότι] καθάπερ z θαυμασίος U: θαυμαστός cett. 3 τοῖσι M, fortasse U^{p.c.}: τοῖς P^{p.c.} (abbrev.), T: om. cett. γὰρ Δ διαλλαττομένοισι codd., correxi 5 ἢ pr. Uz 6 ἐπὶ Δ: ἐν Δ 7 ἢ ΔU, cf. or Hun.: καὶ Pz, cf. et Nic. μᾶλλον P: μάλιστα cett. 8 αἱ om. Δ ξηραίνεσθαι Uz, cf. get dry Hun.: ὑγραίνεσθαι ΔP τε om. Pz 9 ὑγραίνεσθαι Uz, cf. get wet Hun.: ξηραίνεσθαι ΔP πεινῇ] πεινῶν L ἢ] καὶ P ξηρᾶς Uz, cf. dry Hun.: ὑγρᾶς ΔP 10 οὐσίας om. L ἔνθα δὲ ΔP, fortasse U^{Pet.}, cf. hic vero Pet.: ἐν δ' αὖ U: ἔνθα δ' αὖ z ὑγρᾶς Uz, cf. humid Hun.: ξηρᾶς ΔP ἀναβιβρώσκεσθαι Uz: δια- ΔP 11 διασπᾶσθαι Δ: ἀνα- Δ τῆς om. P 12 εἰ] sed when, Hun. ἢ] om. PU, rest. P^{s.l.}: cf. εἰ Orib.^R, corr. Daremberg 13 ἐπιεικῆς] μετρίως P^{s.l.} ὑπάρχοι TU, cf. Orib.: ὑπάρχει cett. 13-14 τοῦ ζώου τὸ σῶμα Δ, cf. Orib.: τὸ τοῦ ζώου σῶμα Δ 14 ἔχει TU, cf. Orib.: ἔχει cett. 15 δὲ correxi: δ' ἦτοι codd. εἰ δὲ ζέοι σφοδρότερον] cf. when the heat of the blood in the inflamed part is strong, it heats the body up with the power of its boil, Hun. ζέοι MU (ferverit Pet.), cf. Orib., cf. ferveat Nic.: ζέει cett. εἰ bis LMP τὸ pr. L^{s.l.} τὸ ζῶον Uz, cf. Orib.: τοῦ ζώου τὸ σῶμα P: τὸ τοῦ ζώου σῶμα Δ αἷμα om. P 16 χολῶδες Uz, cf. Orib.: χολωδέστερον ΔP χολῶδες ὑπάρχοι] cf. θερμότερον ὑπάρχοι καὶ χολῶδες Orib. ὑπάρχοι MU, cf. Orib., cf. extiterit Nic.: ὑπάρχει LP σύμπαν] πᾶν U, et cf. Orib. 17 συνδράμη Pz, U ut videtur, Orib.: συνδράμοι Δ αἷμα U 18 αἷμα add.

as soon as they (the parts) become identical to that which changes them, since not when they have been (completely) changed in their [*krasis*] nature, but in the process of changing, do the parts feel pain, as the admirable Hippocrates said: in those (parts) being changed and destroyed in their nature, pain is present. And each part is being changed and destroyed in their nature, either becoming hot, or cold, or dry, or humid, or else having the continuity loosened. In the anomalous *dyskrasia*, especially because of hot or cold, for those are the most active qualities. Then, because of getting dry or humid as well: when being hungry or thirsty, by missing in the
 740 former the dry matter, and the humid in the latter; when getting wounded, erod-
 [4] ed, stretched out, compressed, or torn asunder, by having its continuity loosened. |
 S 6 || Now, if the blood's heat in the inflamed part were adequate, and the blood contained in the whole animal's body had a temperate *krasis*, it (the blood) would¹³ not at all easily heat up along with the affected part. However, if it boiled harder or if the blood in the whole animal were bilious, suddenly all of it would¹⁴ heat up. (It would happen) much more if both occur at the same time: not just the blood in the inflamed part being hot enough, but that in the whole animal, being bilious as well. First to get hot

¹³ In Greek, "does not".

¹⁴ Again, "does not" in Greek.

- δὲ πρότερον μὲν τὸ κατὰ τὰς ἀρτηρίας, ὅτι καὶ φύσει θερμότερόν ἐστι καὶ πνευματώδεςτερον· ἐφεξῆς δὲ καὶ τὸ κατὰ τὰς φλέβας. εἰ δ' ἐγγὺς εἴη τῶν πολυαίμων σπλάγχνων τὸ φλεγμαῖνον μόριον, ἔτι καὶ θάττον
- S 7 αὐτῷ συνεκθερμαίνεται τὸ καθ' ὅλον τὸ ζῶον αἷμα. || συνελόντι δ' εἰπεῖν, ἐπὶ παντός τοῦ θερμαίνοντος, ὅσον <ἄν> εὐαλλοίωτον ἢ, ἢ φύσει 5 θερμόν, ἐκθερμαίνεται πρῶτον, ὥσπερ γε κάπὶ <παντός> τοῦ ψύχοντος, ὅσον <ἄν> εὐαλλοίωτον ἢ, ἢ φύσει ψυχρόν, ἐκεῖνο πρῶτον καταψύχεται.
- 741 εὐαλλοιωτότατον μὲν οὖν τὸ πνεῦμα, διότι καὶ | λεπτομερέστατον· θερμοτάτη δὲ φύσει <ή> ξανθὴ χολή, ψυχρότατον δὲ τὸ φλέγμα· τῶν δ' ἄλλων χυμῶν, <τὸ> αἷμα μὲν ἐφεξῆς τῇ ξανθῇ χολῇ θερμόν· ἢ μέλαινα δέ, 10 ψυχρὰ μετὰ τὸ φλέγμα. καὶ μὲν δὴ καὶ ἀλλοιοῦται μὲν ἢ ξανθὴ χολὴ ῥαδίως ὑπὸ παντός τοῦ δρῶντος εἰς αὐτήν· ἢ μέλαινα δέ, δυσκόλως. ἐνὶ δὲ λόγῳ, τὸ μὲν λεπτομερές ἅπαν, εὐαλλοίωτον· τὸ δὲ παχυμερές, δυσαλλοίωτον.
- S 8 || ὥστ' ἀνάγκη πολυειδεῖς γίνεσθαι τὰς ἐπὶ ταῖς φλεγμοναῖς ἀλλοιώσεις, ὅτι καὶ πολυειδῶς διάκεινται τὰ σώματα. πρῶτως μὲν γὰρ ὁ τὴν φλεγμονὴν 15 ἐργαζόμενος χυμὸς ἢ μᾶλλον ἢ ἥττον ἐστὶ θερμός· ἐφεξῆς δ' ἢ σῆψις αὐτοῦ κατὰ τὴν οἰκείαν ἀπαντᾷ φύσιν· οὐχ ἥκιστα δὲ καὶ παρὰ τὸ μᾶλλον τε καὶ ἥττον ἐσφηνῶσθαι <τὸν χυμόν> — τὰ γὰρ μὴ διαπνεόμενα, θάττον σήπεται, καθάπερ κάπὶ τῶν ἐκτὸς ἀπάντων — ὅταν δὲ <τὸ αἷμα> καὶ θερμόν καὶ 20 ὑγρόν τὴν κρᾶσιν ἢ, τότε δὴ καὶ μάλιστα. καὶ μὲν δὴ καὶ τὸ φλεγμαῖνον μόριον ἢ ἐγγὺς ἢ πόρρω τῶν πολυαίμων ἐστὶ σπλάγχνων, καὶ τὸ πᾶν αἷμα πικρόχολον ἢ μελαγχολικόν ἢ φλεγματώδες ἢ πνευματώδες· καὶ ταῦτα σύμπαντα μᾶλλον τε καὶ ἥττον. ὥστ' ἀνάγκη πολυειδεῖς γίνεσθαι τὰς

13 τὸ μὲν - δυσαλλοίωτον] Cf. Gal. De diff. febr. I 2: VII 278,3-4 K. 14 ὥστ' - ἀλλοιώσεις] = *infra*, 23 - p. 156,1 16-19 ἐφεξῆς - ἀπάντων] cf. p. 162,15-18 (οὐ - σῆψιν) cf. Gal. De diff. febr. I 5: VII 287,7-9 K. et II 11: VII 375,8-13 K. cf. Gal. De tumor. praeter nat. 2: VII 712,15-713,2 K.

1 πρότερον AP A: πρῶτον Uz 5 ἄν add. ἢ LTP^{s.l.}: ἢν M ante φύσει add. τῇ LM 6 γε om. Lz παντός add. 7 ἄν add. ante φύσει add. τῇ M 8 εὐαλλοιωτότατον P^{s.l.} U, cf. the quickest to be altered, Hun.: εὐαλλοίωτον P^{i.l.} cett. 9 θερμοτάτη corr.: θερμότατον codd. θερμοτάτη - φλέγμα om. L ἢ add. ξανθὴ χολή Tz: χολὴ ξανθὴ MP: om. L τὸ z 10 τὸ add. 11 ψυχρὰ corr. Lalam.: ψυχρόν codd. καὶ μὲν δὴ καὶ Δ: καὶ δὴ Λ 12 δυσκόλως AP, cf. with effort and intensity, Hun.: χολή, μόγισ U^{i.l.}: μόλις z, et U^{i.m.}, cf. scarcely Hun^L 14 πολυειδεῖς] -δοῦς P ἐγγίγνεσθαι z ταῖς φλεγμοναῖς (ἐγ-)γίγνεσθαι τὰς ἀλλοιώσεις Uz 15 πρῶτως Tz: πρῶτος LMU: πρῶτον P] cf. as for the beginning of the subject, Hun. διὰ τοῦτο γίνονται καὶ ὀδύναι ante πρῶτως add. U τε ante τὴν add. PU 17 δὲ καὶ] ἥτοι L^{s.l.} παρὰ TMPz, cf. penes Nic.: κατὰ U: πᾶν L τὸ] τῷ L^{s.l.} τε καὶ AP: ἢ U 18 τὸν χυμόν add. R σήπεται θάττον U, cf. putrescunt citius, Pet.: θάττον σήπεται cett. θάττον] μᾶλλον L 19 καθάπερ Uz: ὥσπερ cett. δὲ <τὸ αἷμα> καὶ om. P τὸ αἷμα add. 20 κρᾶσιν] cf. temperament, Hun., complexionem Nic.: φύσιν U ἢ PU: ἐστὶ Λ καὶ ter om. LM 21 ἐστὶ ante σπλάγχνων Uz: post σπλάγχνων cett. 22 φλεγματώδες ἢ μελαγχολικόν U 23 σύμπαντα U: πάντα cett. γίγνεσθαι] γενέσθαι U

is the blood in the arteries, because by nature it is hotter and more pneumatic;¹⁵ then, that in the veins as well. And, if the inflamed part were near the viscera with much
 S 7 blood, the whole animal's blood would get hot with it even quicker. || In short, in everything that gets hot, the more alterable it is, or hot by nature, it gets hot first; as (it) also (happens) in everything that gets cold: the more alterable it is, or cold by nature, it gets cold first. Thus, on the one hand, most alterable is the pneuma, because it
 741 is also | thinnest. On the other hand, hottest by nature is the yellow bile, coldest the phlegm; of the other humours, blood is second hottest after the yellow bile, whereas the black is second coldest after phlegm. In fact, the yellow bile gets easily altered by everything that acts against it; the black, with difficulty. In a couple of words, everything formed by thin parts, is easily alterable, whereas everything formed by thick
 S 8 parts, is difficult to alter. || So that alterations in the inflammations necessarily happen of many kinds, because also of many kinds are the humours.¹⁶ Firstly, in fact, the humour that provokes the inflammation is more or less hot. Then, the putrefaction of it (the humour) works according to its nature; not the least (insignificant) is the fact of <the humour> being more or less constricted¹⁷ — for the entities without transpiration get putrid quicker, as it also happens in all the external things—. And when <the blood> is not just hot but humid as well in its *krasis*, then even much more so. In fact, the inflamed part is either near or far from the viscera with much blood, and the whole blood is either full of bitter or black bile, or phlegm or pneuma, and all of that to a more or lesser extent, so that necessarily the alterations happen of many kinds |,

15 The Greek word is πνευματωδέστερον.

16 In Greek, "bodies".

17 "Wedged" in Greek.

- 742 | ἀλλοιώσεις, ἑτέρου τε <σώματος> πρὸς ἕτερον παραβαλλομένου καὶ
 [5] S 9 αὐτοῦ τινὸς πρὸς ἑαυτό. || αὗται πᾶσαι δυσκρασίαι τοῦ σώματος ἀνώμαλοι
 γίνονται, μάλιστα μὲν ἐκπεπυρωμένου τοῦ κατὰ τὴν φλεγμονὴν
 αἵματος, ἐφεξῆς δὲ τοῦ κατὰ τᾶλλα σπλάγχνα καὶ τὴν καρδίαν, καὶ
 ταύτης μάλιστα τοῦ κατὰ τὴν ἀριστερὰν κοιλίαν, εἰς ἣν εἰ ὑγιαίνοντος ἔτι 5
 τοῦ ζώου καὶ μήπω πυρέττοντος, ἐθελήσας ἐμβαλεῖν τοὺς δακτύλους,
 ὥς ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσι γέγραπται, σφοδροτάτης αἰσθήσης
 θερμασίας. οὐκ οὐκ ἀπεικός ἐστιν οὐδ' ὅποτε σύμπαν ἐκθερμαίνεται τὸ
 σῶμα παρὰ φύσιν, εἰς ἄκρον ἤκειν θερμότητος ἐκείνην μάλιστα· καὶ γὰρ
 λεπτομερέστατον <τὸ> αἷμα καὶ πνευματωδέστατον ἔχει, καὶ κινεῖται 10
 R-7 διαπαντός. || ἀλλ' ἐν τοῖς τοιούτοις ἅπασιν πυρετοῖς, ἐκθερμαίνεται
 μὲν ἐνίοτε σύμπαν ἤδη τὸ αἷμα, ὃ καὶ δέδεκται τὴν παρὰ φύσιν ἐκείνην
 S 10 θερμασίαν τὴν ἐκ τῆς σηπεδόνης τῶν χυμῶν ὀρμηθεῖσαν· || οὐ μὴν οὐδ'
 οἱ χιτῶνες τῶν ἀρτηριῶν ἢ τῶν φλεβῶν, οὐδ' ἄλλο τι τῶν παρακειμένων
 σωμάτων ἤδη πω τελέως ἡλλοίωται τὴν κρᾶσιν, ἀλλ' ἔτι καὶ μεταβάλλεται 15
 743 | καὶ ἀλλοιοῦται θερμαίνόμενα. εἰ δ' ἐν χρόνῳ πλείονι τοῦτο πάσχοι, κἂν
 νικηθεῖ ποτὲ καὶ μεταβληθεῖ παντάπασιν, ὥς μηκέτι θερμαίνεσθαι
 μόνον, ἀλλ' ἤδη τεθερμάνθαι παρὰ φύσιν. ὅρος δ' ἐστὶ τῆς ἀλλοιώσεως
 ἐκάστω τῶν μορίων, ἢ τῆς ἐνεργείας αὐτοῦ βλάβη· τὸ δ' ἄχρι τοῦδε πλάτος
 ἅπαν, ὁδός ἐστιν εἰς τὸ παρὰ φύσιν, οἷον ἐπίμικτόν τε καὶ κοινὸν καὶ 20
 μέσον ἐξ ἀμφοῖν τῶν ἐναντίων γεγονός, αὐτοῦ τε τοῦ κατὰ φύσιν ἀκριβῶς

4-8 τὴν καρδίαν - θερμασίας] cf. Gal. De usu puls. 2: V 158,16 – 159,2 K. 7 ἐν - ἐγχειρήσεσι] cf. Gal. De anat. adm. II 215-731 K. = Garofalo I-II et Procedimenti anatomici III (Arabig. codd.) 11-13 ἀλλ' ἐν - ὀρμηθεῖσαν] cf. *infra*, p. 162,15-18 17-18 ὥς - φύσιν] cf. Gal. De differ. febr. I 1: VII 276,7-8 K. 18-19 ὅρος - βλάβη] cf. Gal. De tumor. praet. nat. 1: VII 706, 9-10 K. cf. Gal. De differ. febr. II 16: VII 388, 10-12 K.

1 ἑτέρου] ἑτέρω U σώματος add. παραβαλλομένου] παραβαλομένω U 2 αὐτοῦ] αὐτὸ U ἑαυτό correxi: ἑαυτὸν LMUz: ἑαυτῶ TP 2-3 αὗται ... γίνονται] cf. all of them, the alterations of many kinds, are the cause of the heterogeneous dyscrasia, Hun. 2 αἱ ante δυσκρασίαι add. z 3 ἐκπεπυρωμένου Uz: ἐκπυρωμένου cett. 4 τᾶλλα] τὰ ἄλλα P, cf. alia Nic.^{MZPed.}; om. cett. ante τὴν καρδίαν, add. τοῦ κατὰ TP 5 ὑγιαίνοντος ἔτι Ps.^{l.}, servat still Hun., cf. adhuc Ger.: καὶ ζῶντος Pi.^{l.} cett. 6 μήπω UV: μηδέπω AP ἐθελήσας Uz, cf. volueris Nic.: ἐθελήσεις AP 8 ὅποτε] ὁκόταν U (-κ- ut videtur) ἐκθερμαίνεται] -ηται U 9 post φύσιν distinx. TPz 10 τὸ add. 12 ὃ Pz: om. cett., Hun. δέδεκται] cf. has assimilated in a solid way Hun.: δέχεται U 13 θερμασίαν] θερμότητα U τῆς om. Uz οὐδ' U: οὐθ' cett. 14 ἢ ante τῶν ἀρτηριῶν add. U οὐδ' scripsi: οὐτ' codd. παρακειμένων PU, cf. adiacentium Nic.: περικειμένων cett. 16 post ἀλλοιοῦται distinx. LTPU εἰ om. LT πάσχοι M, cf. Nic. patiantur: πάσχει cett. 18 ἐστὶ ante τῆς AP: post ἀλλοιώσεως Uz 19 ἐκάστω LMU: ἐκάστου TPD 20 ἅπαν, ὁδός TPUD^{p.c.}, cf. all the is the way Hun.: ἐπάνοδος LM παρὰ] κατὰ L τε] τι Uz, Lalam. 21 post γεγονός dist. L ἀκριβῶς om. L

742 | a humour¹⁸ compared with another, and compared as well with itself.
 [5]S 9 | All these anomalous *dyskrasias* of the body happen, especially the blood in the inflammation being too much heated, then that in the heart and in the rest of the viscera; and of that (the heart), especially (the blood) in the left ventricle: where, if the animal is still healthy and not yet with fever, you would want to place your fingers, as it has been written in the Anatomical Procedures, you will perceive a very strong heat. In fact, it is not unreasonable that whenever the whole body gets unnaturally hot, especially that one (ventricle) reaches the maximum of heat, for in fact it has a blood of
 R-7 the thinnest parts and most pneumatic that is moving all the time. || Now, in all such fevers, the whole blood, which has received that unnatural heat starting from the
 S 10 putrefaction of the humours, gets already hot sometimes. || Nevertheless, neither the coats of the arteries and veins, nor any other of the adjacent bodies, have already
 743 been completely altered in their *krasis*, but are still changing | and being altered, as they are becoming heated. But if they suffered that for a longer while, even they would be overcome and changed completely, so as not to keep being heated, but to have already been unnaturally heated. The limit of the alteration for each of the parts is the harm to its capacity. The whole range up to the limit is a process towards the unnatural condition (against nature), (the range) being like something mixed, common and mean arisen from two opposites: the one according precisely to nature, and

18 "Body" in Greek.

καὶ τοῦ τελέως ἤδη παρὰ φύσιν. ἐν δὲ τούτῳ τῷ χρόνῳ παντί, τὸ
 θερμαινόμενον σῶμα τῷ ποσῷ τῆς ἀλλοιώσεως ἀνάλογον ἔχει τὴν
 ὁδύνην. ὅταν δ' ἐκθερμανθῇ τελέως <αὐτὰ> [ἅπαντα] τὰ στερεὰ μόρια τοῦ
 σώματος, καλεῖται μὲν ὁ τοιοῦτος πυρετὸς ἐκτικός, ὡς ἂν μηκέτι τοῖς ὑγροῖς
 τε καὶ τῷ πνεύματι μόνον, ἀλλ' ἤδη καὶ <τοῖς στερεοῖς> ἕξιν ἔχουσι σώμασι 5
 περιεχόμενος. ἀνώδυνος δ' ἐστὶ καὶ νομίζουσιν οἱ πυρέττοντες οὕτω μηδὲ
 πυρέττειν ὅλως· οὐ γὰρ αἰσθάνονται τῆς θερμασίας, ἀπάντων ὁμοίως
 αὐτοῖς τεθερμασμένων τῶν μορίων. καὶ δὴ καὶ ὁμολόγηται ταῦτα τοῖς
 744 φυσικοῖς ἀνδράσιν ἐν τοῖς I περὶ τῶν αἰσθήσεων λογισμοῖς. οὔτε γὰρ χωρὶς
 ἀλλοιώσεως ἢ αἰσθησις, οὔτ' ἐν τοῖς ἤδη τελέως ἡλλοιωμένοις ἢ ὁδύνη. II 10
 R-8 <διὰ> ταῦτ' ἄρα καὶ οἱ ἐκτικοὶ πυρετοὶ πάντες, ἄπονοι τε καὶ τελέως εἰσὶν
 ἀναίσθητοι τοῖς κάμνουσιν· οὐ γὰρ ἔτι τῶν ἐν ἑαυτοῖς μορίων, τὸ μὲν
 ποιεῖ, τὸ δὲ πάσχει, πάντων ὁμοίως ἀλλήλοις ἤδη γεγονότων, καὶ μίαν
 [6] S 11 ἐχόντων ὁμόλογον κρᾶσιν. II εἰ δὲ δὴ καὶ τὸ μὲν αὐτῶν θερμότερον εἴη,
 τὸ δὲ ψυχρότερον, ἀλλὰ τοσούτῳ γε θερμότερον ἢ ψυχρότερον ὡς [μὴ] 15
 λυπεῖν τὸ πλησιάζον, [ἦ] οὕτως ἂν εἴη ἀλλήλοις λυπηρὰ καὶ <πάντα>
 τὰ κατὰ φύσιν ἔχοντα μόρια, ὡς διαφέροντά γε καὶ αὐταῖς ταῖς κρᾶσεσι·
 σὰρξ μὲν γὰρ θερμόν <ἐστι> μόριον, ὅσπουν δὲ ψυχρόν· ἀλλὰ καὶ τούτων
 καὶ τῶν ἄλλων ἀπάντων ἀνώδυνός <ἐστιν> ἢ ἀνωμαλία, τῷ μετρίῳ τῆς

3-14 ὅταν - κρᾶσιν] cf. Gal. De sympt. causis II 5: VII 176,3-13 K. 4-8 καλεῖται - μορίων] = Orib. Syn. ad Eust. fil. CMG VI 3: VI 21,1,1 -3,1 Raeder = Paul. Aeg., Epit. II: CMG IX 1; 31,1,1 - 4 Heiberg 11-14 οἱ ἐκτικοὶ - κρᾶσιν] = cf. *infra*, p. 162,3-4 11-12 καὶ - κάμνουσιν] cf. De sympt. caus. II 5: VII 176,2-8 K. 12-13 οὐ γὰρ - γεγονότων] cf. Aristot. de longit. 465b.14 -16

1 τούτῳ παντί τῷ χρόνῳ Λ 3 αὐτὰ scripsi: ἅπαντα *codd.*, cf. all *Hun.* 3-4 τὰ στερεὰ μόρια τοῦ σώματος P: τοῦ σώματος τὰ σπ. μ. *cett.* 4 μὲν Δ 4-6 ὡς - περιεχόμενος] ut utique non adhuc in humidis et spiritus solum: sed iam in hiis q. habitum habent corporibus contempta, *Nic.* 5 post καὶ add. στερεοῖς καὶ LM τοῖς στερεοῖς add. 5-6 ἀλλ' - περιεχόμενος] cf. but it is as well in the solid parts, *Hun.* ante ἕξιν add. τὴν L 6 post περιεχόμενος non distinx. LMU δ' om. LMP^{il}. οὕτω non habet Orib. post οὕτω add. ὡς APz 7 οὐ γὰρ] cf. οὐδὲ Orib. αὐτοῦ ante ἀπάντων add. z 7-8 ἀπάντων ὁμοίως αὐτοῖς] ἀπάντων αὐτοῖς cf. ὁμοίως Orib. ὁμοίως] ὁμοίων Σ 8 αὐτοῖς (habet Orib.) ante τεθερμασμένων LPU: ante τῶν μορίων M: om. *cett.* τεθερμασμένων] cf. ἐκ- Orib. ὁμολόγηται P^{s.l}. z: ὁμολογεῖται (sic) L: ὁμολογεῖται TMP^{il}. U 9 ἀνδράσιν AP^{s.l}. 10 τελέως] τελείως LM ἢ ὁδύνη] ἢ αἰσθησις τῆς ὁδύνης U 11 διὰ add., cf. because of that *Hun.* 12 ἑαυτοῖς P: αὐτοῖς *cett.* 13 ὁμοίως U: ὁμοίων *cett.*, cf. Σ 14-15 εἴη θερμότερον αὐτῶν ΛU 15 μὴ ante τοσούτῳ add. U (cf. Pet. non), cf. non *Nic.* τοσούτῳ AP: τοσοῦτον Uz γε Pz: om. *cett.* ἢ ψυχρότερον add. Ch., cf. to the colder *Hun.*, cf. hae vero frigidior *Nic.* 16 μὴ *seclusi*, cf. ut contristet vicinatem *Nic.* τι ante τὸ add. z πλησιάζον ΔLT: πλησιάζσαν M post πλησιάζον add. neque ita dolebunt *Nic.*, οὐδὲ οὕτως ὁδυνήσεται add. *Fuchs et Lalum.* post *Nic.* 16 ἢ *seclusi* εἴη U: ἦν *cett.* [ἦ] οὕτως ἂν εἴη ἀλλήλοις λυπηρὰ] if it were like that, the organs would be harmful to each other, *Hun.* 16 πάντα add., cf. universe *Nic.* 17 τὰ U τὰ ante μόρια add. ΛΔ ὡς om. U καὶ αὐταῖς] ταῦτα Pz 18 ἐστὶ add. 19 ἀπάντων om. *Hun.* ἐστὶν add. μετρίῳ PU: μέτρῳ *cett.*

the other already completely against nature.¹⁹ Now, during all this time, the body getting hot, feels a pain proportional to the quantity of the alteration. When the body's <own> solid parts are completely heated up, such fever is called *hektikos*, as if it were not just contained in the humidities (humours) and the pneuma, but also in <the solid> bodies that hold a permanent condition. It is painless, and the patients with such fever believe that they do not have a fever at all, for they do not perceive the heat, as all their parts have been heated up in a similar way. In fact, this has
744 been agreed upon by the natural philosophers in | their reasonings²⁰ on perception: for neither without alteration, perception, nor in those completely altered, pain.
R-8 || Hence, because of that, the *hektikoi* fevers, all of them, are painless and completely imperceptible to the patients. For it is no longer that one of their parts is active, and the other passive, all of them having already become the same²¹ to each other,
S 11 and presenting a single similar *krasis*. || Now if one (part) of them were rather hot and the other rather cold, but so hot or cold as to hurt the one nearby, [or] that way would be harmful to each other <all> the parts in their natural state, for they are in fact different in their *krasis*: flesh <is> a hot part, bone is a cold one. However, in these and all the others, the anomaly is painless, because of the moderation of the

¹⁹ See Diagram in Commentary to Section 10.

²⁰ Probably "treatises" may be understood.

²¹ Meaning that they have reached the same condition.

ὑπεροχῆς. οὕτω γοῦν καὶ τὸ περιέχον ἡμᾶς οὐκ ἀνιᾶ πρὶν εἰς ἄμετρον
 ποτε ψῦξιν ἢ θερμασίαν ἐκτραπῆναι. τῶν δ' ἐν τῷ μέσῳ διαφορῶν αὐτοῦ,
 καίτοι παμπόλλων οὐσῶν καὶ σαφῇ τὴν ὑπεροχὴν ἐχουσῶν, ἀλύτως
 αἰσθανόμεθα. κινδυνεύει τοιγαροῦν ἐκ τῶνδε κακείνους ὁ λόγος ἔχειν
 745 ἐπιείκειαν, ὥς που ἰ καὶ Ἱπποκράτης φησὶν ὁ φάσκων· "ἔλκεα πάντα 5
 εἶναι τὰ νοσήματα". συνεχείας μὲν γὰρ λύσις τὸ ἔλκος· αἱ δ' ἄμετροι
 θερμασίαι καὶ ψύξεις, πλησίον ἤκουσι τοῦ λύειν τὴν συνέχειαν· ἡ μὲν γὰρ
 πολλή θερμασία, τῷ διακρίνειν τε καὶ διατέμνειν τῆς οὐσίας τὸ συνεχές,
 ἡ δ' ἄκρα ψύξις, τῷ πιλεῖν τε καὶ συνωθεῖν εἴσω, τὰ μὲν ἐκπιέζει, τὰ δὲ
 θλαῖ· καὶ τοῦτόν γέ τις ὄρον τιθέμενος <τῆς> ἀμετρίας <τοῦ> θερμοῦ καὶ 10
 ψυχροῦ, τάχ' ἂν οὐκ ἀπὸ τρόπου γιγνώσκειν δόξειεν· —<ἀλλ' > εἴθ' [δ']
 οὗτος εἴτ' ἄλλος τις ὅρος ἐστὶ τῆς ἀμετρίας— [ἀλλὰ] τό γ' ἐν τῷ πρὸς τι
 πᾶσαν ἀμετρίαν ὑπάρχειν, ἥδη που πρόδηλον· οὐ γὰρ ὡσαύτως ὑπὸ τῶν
 θερμῶν ἢ ψυχρῶν ἅπαν σῶμα διατίθεται. καὶ διὰ τοῦτο τινὰ μὲν οἰκείους
 ἔχει τοὺς χυμοὺς ἀλλήλοις ζῶα· τινὰ δ' οὐ μόνον οὐκ οἰκείους ἀλλὰ καὶ 15
 φθαρτικούς, οἷον ἄνθρωπος καὶ ἔχιδνα· τὸ γοῦν σίελον, ὀλέθριον ἐστὶν
 ἐκατέρῳ τὸ τοῦ ἑτέρου. οὕτω γ' <ἂν> καὶ σκορπίον ἀναιρήσειας ἐπιπτύων
 νῆστις· οὐ μὴν <ἂν> ἄνθρωπος γ' ἄνθρωπον ἀναιρήσειε δάκνων, οὐδ' ἔχως
 746 ἔχιν, οὐδ' ἀσπίς ἀσπίδα. τὸ μὲν γὰρ ὅμοιον, οἰκειῶν ἐστὶ καὶ ἰ φίλιον· τὸ
 δ' ἐναντίον, ἐχθρὸν καὶ ἀνιάρων. αὖξεται γοῦν ἅπαντα καὶ τρέφεται πρὸς 20
 τῶν ὁμοίων, ἀναιρεῖται δὲ καὶ φθίνει πρὸς τῶν ἀνομοίων· καὶ διὰ τοῦτο

1-2 εἰς - ἐκτραπῆναι] cf. Gal. Adv. Lyc. 1: XVIIIa,204,3 K.=CMG V 10,3: 7,19 Wenkebach
 4-6 κινδυνεύει - νοσήματα] cf. Hipp. De fract. 31: III 526, 9-10 L. = II 94,10-11 Kühle-
 wein 5-6 Ἱπποκράτης - νοσήματα] = Gal. De tremore: VII 620,6-8 = Gal. In Hipp. epid. VI
 comm. VI 5: XVIIb,334,2-3 K. = Gal. De sympt. caus. I 6: VII 115,14 K. et II 5: VII 176,9-10 K.
 6-10 συνεχείας - θλαῖ] cf. Gal. In Hipp. De fract. comment. III 34: XVIIb,586,1-
 587,12 K. cf. Gal. De loc. aff. II 5: VIII 80,12-17 K. 17-18 οὕτω - νῆστις] cf. Gal. De
 nat. fac. III 7: II 163,5-9 K. = SM III; 218,25 -219,3 Helmreich cf. Nicand. Ther. 86
 20-21 αὖξεται - ὁμοίων] cf. Hipp. morb. IV 34: VII 548, 2-5 L. = Hippocrate XI 87, 9-12 Joly cf.
 Hipp. morb. sacr. 18 (21 Jones); Hippocrate II 32,13-15 Jouanna = VI 386, 3-4 L. cf. Anonym.
 Lond. 26, 7-8, et 11-12 Diels (=Jones) cf. pseudo?-Aristotle, De spiritu 481a15 = Roselli 73, 15

1 γοῦν] δὲ P 2 ποτε PU: τε Λ: τινα z θερμασίαν] θέρμανσιν L 4-5 κινδυνεύει - ἐπιείκει-
 αν] sed as for this comparison, the soul is hardly calm with those words that have been told,
 as... Hun. (cf. ergo forsitan anima ... Ger.) 5 ἔλκεα z: ἔλκη cett. 6 γὰρ om. L 7 τοῦ] τὸ U
 γὰρ om. L 8 διατέμνειν LMP: διακόπτειν U 10 τοῦτόν] τοῦτο Pz θέμενος P τῆς add.
 τοῦ add. 10-11 θερμοῦ καὶ ψυχροῦ om. P^{il}. 11 δόξειε γιγνώσκειν U ἀλλ' e l. 12 traduxi
 εἴθ' corr.: εἴτε codd. δ' del. 14 τὸ ante σῶμα add. Λ καὶ om. P, add. P^{s.l}. 15 οὐκ Δ ἔχει
 post οἰκείους add. Λ 16 οἷον - ἔχιδνα om. P^{il}, οἷον ἄνθρωπος δὲ ἔχιδνα scr. P^{s.l}. 17 ἐκατέρῳ]
 -τέρων U γ' ἂν scripsi: γοῦν LMPz ἀναιρήσειας corr., cf. Hun would kill: ἀναιρήσεις
 codd. Σ 18 ἂν add. ἄνθρωπον γ' ἄνθρωπος Uz ἀναιρήσειε (-ε s.l.) P, cf. would (not)
 kill Hun: ἀναιρήσει cett. ἀναιρήσειε ante ἄνθρωπον L 18-19 ἔχως ἔχιν] ἔχιδναν ἔχιδνα P
 19 ἀσπίδα ἀσπίς Λ τε ante ἐστὶ add. U ἐστὶ Δ: εἶναι Λ φίλιον TM P^{p.c}. z: φίλον LP^{a.c}. U
 20 αὖξεται L: αὖξάνεται cett. γοῦν Δ: οὖν Λ ἅπαντα post τρέφεται P 21 φθίνει LMU:
 φθείρεται TPz ἀνομοίων z: ἐναντίων cett.

excess. Hence, in a similar way, the environment does not hurt us before changing into disproportionate cooling or heating. Its differences in between, although being too many and the excess being conspicuous, we perceive (them as) painless. In fact,
745 on those grounds, that reasoning is probably appropriate, as | Hippocrates himself states when saying: all diseases are but wounds. For, on the one hand, a wound is a loosening of continuity; on the other hand, the disproportionate heating and cooling come close to loosening the continuity. Intense heating loosens the continuity of the matter by separating and cutting through; strong cooling, by contracting and compressing inward, so that they squeeze out some matter, and crush some other. And somebody, considering this the limit of the disproportion of the hot and the cold, would seem not to err in his knowledge —<but> be this or another the limit of the disproportion— [But] The fact of all disproportion being in relation to something, is already evident. Not in the same way does every individual body get affected by heat and cold; and, for that reason, some animals have their humours compatible with those of each other, while others have them not just incompatible but destructive as well, such as men and vipers. In fact their saliva is mortal to each other. In this way, you would even kill a scorpion, spitting on it with an empty stomach. However men would not kill men by biting them, nor vipers
746 kill vipers, nor asps²² kill asps. In fact, what is similar, is compatible and | friendly; what is opposite, is inimical and harmful. Hence, everything grows and is nurtured by similars, but is destroyed and perishes by dissimilars; and, in consequence,

²² "Asp" is the "Egyptian cobra".

- ἡ μὲν τῆς ὑγείας φυλακὴ διὰ τῶν ὁμοίων, ἡ δὲ τῶν νοσημάτων ἀναίρεσις
 <ἔσται> διὰ τῶν ἐναντίων. ἀλλὰ περὶ μὲν τούτων ἕτερος ἂν εἴη λόγος.
R'-8 || ὁ δ' ἐκτικὸς ἐκεῖνος πυρετός, ὁ τὴν ἕξιν ἤδη τοῦ ζώου κατεληφώς,
S 12 ἀναίσθητος μὲν ἐστὶ τῷ κάμνοντι || τῶν δ' ἄλλων ἀπάντων πυρετῶν
 οὐδεὶς ἀναίσθητος, ἀλλ' οἱ μὲν μᾶλλον, οἱ δ' ἦττον ἀνιαροὶ τοῖς νοσοῦσιν· 5
 ἔνιοι δ' αὐτῶν καὶ ῥίγος ἐπάγουσιν. γίγνεται γὰρ οὖν δὴ καὶ τοῦτο τὸ
 σύμπτωμα καθάπερ καὶ ἄλλα τινὰ πρὸς τῆς ἀνωμάλου δυσκρασίας. εἰπεῖν
 δ' οὐκ ἐγχωρεῖ τὸν τρόπον αὐτοῦ τῆς γενέσεως ἐν τῷ νῦν ἐνεστῶτι λόγῳ
 πρὶν ἀποδεῖξαι περὶ τῶν φυσικῶν δυνάμεων, <ὁπ>όσαι τ' εἰσὶ καὶ ὁποῖαι
 καὶ ὅ τι δρᾶν ἐκάστη πέφυκεν. ἀλλ' ἐν ταῖς τῶν συμπτωμάτων αἰτίαις 10
 [7] ὑπὲρ ἀπάντων εἰρήσεται. | ἐπάνειμι δὲ πάλιν ἐπὶ τὰς τῆς ἀνωμάλου
 δυσκρασίας διαφοράς· ὅπως μὲν οὖν ἐπὶ φλεγμονῇ γίγνεται πυρετός, ὅτι
 τε φλεγμονὴ πᾶσα καὶ πυρετὸς ἅπας, χωρὶς τῶν ἐκτικῶν ὀνομαζομένων,
 747 ἐκ τῶν ἀνωμάλως κεκραμένων ἐστὶ | νοσημάτων, ἤδη μοι λέλεκται.
R'-7 || γένοιτο δ' ἂν καὶ χωρὶς φλεγμονῆς ἐπὶ σήψει μόνῃ χυμῶν, πυρετός. οὐ γὰρ 15
 δὴ τά γε σφηνούμενά τε καὶ μὴ διαπνεόμενα σήπεται μόνον, ἀλλὰ τάχιστα
 μὲν ταῦτα καὶ μάλιστα. σήπεται δὲ καὶ ἄλλα πάμπολλα τῶν ἐπιτηδείων
 εἰς σήψιν. εἰρήσεται δὲ καὶ περὶ τῆς τούτων ἐπιτηδειότητος ἐτέρωθι.
S 13 || καὶ μὲν δὴ καὶ κατ' ἄλλον τρόπον ἀνώματος ἔσται δυσκρασία περὶ
 σύμπαν τὸ σῶμα· ποτὲ μὲν λιγνυώδους διαπνοῆς ἐπισχεθείσης· ποτὲ δ' 20

1 ἡ μὲν - ἐναντίων.] cf. Gal. De meth. med. IX 1: X 634,9-10 K. 3-4 ὁ δ' ἐκτικὸς - κάμνοντι] cf. supra, p. 158,11-14 4-7 τῶν - δυσκρασίας] cf. infra, p. 166,7 - 168,10 et p. 170,5-10 9-10 πρὶν - πέφυκεν] cf. Gal. De nat. fac. I 2: II 6,14-16 K. = SM III, 105, 7-13 Helmreich. 10-12 ἐν - εἰρήσεται] cf. Gal. De sympt. caus. VII 85-272 K. 15 γένοιτο - πυρετός] cf. supra, p. 156,11-13 15-16 οὐ γὰρ - μόνον] cf. Gal. De diff. febr. II 11: VII 375,11 15-17 οὐ γὰρ - μάλιστα] cf. supra, p. 154,17-19 cf. Gal. De diff. febr. II 17: VII 399,6-7 K. 17-18 σήπεται - σήψιν] cf. Gal. De diff. febr. II 5: VII 287,7 -9 K. et II 11: VII 375,11 K. 19 - p. 164,3 καὶ μὲν - ἐκθερμανθέντος] cf. Gal. De diff. febr. I 7: VII 295,15-296,7 K.

1 ὑγείας corr.: ὑγέας P: ὑγείας cett. 2 ἔσται add. ἂν εἴη Pz 3 ἐκεῖνος ΛU, cf. that Hun, illa Nic.: ὀνομαζόμενος Pz 4 μὲν Pz ἀπάντων Δ: om. cett., Hun. 6 ἐπάγουσι Uz: ἐπιφέρουσι cett. γὰρ οὖν δὴ καὶ ΔP: οὖν γὰρ καὶ U (enim et Pet.)] cf. autem et Nic. 7 τινὰ L: πολλὰ cett., cf. many Hun. ἐν om. P νῦν Δ 9 ὁπόσαι scripsi: ὅσαι codd. εἰσὶ om. L ὁποῖαι ΛU: οἶαι Pz 10 ἐκάστη] ἐκάστου U, cf. ab unaquaque Pet. ἐν ταῖς τῶν συμπτωμάτων αἰτίαις, cf. in my book of the causes of the symptoms Hun. 11 εἰρήσεται, (cf. I shall describe Hun.): εἰρήσεται P 12 οὖν P^{s.l.}: γὰρ ΛUz: om. P^{i.l.} ἅπας post πυρετὸς add. Δ ὅτι] cf. that Hun. 13 καὶ post τε add. ΔPz 13 φλεγμονὴ πᾶσα καὶ πυρετὸς ἅπας Uz, cf. all the tumours of this kind and all the fevers Hun.: πυρετὸς ἅπας καὶ φλεγμονὴ πᾶσα P: πυρετὸς καὶ φλεγμονὴ πᾶσα Δ 15 γένοιτο Pz: γίγνοιτο U: γίγνεται Δ ἂν Δ: καὶ Δ μόνῃ Δ, cf. only Hun. 16 σφηνούμενά Pz: ἐσφηνωμένα Δ τε Δ 16-17 τάχιστα μὲν ταῦτα PU: ταῦτα τάχιστα μὲν Δ 17 πάμπολλα P: πολλὰ cett. 18 εἰρήσεται, cf. I shall describe Hun.: εἰρήσεται U ἐτέρωθι] ἐτέρωθεν LM 19 ἔσται] sed cf. happens Hun., est Nic. 20 λιγνυώδους διαπνοῆς ἐπισχεθείσης] cf. because of the accumulation in it of hot fumes Hun.

the watchfulness of health by means of similars, the destruction of diseases by means of opposites, will be done. However, concerning this, would be another account. ||

R'-8 That hektikos fever, which has already seized the permanent condition of the animal,

S 12 is imperceptible to the patient. || Of all the other fevers, none is imperceptible, but some are more, some are less painful to the patients. Some of them (the fevers) are accompanied by *rhîgos* as well. In fact, this symptom and some others are produced by the anomalous *dyskrasia*, but it is not possible to tell the manner of its genesis (of the symptom) in the present book, before having shown of the natural faculties, how many and of what kind they are, and what each of them does according to nature,

[7] but in The causes of the symptoms everything will be told. | I am returning to the differences in the anomalous *dyskrasia*. Hence, how fever is produced upon inflammation, and that every inflammation and every fever, except for the so-called *hektikoi*

747 fevers, belong to the diseases of anomalous *krasis*,¹ has already been said by me.

R'-7 || Fever would happen even without inflammation, just upon putrefaction of the humours. For, in fact, it is not only that what is being obstructed and not transpiring gets putrid, but that it gets so especially and very quickly. Very many other entities disposed to putrefaction also become putrefied. And, of the disposition of these, it will

S 13 also be told in another place. || Now, there will happen in other ways anomalous *dyskrasia* in the whole body; sometimes a fuliginous perspiration is retained; sometimes,

ἐκ γυμνασίων πλειόνων ἢ πόνων αὐξηθέντος τοῦ θερμοῦ· ποτὲ δ' ἐπὶ
 θυμῷ ζέσαντος ἀμετρώτερον τοῦ αἵματος ἢ δι' ἑκκαυσίν τινα ἔξωθεν
 ἐκθερμανθέντος. ὅτι δὲ κὰν τούτοις ἅπασι τοῖς πυρετοῖς, ὥσπερ κἀπὶ τῆς
 φλεγμονῆς ἔμπροσθεν ἐλέγετο, παρὰ τε τὴν ἰσχὺν τοῦ δρῶντος αἰτίου καὶ
 παρὰ τὴν τοῦ σώματος διάθεσιν, οἱ μὲν μᾶλλον πυρέξουσιν, οἱ δ' ἦττον, 5
 οἱ δ' οὐδ' ὅλως, εὐδηλον εἶναι νομίζω. καὶ μὲν δὴ καὶ ὥς ποτὲ μὲν ταύτης
 τῆς πνευματώδους οὐσίας μόνης, ἐνίοτε δ' ἄπτεται καὶ τῶν χυμῶν ἢ
 δυσκρασία, πρόδηλον καὶ τοῦτο οὐδὲν ἦττον. καὶ ὥς ἐπὶ πᾶσι τοῖς τοιούτοις
 748 πυρετοῖς χρονίζουσιν, ὁ καλούμενος ἐκτικὸς ἀκολουθήσει. | καὶ πῶς ὁ
 λόγος ἤδη δείκνυσιν ὥς ἐνίοτε μὲν οὐσίας θερμῆς ἢ ψυχρᾶς ἐπιρρυσίης 10
 μορίῳ τινί, γίγνεσθαι συμβαίνει τὴν ἀνώμαλον ταύτην δυσκρασίαν,
 ὥσπερ ἐπὶ τῶν φλεγμαινόντων ἐλέγετο· πολλάκις δ' οὐχ οὕτως, ἀλλ'
 αὐτῆς τοῦ σώματος τῆς κράσεως, ἀλλοιωθείσης κατὰ ποιότητα· καὶ ὥς τῶν
 ἀλλοιούντων αὐτήν, τὰ μὲν ἐξ αὐτοῦ τοῦ σώματος ὁρμᾶται, τὰ δ' ἔξωθεν.
 ὅταν μὲν ἐπὶ σήψεσι μόναις ἢ τισι φλεγμοναῖς ἐγείρηται πυρετός, ἐξ αὐτοῦ 15
 τοῦ σώματος. ὅταν δ' ἐπ' ἑκκαύσεσι τε καὶ γυμνασίοις, ἔξωθεν. εἰρήσεται
 δὴ καὶ περὶ τούτων ἐπὶ πλέον αὐθις, ἐν ταῖς τῶν νοσημάτων αἰτίαις.
 S 14 | ὥσπερ δ' ἐπ' ἑκκαύσεσι γίγνεται πυρετός ἀλλοιωθείσης τῆς τοῦ σώματος
 κράσεως, οὕτως ἐν κρύει πολλάκις ἰσχυρῶς ἐψύγησαν ἔνιοι τὸ σύμπαν
 σῶμα, καὶ τινες ἐξ αὐτῶν ἀπέθανον. καὶ μὲν δὴ καὶ ὥς ἀλγοῦσιν οὗτοι 20
 [8] πάντες, οὐδὲ τοῦτ' ἄδηλον. | ἀλγοῦσι δὲ καὶ ὅσοι κατεψυγμένοι σφοδρῶς

12-13 ἀλλ' - ποιότητα] *cf. supra*, p. 142,9-10 17 ἐν - αἰτίαις] Gal. De morb. caus. VII, 1-41 K. 21 - p. 166,3 ἀλγοῦσι - ὀνύχων] *cf.* Gal. De loc. aff. II 5: VIII 81,5-11 K. *cf.* Gal. Meth. Med. XII 7: X 853, 12-14 K. *cf.* pseudo-Arist., pseudo-Alex., Problem. I 44,1 - 45,4 Ideler *cf.* Aetius V: CMG VIII 2; V 101, 6-8 Olivieri

1 πλειόνων *om.* PU ἢ πόνων Λ P: καὶ πόνων Uz πόνων *om.* Hun πλειόνων *post* πόνων z αὐξηθέντος Δ, *cf.* (heat) increases Hun.: αὐξηθέντων Λ τὴν θερμοσίαν ἐπιτείνόντων *post* αὐξηθέντος *add.* Ch τοῦ θερμοῦ Δ, *cf.* heat Hun. 2 ζήσαντος L ἀμετρώτερον ΔT: -τρώτ-? L ἑκκαυσιν *correxi*, ἔγκ- *codd.* 2-3 ἀμετρώτερον - ἐκθερμανθέντος *om.* U Pet. 3 κὰν] καὶ P ὥσπερ] ὥς P: *om.* Hun. κἀπὶ L: ἐπὶ P: κὰν τοῖς ἐπὶ TMz: κὰν U 3-4 τῆς φλεγμονῆς P: ταῖς φλεγμοναῖς *cett.* 4 ἔμπροσθεν ἐλέγετο *om.* Hun. τε *om.* U 5 πυρέξουσιν U: πυρέττουσιν *cett.* 6 οὐδ' ὅλως, *cf.* not at all Hun: οὐ δόλως *codd.* 7 οὐσίας μόνης Pz: μόνης οὐσίας Λ 8 πρόδηλον καὶ τοῦτο Λz: πρόδηλον δ' PU 9 πυρετοῖς Δ, *cf.* fevers Hun. καὶ πῶς LMz: πῶς TPU 10 δείκνυσιν] διδάξει P 12 ἐλέγετο] ἐγένετο z 13 κράσεως τοῦ σώματος P: τῆς τοῦ σώματος κράσεως z 14 αὐτήν] αὐτά L 15 μόναις] μόνον LT τισι *om.* P 16 δ' *om.* L ἑκκαύσεσι TM: ἐγκ- LZ: ἐγκαύσει P τε καὶ Δ: καὶ Λ 17 δὴ U: δὲ *cett.* ἐν ταῖς τῶν νοσημάτων αἰτίαις] *cf.* in my book on the causes of diseases Hun. 18 ἐπ' *om.* U ἑκκαύσεσι TM: ἐγκ- LPz 19 ἰσχυρῶς *om.* L ἰσχυρῶς ἐψύγησαν P: ἐψύ- ἰσχ. *cett.* ἐψύγησαν z (Ch.): ἐψύχησαν (*sic*) Λ, Pz ^{s.l.} U 19-20 τὸ σύμπαν σῶμα Pz: σύμπαν τὸ σῶμα *cett.* 20 οὗτοι Δ, *cf.* these Hun.: οὕτω Λ 21 οὐδὲ] οὐδὲν U τοῦτ' *om.* U κατεψυγμένοι Δ: καταψυχόμενοι Λ

the heat is increased because of too many gymnastic exercises or bodily exertion; sometimes, the blood immoderately boils because of anger, or is heated up from the exterior by heat-stroke. That in all these fevers, as upon inflammation it was told before, in relation to the strength of the cause that acts, and to the condition of the body, some will contract an intense fever, some a weak one, and some not at all, I think it is evident. For in fact, that the *dyskrasia* sometimes just attacks that pneumatic substance, at times the humours as well, is no less evident. And that, all such fevers, when they persist, the so-called *hektikos* fever will accompany them.

748 | And somehow the text already shows that, at times, when a hot or cold substance flowed to a certain part, this anomalous *dyskrasia* occurred, as it was told in the case of a part getting inflamed. Many times it happened not like that, but when the body's own *krasis* was altered in its quality. And that, of the (causes), which alter it, some start from the body itself, some from outside. When just upon putrefaction or certain inflammations a fever arises, (it starts) from the body itself; when just upon heat-strokes and gymnastic exercises, from outside. More about these will be told in turn,
 S 14 in The Causes of Diseases. || As after heat-strokes a fever arises, because the body's *krasis* was altered, similarly in icy cold, many times people grew very cold in their whole body, and some among them died. And, in fact, that all those suffer pain, even that is evident.²³ And those also suffered pain who, having grown rather cold

23 In Greek, "not even that is unevident".

749 ὑπὸ κρύους καρτεροῦ προϋθυμήθησαν ἐκθερμῆναι ταχέως ἑαυτούς, καὶ
 πολλοὶ γε αὐτῶν ἐπενέγκοντες ἀθρόως τῷ πυρὶ τὰς χεῖρας, ἀλγήματος
 αἰσθάνονται σφοδροτάτου κατὰ τὰς ῥίζας ἢ τῶν ὀνύχων. εἴτα τίς οὕτως
 5 ἑναργῶς ὁρῶν ὀδύνης αἰτίαν γενομένην τὴν ἀνώμαλον δυσκρασίαν, ἔτ'
 ἀπιστεῖ περὶ τῶν ἐντὸς ἀλγημάτων, ἢ θαυμάζει πῶς χωρὶς φλεγμονῆς
 ὀδυνῶνται πολλάκις, ἢ τὸ κόλον, ἢ τοὺς <ὄρχεις> [ὀδόντας], ἢ τῶν ἄλλων
 S 15 τι μορίων; ἢ οὔτε γὰρ τῶν τοιούτων διαθέσεων οὐδὲν θαυμαστὸν οὐδὲ
 πῶς ἅμα καὶ ῥιγῶσι καὶ πυρέττουσιν ἔνιοι τῶν νοσοῦντων. καὶ γὰρ εἰ ὁ
 φλεγματώδης χυμὸς, ψυχρὸς ὢν, ὃν ὁ Πραξαγόρας ὑαλώδη προσαγορεύει, 10
 καὶ ὁ πικρόχολος καὶ θερμὸς ἅμα πλεονάζοιεν ἐν αὐτοῖς καὶ κινοῖντο
 διὰ τῶν αἰσθητικῶν σωμάτων, οὐδὲν θαυμαστὸν ἀμφοτέρων ὁμοίως
 αἰσθάνεσθαι τὸν ἄρρωστον. οὐδὲ γὰρ εἰ στήσας ἄνθρωπον ἐν ἡλίῳ θερμῷ,
 προσραίνοις ὕδωρ ψυχρόν, ἀδύνατον αὐτῷ τὸ μὴ οὐχ ἅμα καὶ τῆς ἀπὸ
 τοῦ ἡλίου θερμῆς αἰσθάνεσθαι καὶ τῆς ἀπὸ τοῦ ὕδατος ψύξεως. ἀλλ' 15
 ἐνταῦθα μὲν, ἔξωθεν ἔστιν ἀμφοτέρω, καὶ κατὰ τὰ μεγάλα προσπίπτει
 μόρια· κατὰ δὲ τοὺς ἡπιάλους πυρετούς, ἔνδοθεν τε καὶ κατὰ τὰ σμικρά,
 καὶ διὰ τοῦτο σύμπαν ἀμφοτέρων αἰσθάνεσθαι τὸ σῶμα δοκεῖ. τῷ γὰρ
 δι' ἐλαχίστου παρεσπάρθαι τό τε ψύχον καὶ τὸ θερμαῖνον, οὐδὲν ἔστιν

6 ὀδυνῶνται - [ὀδόντας] cf. Gal. De diff. sympt. 3,5: CMG V 5,3; 220,14-17 Gundert = VII 57,17-58,1 K. 7 - p. 168,10 οὔτε - συμπέπτωκεν] cf. *supra*, p. 162,4-7

1 καρτεροῦ *om. et add. ipso loco* πυρὶ οὗτοι, U προῦ- Pz ταχέως *om.* L 2 γε *om.* P ἐπ-
 ενέγκοντες Pz: -καντες Λ: προσενέγκοντες U ἀθρόως τῷ πυρὶ] τῷ πυρὶ ἀθρόως P
 3 σφοδροτάτου Δ: σφοδρῶ Λ τίς] τις Λz 3-4 οὕτως ἑναργῶς ὁρῶν z: οὐ- ὁρ- ἐν- ΛP
 (ὁρ- P^{s.l.}) 4 αἰτίαν ὀδύνης U γενομένην z: γιγνο- *cett.* 6 κόλον *correxi*: κῶλον *codd.*
 ὄρχεις *add.*, cf. testicles Hun.^{AP}: ὀδόντας *codd.* 7 τί *codd.*, *corr.* A] cf. in any other organ
 Hun. τι *ante* τῶν Pz *post* μορίων *interrogationem recte scrip.* Ch., *punct. codd.* διαθέσεων
 Λ οὐδὲ Λ: οὔτε Δ 8 ἅμα καὶ U καὶ γὰρ εἰ Λ: εἰ γὰρ Δ ὁ Uz 9 χυμὸς, ψυχρὸς]
 ψυχρὸς χυμὸς L: χυ- καὶ ψυ- U ὢν *ante* ὃν Pz ὃν] οἶον z ὁ *om.* Uz ὑαλώδη Δ: ὑα-
 λοειδῇ Λ προσαγορεύει Uz: καλεῖ *cett.* 10 καὶ pr. Uz ὁ z: ἡ U: *om. cett.* καὶ bis] ὁ
coni. Lalam. πλεονάζοιεν ἐν *scripsi*: πλεονάζοιεν z, -άζοι, *et* ἐν *s.l.* P, *et scr.* Ch.: -άζειν ἐν
 LM αὐτοῖς P: αὐταῖς LM: *om. cett.* καὶ LP: τε καὶ *cett.* κινοῖντο Pz *et corr.* Ch.: κινοῖτο
 T: κινεῖτο LM 11 οὐδὲν P *et corr.* Ch.: οὐδὲ *cett.* 12 ἄρρωστον] κάμνοντα P στήσας
 P^{i.l.} U? z: στήσαις AP^{s.l.} 13 καὶ *add.* Λ *ante* προσραίνοις προσραίνοις *corr.*: προσρένεις P,
et οἱ *s.l.*: προσρένης U: προσρέοις z: προσβρέχεις L: -έχοις TM 13 αὐτῷ Δ: αὐτὸν LT τὸ
 U μὴ] μὲν, L οὐχ' TPz 14 θερμῆς z: θερμότητος *cett.* ἀπὸ τοῦ ὕδατος] ἐξ ὕδατος
 P ψύξεως P: ψυχρότητος *cett.* 15 τὰ *om.* P (*sed rasuram habet*), U 16 ἔνδοθεν] ἔνδον P
 τὰ z *post* σμικρά, up to the point of not being large body organs reached by coldness
 unless a large body organ beside is reached by heat, and not being small body organs
 reached by coldness unless a small organ beside is reached by heat, *add. Hun.* 17 σύμπαν]
cf. all of it Hun. δοκεῖ τὸ σῶμα Δ τῷ z, *et corr.* Ch.: τὸ *cett.* 18 δι' ἐλαχίστου ΔR,
cf. in the small parts, one after the other, until the smallest, Hun., per minima Nic.: δὴ
 ἐλαχίστῳ Λ τό τε ψύχον καὶ τὸ θερμαῖνον PU, *cf.* that what cools and that what
 heats up Hun.: τό τε ψυχρόν καὶ τὸ θερμόν z: τό τε θερμόν καὶ ψυχρόν Λ οὐδὲν]

because of hard icy cold, wished eagerly to heat themselves quickly, and many of them quickly placed their hands next to the fire, and perceived excruciating pain in
749 the roots | of their nails. Then, who, seeing so clearly that the anomalous *dyskrasia* was the cause of the pain, is still incredulous in the case of inner pains, or wonders how, without inflammation, there is often pain in the colon or the testicles or any
S 15 other part? || For neither is any such condition amazing, nor (is it amazing) how some patients suffer at the same time *rhîgos* and fever. For, in fact, if the phlegmatic humour —being cold—, which Praxagoras calls vitreous,²⁴ and the bitter, bilious and hot, would both abound in them and move through the sensitive bodies, it is not at all amazing that the patient similarly perceives both of them. For not even if, having placed a man under the hot sun, would you douse him with cold water, (it is) impossible for him not to perceive²⁵ at the same time the heat from the sun and the cold from the water. However, in this case, both come from outside, and fall on large parts, while, in the *êpialoi* fevers, (both come) from inside and (fall) on small parts; for this reason the body seems to perceive both of them throughout. For, as what cools and what heats is scattered up to every minimal part throughout the body, it is not

24 Hyaloid.

25 I.e. he necessarily perceives.

- 750 αὐτοῦ λαβεῖν μικρὸν μόριον αἰσθητόν, ἢ ἐν ᾧ θάτερον οὐχ ὑπάρχει. κατὰ
 μέντοι τὴν εἰσβολὴν τῶν παροξυσμῶν ἔνιοι τῶν πυρεττόντων καὶ ῥιγῶσι
 καὶ πυρέττουσιν, καὶ ἅμα ἀμφοτέρων αἰσθάνονται, ψύξεως ἀμέτρου
 καὶ θερμῆς ὁμοῦ, ἀλλ' οὐ κατὰ τὸν αὐτὸν τρόπον· ἐναργῶς γὰρ ἔχουσι
 οὗτοι διορίσαι τὰ θερμαινόμενα μόρια τῶν ψυχομένων. ἔνδοθεν μὲν 5
 γὰρ καὶ κατ' αὐτὰ τὰ σπλάγχνα τῆς θερμασίας αἰσθάνονται· ἐν δὲ τοῖς
 ἔξωθεν μορίοις ἅπασι, τῆς ψύξεως αἰσθάνονται. εἴσι δὲ καὶ οἱ λειπυρίαί
 καλούμενοι πυρετοὶ διαπαντὸς τοιοῦτοι, καὶ τι γένος ὀλέθριον καύσων.
 ὅπερ οὖν ἐν τούτοις κατὰ τὰ μεγάλα μόρια, τοῦτ' ἐν τοῖς ἡπιάλοις κατὰ
 S 16 τὰ μικρὰ συμπέπτωκεν. ἢ ἀνώμαλος μὲν γὰρ ἐστὶ δυσκρασία καὶ ἡ 10
 τῶν συνθέτων πυρετῶν· ἀνώμαλος δὲ καὶ ἡ τῶν ἄλλων ἀπάντων, πλήν
 τῶν ἐκτικῶν ὀνομαζομένων· ἀνώμαλος δὲ καὶ τοῖς ῥιγῶσι μὲν, οὐκ
 ἐπιπυρέττουσι δέ. σπάνιον μὲν γὰρ τὸ σύμπτωμα· γίγνεται μὴν ὁμως
 <κατὰ τὴν διάθεσιν> καὶ ταῖς γυναιξὶ καὶ τισὶν ἀνδράσιν ἐνίοτε. χρὴ δὲ
 πάντως ἀργὸν προηγήσασθαι βίον, ἢ τι πλῆθος ἐδεσμάτων ἐν χρόνῳ 15
 πλείονι προσενηνέχθαι τὸν ἄνθρωπον, ἐξ οὗ χυμὸς ἀργὸς καὶ ψυχρὸς
 καὶ ὠμὸς καὶ φλεγματώδης γεννᾶται, ὁποῖόν τινα καὶ ὁ Πραξαγόρας
 751 εἰσηγήσατο τὸν ἢ ὑαλώδη. πάλαι δέ, ὡς ἔοικεν, οὐδεὶς οὕτως ἔπασχεν ὅτι

2-3 ἔνιοι - αἰσθάνονται] *cf.* Gal. De diff. febr. II 6: 7.347, 5-9 K. *cf.* Aetius V: CMG VIII 2; V 87,3-4 Olivieri *cf.* Leo, Consp. med. 1,12,1-4 Ermerins 11-12 ἀνώμαλος - σύμπτωμα] *cf.* Leo, Consp. med. 1,15,1-4 Ermerins 13-14 σπάνιον - ἐνίοτε] *cf.* Gal. De tremor. 7: VII 635,5-7 K. 14-16 χρὴ - ἄνθρωπον] *cf.* Gal. De sympt. caus. I 5: VII 109, 4-7 K. *cf.* Gal. De diff. febr. I 6: VII 291, 8-9 K. *cf.* Gal. De loc. aff. I 1: VIII 9-11 K. 15-18 ἢ τι - ὑαλώδη] *cf.* Gal. De aliment. facult. I 12: VI 509, 14-17 K. 16-18 χυμὸς - ὑαλώδη] *cf. supra*, p. 166,8-9 18 - p. 170,4 πάλαι - ἐπηκολούθησεν] *cf.* Gal. De sympt. caus. II 5: VII 189, 2-11 K. *cf.* Gal. De tremor. 7: VII, 636,18 -637,8 K.

1 αὐτοῦ λαβεῖν L: αὐτῆς λαβεῖν TMA: λαβεῖν οὕτω Δ μικρὸν Pz: *om. cett.* οὐχ *corr.* A: οὐχ' *codd.* 2 καὶ *om.* P 3 πυρέττουσιν P^{s.l.} Uz: διψῶσι Λ P^{i.l.}, *cf.* are thirsty Hun.^{L,Sim.}, *cf.* sitiunt Nic. ἅμα U ἀμέτρου *om.* U 4 ὁμοῦ] *post* θερμῆς z: *ante* καὶ P^{p.c.} i.m., U: *om.* Λ P^{p.c.} κατὰ τὸν αὐτὸν ΔT: κατ' αὐτὸν τὸν LM 5 οὗτοι U: *om. cett.*, Nic. διορίσαι] διορίσασθαι P χρὴ *ante* τὰ *add.* P, *expunxit* P^{p.c.} θερμαινόμενα] θερμαίνοντα P 6 κατ' αὐτὰ] κατὰ τὰντὰ U τῆς Δ θερμασίας] θερμά L αἰσθάνονται Uz, *cf.* perceive Hun.: *om. cett.*, Nic. 7 εἴσι *corr.*, εἴσι Δ, *cf.* presents Hun.: ἔτι Λ 8 *post* γένος *add.* μένει (vel μὲν εἰ) P ὀλέθριον P: ὀλεθρίων *cett.* 9 οὖν *om.* U τὰ *om.* Pz 10 τὰ LU ἐστὶ Pz, *del.* Pⁱ 10-11 ἡ τῶν συνθέτων πυρετῶν *scripsi*: εἰς τοῦτον σύνθετον πυρετόν P: *rasura*, *et* σύνθετον τῶν πυρετῶν U: ἡ τούτων αὐτῶν τῶν πυρετῶν z: ἡ τούτων τῶν πυρετῶν Λ 11-12 ἀνώμαλος - ὀνομαζομένων *om.* Hun. 12 *post* δὲ *distinx.* Λ *post* μὲν *non distinx.* P 12-13 οὐκ ἐπιπυρέττουσι δέ LTU: οὐκέτι δὲ πυρέττουσι P 13 γὰρ *om.* U μὴν LM: μὲν z: δὲ PU ὁμως] ὅλως A 14 κατὰ τὴν διάθεσιν *add.*, *pace* Hun., according with the state ταῖς P τισιν] *cf.* some Hun. 15 *post* πάντως *distinxit* L προηγήσασθαι P: προηγῆσθαι *cett.* ἢ τι *corr.* A: ἢ τί ΛP (ἢ τί) U: ἦτοι *coni.* Lalam. 16 προσενηνέχθαι] προσενηχθῆναι Uz οὐ] ὦν U ἀργὸς *om.* Hun., *sed verbum illegibile habet* Hun^p ψυχρὸς καὶ *om.* P 17 ὠμὸς, *cf.* raw Hun^{MAP}, *om.* Hun^{cett} ὁ Δ: *om.* Λ 18 εἰσηγήσατο P^{s.l.} (ἡγή P^{p.c.}, *et* εἰς- *et* -σατο P^{s.l.}): ἡγήσατο LM P^{i.l.}: ἐξηγεῖται *vel* ἡγεῖ- Uz ὑαλώδη Δ: ὑαλοειδῆ Λ οὐδεὶς] *cf.* nobody Hun^{SEM}, *om.* Hun^{ALP}

750 possible to take a small sensitive part of it (of what cools in the body), | in which the other (what heats) is not present as well. Nevertheless, in the attack of paroxysms, some of the feverish patients suffer *rhîgos* and fever, and they perceive both of them: disproportionate cold and heat at the same time, but not in the same place. In fact, they are able to keenly distinguish the heated parts from the cooled. For, inside and in the viscera themselves, they perceive heat, while in the outside parts, in all of them, they perceive cold. The so-called *lipyriai* fevers are of this kind throughout the process, and a mortal type of *kausos* as well. Consequently, as in these fevers heat and cold fell on the large parts, in the *êpialoi* fevers they fell on the small parts.

S 16 || In fact, the *dyskrasia* of the composed fevers is anomalous. That of all the other fevers is anomalous as well, except for the so-called *hektikoi*. That of the patients who present *rhîgos*, but do not have fever afterwards, is also anomalous. The symptom, in fact, is scarce. Nevertheless, it happens at times, according to their condition,²⁶ in women and in some men. It is necessary that a completely idle life has gone before, or that the person ingested a lot of food for a long while, (circumstances) from which an inactive, cold, raw and phlegmatic humour is built up: such a humour was first introduced by

751 Praxagoras as | vitreous. In ancient days, as it seems, nobody suffered this way, because

26 Body's condition or state.

- μηδεὶς τοσοῦτον ἀργῶς καὶ πλησμονωδῶς διητᾶτο, καὶ διὰ τοῦτο γέγραπται παρὰ τοῖς παλαιοῖς ἰατροῖς ἐξ ἀνάγκης ἔπεσθαι ῥίγει πυρετόν. ἀλλὰ καὶ ἡμῖν αὐτοῖς καὶ ἄλλοις πολλοῖς τῶν νεωτέρων ἰατρῶν, ὥπται πολλάκις ῥίγος ᾧ πυρετὸς οὐκ ἐπηκολούθησεν. ||
- S 17** σύνθετος δ' οὖν ἐστὶν ἐκ ταύτης τῆς δυσκρασίας, καὶ προσέτι τῆς τῶν 5 πυρεττόντων, ὁ ἡπιάλος. οὕτω δ' ὀνομάζω τὸν πυρετὸν ἐκεῖνον, ᾧ διὰ παντὸς ἄμφω συμβέβηκεν. ᾧ δ' ἡγεῖται μὲν <τὸ> ῥίγος, ἔπεται δ' ὁ πυρετός, ὡς ἐν τριταίοις καὶ τεταρταίοις, οὐ καλῶ τοῦτον ἡπιάλον· ὥστ' ἐκ δύο τῶν ἀνωμάτων δυσκρασιῶν ὁ ἡπιάλος συμπέπλεκται, καὶ
- [9] οἱ λοιποὶ [δὲ] πυρετοὶ σχεδὸν ἅπαντες, πλὴν τῶν ἐκτικῶν ὀνομαζομένων. | 10
- S 18** || ὡσαύτως δὲ καὶ ὅσα μορίου τινὸς ἐνὸς ἔστι νοσήματα μετ' ὄγκου, καὶ ταῦτα σύμπαντα παραπλησίως τῇ φλεγμονῇ, κατὰ δυσκρασίαν ἀνώμαλον ἀποτελεῖται· καρκίνος, ἐρυσίπελας, ἄνθραξ, ἔρπηξ, οἰδημα, φαγέδαινα, γάγγραινα. κοινὸν μὲν γὰρ αὐτοῖς ἅπασιν τὸ ἐξ ἐπιρροῆς
- 752 ὑγρῶν γεγενῆσθαι διαφέρει δέ, τῷ τὰ μὲν, ὑπὸ φλεγματικῷ χυμοῦ, | τὰ 15 δέ, ὑπὸ χολώδους, ἢ μελαγχολικοῦ χυμοῦ, τὰ δέ, ὑφ' αἵματος ἤτοι θερμοῦ καὶ λεπτοῦ καὶ ζέοντος, ἢ ψυχροῦ καὶ παχείος, ἢ πως ἄλλως διακειμένου, γίνεσθαι. δηλωθήσεται <μὲν> γὰρ ἀκριβῶς ὑπὲρ τῆς κατ' εἶδος ἐν τούτοις διαφορᾷς ἐτέρωθι· πρὸς δὲ τὸν ἐνεστῶτα λόγον, ἀρκεῖ καὶ τοῦτ' εἰρησθαι μόνον, ὡς ὅποιον ἂν ἦ τὸ ῥεῦμα, κατὰ τὸν αὐτὸν λόγον ἕκαστον τῶν 20 εἰρημένων ἐργάζεται παθῶν, καθ' οἷον ἐμπροσθεν ὑπὸ τοῦ θερμοῦ καὶ

1-3 καὶ διὰ - πυρετόν] *cf.* Gal. De sympt. caus. II 5: VII 188, 9-10K K. 1-4 καὶ διὰ - ἐπηκολούθησεν] *cf.* Gal. De diff. febr. II 5: VII 346, 10-11 K. 5-7 σύνθετος - συμβέβηκεν] *cf.* Leo, Consp. med. 1, 12, 1-4 Ermerins 7-8 ᾧ - πυρετός = Aet. V: CMG VIII 2; V 87, 7 Olivieri 9-10 ἐκ δύο - ὀνομαζομένων] *cf. supra*, p. 142, 2-5 13-14 καρκίνος - γάγγραινα] *cf. supra*, p. 142, 5-8 *cf.* Gal. De sympt. caus. III 1: VII 211, 4-7 K. 13-18 καρκίνος - γίνεσθαι] *cf.* Gal. De caus. morb. 6: VII 22, 1-13 K.

1 μηδεὶς TU: μὴ δ' εἰς LMz: μὴ δεῖς (*sic*) εἰς P post μηδεὶς *add.* οὕτως U τοσοῦτον *om.* U καὶ *om.* LM πλησμονωδῶς *corr. apud* πλησμονωδῶς (*sic*) P: πλησμίως TU: *om.* LM (*sed spatium habet* L) καὶ *ante* παρὰ z παρὰ *om.* L, *restituit* L^{s.l.} παλαιοῖς LMP: ἀρχαίοις Uz: *sed* the wise men Hun. ἐξ ἀνάγκης Δ, *cf.* it is necessary, Hun., *cf.* ex necessitate Nic: *om.* Λ 3 πολλοῖς *om.* P, *scr.* P^{s.l.} 4 ῥίγος πολλάκις P ἡκολούθησε Uz 5 δ' οὖν *scripsi*: οὖν P: δὲ *cett.* ἐστὶν *ante* ἐκ Pz: *post* ταύτης *cett.* τῆς bis LTz: τοῖς MU: *om.* P 6 οὕτω LU 7 ἄμ' ἄμφω U τὸ *add.* 8 ὁ ΔP πυρετός] *sed cf.* fever with spasms Hun. 9 ἐκ δύο z, *cf.* two Hun., ex duabus Nic.: καὶ U: διὰ ΔP: διὰ δυοῖν *scrips.* Corn.: διὰ τῶν δύο *coni. Lalam.* συμπέπλεκται ΔP: συμπλέκεται Uz 10 λοιποὶ Λ: ἄλλοι Δ δὲ *secl.* 11 δὲ *om.* Λ, *scrip.* L² ἐνός PU, *cf.* of a single organ Hun. ἔστι *om.* L 12 τῇ φλεγμονῇ] τῆς φλεγμονῆς L 13 ἄνθραξ *om.* Hun. 14 *post* φαγέδαινα *add.* φλεγμονῇ Λ A γὰρ *om.* U 15 ὑπὸ Uz: ἀπὸ *cett.* τοῦ *ante* φλεγματικῷ *add.* TM χυμοῦ *om.* Δ 16 ὑπὸ] ἀπὸ P ἢ εἴτ' P^{s.l.} 16 ἡτοι] ἡ z 17 παχείος M: παχέος *cett.* 18 μὲν *add.* 19 τοῦτ'] ταῦτ' U 20 ἢ TPz: ἢν LM, U *ut vid.* 21 ἐργάζεται Λ A: ἐργάζεται *om.* Δ

no one happened to spend his²⁷ life in such inactivity and satiety, and, for that reason, it has been written by the ancient doctors that fever necessarily accompanies *rhîgos*. However, we and many other present-day physicians have many times observed *rhî-*
S 17 *gos*, which fever did not accompany. || Then, the *êpialos* is composed of this *dyskrasia* and that of patients with fever. I call this way that fever to which both (*rhîgos* and fever) happen throughout, but I do not call *êpialos* that in which the *rhîgos* comes first, and the fever follows, as in tertians and quartans. So that from two anomalous *dyskrasia* the *êpi-*
 [9] *alos* has been formed, and nearly all the remaining fevers, except the so-called *hektikoi*. |
S 18 || And likewise the diseases with a tumour in a single part, all of these, in a way similar to inflammation will be produced in accordance with anomalous *dyskrasia*: *cancer*, *erysipelas*, *anthrax*, *herpes*, *swelling*, *phagedaina*, *gangraina*. For, on the one hand, common to all of them is that they result from a flux of humours; on the other hand, they differ from each other in the fact that some happen by the phlegmatic
 752 humour,^l some by the bilious or the melancholic humour, some by blood, being hot, thin and boiling, or cold and thick, or in any other state. In fact, the differences in them will be shown precisely according to the type,²⁸ somewhere else. For the present study, it is enough just to be told that a flux, such as it happens to be, will produce each of the aforementioned affections, in the same way as it was shown before that inflammation happens by the hot and bloody

²⁷ Or her.

²⁸ εἶδος.

αίματώδους ἐδείκνυτο γίνεσθαι φλεγμονήν, καὶ ὡς τῶν ὁμοιομερῶν
 τε καὶ ἀπλῶν καὶ πρώτων σωμάτων ἕκαστον ὑπὸ τοῦ ῥεύματος τοῦδε
 διατιθέμενον, εἰς ἀνώμαλον ἀφίξεται καὶ αὐτὸ δυσκρασίαν· ἔξωθεν
 μέντοι θερμαινόμενον ἢ ψυχόμενον ἢ ξηραινόμενον ἢ ὑγραινόμενον,
 ὅποιον ἂν ἦ καὶ τὸ ῥεῦμα· μέχρι δὲ τοῦ βάθους μήπω διακείμενον 5
 ὁμοίως. εἰ δὲ πᾶν ὅλον δι' ὅλου μεταβάλλοι καὶ ἀλλοιωθεῖ, γενήσεται
 μὲν εὐθὺς ἀνώδυνον· ἐν χαλεπωτέρῳ δ' ἂν οὕτω γε διαθέσει κατασταίη.
 ταῦτ' ἀρκεῖν μοι δοκεῖ προεγνῶσθαι τοῖς μέλλουσι τῇ τε περὶ φαρμάκων
 ἀκολουθήσειν πραγματείᾳ, καὶ μετ' αὐτὴν τῇ τῆς θεραπευτικῆς μεθόδου.
 τέλος Γαληνοῦ περὶ <τῆς> ἀνωμάλου δυσκρασίας. 10

8-9 τῇ - πραγματεία] *cf.* Gal. De simpl. med. temp. ac fac. (XI 379-892 K.) 9 τῇ - μεθόδου]
cf. Gal. De meth. med. (X 1-1021 K.)

1 *post* αίματώδους, *distinx.* LTU γίνεσθαι Δ: γενέσθαι Λ φλεγμονήν Pz: φλεγμονή *cett.*
 2 καὶ πρώτων Δ, *cf.* and primary Hun.: *om.* Λ τοῦδε PU, *cf.* Hun that: οὕτω z: *om.* Λ 4 μέντοι]
 μὲν ἢ *coniec.* Helmreich 5 καὶ Δ: *om.* Λ, *cf.* Σ δὲ Pz, *cf.* Σ: *om.* *cett.* μήπω PU, *cf.* Σ: μηδέπω
cett. 6 μεταβάλλ P ἀλλοιωθεῖ] ἀλλοιωθῇ LT 7 εὐθὺς Δ: εὐθέως Λ ἐν Λz: εἰς P
 χαλεπωτέρα MTU: -πώτεραν P ἂν *om.* P διάθεσιν P κατασταίη διάθεσιν Pz
 8 τε *om.* P 9 αὐτὴν TM: αὐτῆς LU: ταύτης P 10 τέλος ... δυσκρασίας P, τῆς *ante*
 ἀνωμάλου *add.*: τέλος τοῦ τρίτου λόγου περὶ κρᾶσεων z (*apud priorem tractatum*): *om.* *cett.*

flux,²⁹ and that, each of the homoeomer, simple and primary bodies, being affected by this flux, will contract the anomalous *dyskrasia*. On the one hand, from outside it will be heated or cooled or dried or moistened, whatever the flux happens to be; on the other hand, it will not yet be in an homogeneous state up to its depth.³⁰ However, if the whole of it would wholly change and be altered, it will at once become painless, but that way it would be in a more difficult condition. That seems to me enough to be known in advance by those who are going to follow the thread of the study On Drugs, and, after this, On Therapeutic Method.

End of Galen's On <the> Anomalous *Dyskrasia*.

29 "Blood", in fact.

30 I. e. "completely".

4. COMMENTARY

P. 142,1. Γαληνοῦ ... δυσκρασίας] J. Caius added τῆς to the title. The treatise is mentioned without the article in De diff. febr. II 13: VII 380,18 K. and De ord. lib. suor. 2: XIX 56,11 K.= Boudon-Millot I 94, 8-9, while it has the article in 10 passages:¹ Ars med. 37: I 408,2-3 K.= Boudon II, 388, 17; De diff. febr. II 15: VII 388,5 K.; De tot. morb. temp. 78.12; Med. Meth. II 2: X 15,4 K.; II 6: X 122,6 K.; III 9: X 216,7 K.; X 7: X 694,18; De simpl. med. temp. ac fac. V 6: XI 723,2 K., and In Hipp. Progn. Comment. I 42: XVIIIb,107,5 K. = CMG V 9,2; 256,23-24 Heeg.

In the treatise itself, the heterogeneous *dyskrasia* is mentioned six times with the article: p. 144,8; p. 152,7; p. 162,7, and 11-12; p. 164,11, and p. 170,9, when the author opposes it to the other *dyskrasia*, the homogeneous, or wants to mention it as a single entity, while all through the book he describes many different anomalous *dyskrasia* —without the article, that is. As for the title, the article is necessary if the author distinguishes the heterogeneous *dyskrasia* from the homogeneous (by means of an attributive adjective preceded by article). However, prepositions often let the article off. By the way, in this case the article avoids hiatus.

SECTION 1. PRESENTATION

142,2- 144,9. Ἀνώμαλος ... διελεῖν] Section 1 contains the Presentation of the book. Some stylistic devices permit graduation of the importance of *dyskrasia* and related diseases. The presentation of the AD only contains coordinate sentences (verbs γίγνεται or ἐστί), excepting two comparative clauses introduced by καθάπερ in l. 2, and καθότι in l. 11. The linguistic focus is the anomalous *dyskrasia*, and as such it appears as grammatical subject of the sentences (in Nominative) at the beginning of them, in pp. 142, 2, 10, 12-13, and 144,1, while the related diseases are mentioned in dative with ἐν, for the *dyskrasia* of the body (142,2-5), and in participles agreeing with “part” for the local (142,5-7); only three of them appear as nouns in Nominative (142,7-8)

The blocks p. 142,2-5 and 5-7 contain the opening of the two frames that encircle the treatise, closing in p. 170,5 – 170,10 the first (body), and in p. 170,11 – 172,7 the second (part). Once *dyskrasia* has been explained throughout the treatise, the names of the particular diseases appear as grammatical subjects in Nominative at the end of the book, where *they* are the focus.

The *dyskrasia* is divided into body- and part- (p. 142,2-5, and 5-7),² by means of two parallel and opposite clauses, highly anaphoric:

¹ Galen fluctuates in the title of his books. Cf. V. Boudon, "Comment Galien désignait-il ses propres oeuvres? Pour une ecdotique des titres", in A. Garzya, J. Jouanna, eds., *Trasmissione e ecdotica...*, 2003, pp. 25-37.

² Nowadays they would be called systemic and localized.

γίγνεται μὲν ἐνίστε³ καὶ καθ' ὅλον τοῦ ζώου τὸ σῶμα ...⁴

γίγνεται δ' <ἐνίστε> καὶ καθ' ἐν ὅτιοῦν μόριον ...⁵

Both kinds will be developed throughout the treatise: first the local, then, the body's *dyskrasia*, for the local is the origin of the systemic in some cases, such as the fevers being a consequence of inflammation. A quiaistic composition introduces the notion "with flux/without flux": the qualitative alteration of the parts is again presented by means of participles agreeing with "part", this time in Genitive, letting *dyskrasia* in Nominative (ll. 9-12). The next series of external-produced *dyskrasia* appear in Dative, agreeing with "bodies" (=parts) and letting *dyskrasia* in Nominative. A new opposition provides the contrast: simple/composed *dyskrasia*.

P. 142,2-3 γίγνεται ... τὸ σῶμα] The sentence may be found in other treatises. Cf. In Hipp. De vict. acut. Comment. IV 1: XV 737,6-7 K. = CMG V 9,1; 273,20 Helmreich. As for ἐνίστε, the Λ-family has lost it in the series MENENIOTE (haplography); written afterwards in the margin, it has been misplaced. We have the first instance of an unusual καί (as an adverb): Galen favours καί in any position. This one is just a sample of its dominance throughout the book.

P. 142,3-5 καθάπερ ... ὀνομαζομένων] The first body's *dyskrasia* to be named is the *anasarka*⁶ dropsy,⁷ and most fevers, *êpialos* among them. ὕδρεος (and ὕδρωψ) appears for the first time in the Hippocratic Corpus.

In Nat. Fac. I 11:⁸ Galen explains nutrition and its three activities: presentation, adhesion, assimilation, and he brings forth the nature of *anasarka* dropsy, produced not by the lack of humid flux, for in fact the flesh appears humid and soaked and the same happens to every solid part of the body.

"While however, the nutriment conveyed to the part does undergo presentation, it is still too watery, and is not properly transformed into a juice,

3 Galen also uses the group γίγνεται - ἐνίστε in De meth. med. X 2: X 670,17 K., In Hipp. Aphor. 2: XVIIb,730,6 K., and De praes. ex puls. II 8: IX 303,13-14 K.

4 The syntagm καθ' ὅλον τοῦ ζώου τὸ σῶμα is found as well in Gal. De usu part. VI 10: III 446,17 K. = 326,4 Helmreich, and IX 3: III 696,9 K. = II 10,2-3 Helmreich. De plac. Hipp. et Plat. VI 8: 21, 4; CMG V 4,1,2 Lacy. De diff. febr. II 18: VII 403,10-11 K. De simp. med. temp. ac facult. IV 16: XI 675,8 K.

5 The group καθ' - μόριον, occurs in De morb. differ. 5: VI 850,3 K., De causis puls. II 13: IX 101,1-2 K., and Gal. In Hipp. Aphor. 12: XVIIb,394,8 K.

6 As the *scriptio continua* and the phonetics do not permit distinguishing ἀνασάρκα from ἀνὰ σάρκα, I just write a single word. The syntagm τοῖς - ὕδρεοις is not uncommon. Cf., *inter alia*, Steph. Alex., Schol. in Hipp. Progn. 2,1,63; 2,1,143; 2,1,147 Duffy; Alexand. Trall., Therap. 10: 2,449,15 Puschmann; Aretaeus, De causis I 16,6,4 CMG II Hude.

7 *Anasarka* is in use as massive oedema. It is a dropsy of the subcutaneous cellular tissue; an effusion of serum into the cellular substance, occasioning a soft, pale, inelastic swelling of the skin (<http://cancerweb.ncl.ac.uk/cgi-bin/omd?query=anasarka>, 12/02/2007).

8 Fac. nat. I 11: SM III 118, 21 -119,4 Helmreich= II 24,14-25,11 K.=40, 1-19 Brock.

nor has it acquired that viscous and agglutinative quality that results from the operation of innate heat; therefore, adhesion cannot come about, since, owing to this abundance of thin, crude liquid, the pabulum runs off and easily slips away from the solid parts of the body." (tr. Brock).

*Anasarka*⁹ is cold and humid, as is phlegm.¹⁰ The liquid is spread through in the flesh. In *De loc. aff.* V 7, he adds:¹¹ "from tip to toe the whole body seems to contain phlegmatic blood in the dropsies called *anasarka* and *leukophlegmatia* ... The dropsical (watery) liquid fills up the space between the peritoneum and the organs under it." Good (as a therapy) for it, is that which dries and avoids the collection of humidity, such as the *theriaka*.¹² In modern terms, dropsy is not a disease but a syndrome (see Grmek, *Diseases*, p. 41).

Galen explains fever in the treatise as a result of anomalous *dyskrasia* in the body. For the *êpialos* fever, see below, Commentary to p. 166,16 ff.: the treatise offers a precise description of it. The reference to the *hektikos* fever,¹³ due to the homogeneous *dyskrasia*, appears throughout the treatise as a counterpoint to the other fevers, produced by the anomalous *dyskrasia*. Its genesis is explained in p. 158,3-14: see Commentary *ibid*.

P. 142,5-8 γίνεται ... ἔρπητος] Among the local AD, we have a series of affections expressed by means of participles: οἰδισκόμενον ἢ φλεγμαῖνον ἢ γαγγραινούμενον, i.e. οἶδημα, φλεγμονή, γάγγραινα, and a second expressed by nouns:¹⁴ ἐρυσίπελας, καρκίνος, ἐλέφας, φαγέδαινα and ἔρπητος. The series of local affections is repeated as nouns in p. 170,13-14, closing a second frame. It includes as well ἄνθραξ.

As for the diseases included, Galen refers in *De morb. differ.* 5: VI 849,1-6 K. to the local affections presenting tumors, adding that they are evident (visible) to anybody: ἐρυσσιπέλατα γὰρ, καὶ φλεγμοναί, καὶ οἰδήματα, καὶ φύματα, καὶ φύγεθλα, καὶ χοιράδες, ἐλεφαντιάσεις τε καὶ ψῶραι, καὶ λέπραι καὶ ἀλφοί, καὶ σκιδόροι, τούτου τοῦ γένους εἰσὶν, οὐδένα λαθεῖν δυνάμενα. Next to *erysipelas*, *phlegmonê*, *oidêma*, and *elephas*, the series includes as well *phymata*, *phygethla*, *choirades*, *psôrai*, *leprai*, *alphoi* and *skirroï*.

9 See the Pseudo-Galenic *Def. med.* 279: XIX 424,7-10 K.

10 *De sympt. caus.* III 10: VII 260,2-5 K.

11 *De locis affectis* V 7: VIII 353,5-13 K.

12 See *De ther. ad Pisonem* 15: XIV 275,10-276,2.

13 The syntagm πλὴν - ὀνομαζομένων is repeated infra, p. 162,13-14; p. 168,11-12; p. 170,10.

14 The initial syntagm in 5-6 τούτου – καὶ, is repeated in *De sympt. causis* III 12: VII 268,1 K. and *De meth. med.* II 3: X 317,13-14 K. The beginning of the book (see above, notes 4-5) introduces some known syntagms that are clear enough for the exposition.

Five of them, φλεγμονή,¹⁵ γάγγραινα, ἐρυσίπελας, ἑρπης, καρκίνος start to appear in the Hippocratic Corpus (as nouns),¹⁶ while φαγέδαινα is already used by Aeschylus¹⁷ (and Euripides¹⁸). On the other hand, πυρετός, οἶδημα, and φλεγμονή are the names of diseases/symptoms/syndromes more often mentioned in the HC.¹⁹ All of them affect the skin (the flesh underneath being affected or not). Their names are still in use, but the related diseases are not exactly the same as those explained by Galen (see following notes): *anthrax*,²⁰ *gangraina*,²¹ *phagedena*,²² *herpes*,²³ *elephas*,²⁴ *erysipelas*,²⁵

15 Nowadays, inflammation is a localised protective response elicited by injury or destruction of tissues, which serves to destroy, dilute or wall off (sequester) both the injurious agent and the injured tissue (<http://cancerweb.ncl.ac.uk/cgi-bin/omd?inflammation>, 18/02/2006). For the present-day meaning of *phlegmon*, see below.

16 Cf. S. Byl, *Néologismes*, pp. 86-90.

17 Frag. 253,1 Radt.

18 Frag. 792,1 Nauck= Kannicht.

19 See Byl, *Néologismes*, p. 78.

20 Currently, Anthrax is an infectious disease caused by bacteria called *Bacillus anthracis*. This infection in humans most often involves the skin, the gastrointestinal tract, or the lungs (<http://www.nlm.nih.gov/medlineplus/ency/article/000858.htm>, 18/02/2006).

21 Gangrene is the death of tissue in a part of the body. (<http://www.nlm.nih.gov/medlineplus/ency/article/000858.htm>, 18/02/2006).

22 "Phagedena is an old term for serious deep, necrotic and gangrenous skin ulcers. In the past these have been regarded as severe infections. A review of 31 cases revealed that except in cases of *Streptococcus pyogenes* or *Clostridium welchii* infection, a bacterial or fungal infection was only one of several factors that led to the development of phagedenic ulcers. Initiating factors may be a bacterial infection, a debilitated state as a result of immunosuppressive therapy or of such conditions as alcoholism, severe diabetes, inflammatory bowel disease or severe arteriosclerosis, and various types of injury or trauma. Continuing factors include enzymatic mechanisms, the release of toxins from large areas of dead tissue and vascular disorders. In general, antibiotics are of limited value. Systemic corticosteroid therapy may be useful in the subacute or chronic case. In acute, spreading, gangrenous phagedena with surrounding erythema, fever and systemic toxic effects, immediate excision of dead tissue may be lifesaving." See R. Jackson and M. Bell, "Phagedena: gangrenous and necrotic ulcerations of skin and subcutaneous tissue", *Canadian Medical Association Journal*, 126, 1982, 363-368.

23 Herpes is any inflammatory skin disease caused by a herpes virus and characterised by the formation of clusters of small vesicles. When used alone, the term may refer to herpes simplex or to herpes zoster ([http://cancerweb.ncl.ac.uk/cgi-bin/omd?query=herpes&action=Search+O MD](http://cancerweb.ncl.ac.uk/cgi-bin/omd?query=herpes&action=Search+O+MD), 18/02/2006). The Herpes simplex virus type 1 (HSV-1) is usually associated with infections of the lips, mouth, and face, while the Herpes simplex virus 2 (HSV-2) is sexually transmitted: symptoms include genital ulcers or sores. Herpes zoster (or Shingles) is an acute, localized infection with varicella-zoster virus, which causes a painful, blistering rash. (<http://www.nlm.nih.gov/medlineplus/ency/article/000858.htm>, 18/02/2006).

24 As for elephantiasis, it is a disease of the skin, in which it become enormously thickened, and is rough, hard, and fissured, like an elephant's hide. (<http://cancerweb.ncl.ac.uk/cgi-bin/omd?elephantiasis>, 18/02/2006).

25 Erysipelas is a type of cellulitis (skin infection) generally caused by group A *Streptococcus* bacteria. It typically presents painful, very red, swollen, and warm skin underneath the lesion. (<http://www.nlm.nih.gov/medlineplus/ency/article/000618.htm>, 18/02/2006).

oidêma,²⁶ *karkinos*,²⁷ *phlegmôn*.²⁸ The author explains them as against-nature, i.e. pathologic, tumours (παρὰ φύσιν ὄγκοι),²⁹ produced by the flux of a humour. The sick humours (*kakochymia*, blood excepted) are the cause of those *dyskrasia*.³⁰ He indicates in several treatises the humour that, imbalanced and displaced, produces the disease (he refers to such humour as an excess or superfluity): yellow bile for *erysipelas* and *herpes*, black bile for *anthrax*, *gangraina*, *elephas*, *phagedena* and *cancer*, blood for *phlegmonê*, and *phlegm* for *oidêma*.³¹ Most of them are ulcers or could present them: *anthrax*,³² *gangraina*, *herpes*, *phlegmonê*, *phagedena*, *erysipelas*,³³ *karkinos*, all very different to one another.³⁴

“*Gangrainae* and *anthraxes*³⁵ — as when blood, boiling near the inflammation, burns the skin — happen with scabs, and blisters appear before the ulcers do, as if burnt by fire; they bring as well high fever and are life-threatening. ... The scabs of the ulcers in *anthrax* are black and look like ashes ... the blackness of the tumour has a kind of gloss, like asphalt or tar”.³⁶ It may be the result of a wound.³⁷

*Gangraina*³⁸ follows the important inflammations, and is a necrosis of the affected part. If it is not treated quickly, the part easily necroses, spreads as well to the contiguous parts, and kills the patient.³⁹

26 Oedema is the presence of abnormally large amounts of fluid in the intercellular tissue spaces of the body, usually applied to demonstrable accumulation of excessive fluid in the subcutaneous tissues. (<http://cancerweb.ncl.ac.uk/cgi-bin/omd?query=oedema>, 18/02/2006).

27 This [cancer] is now a general term for more than 100 diseases that are characterised by uncontrolled, abnormal growth of cells. Cancer cells can spread locally or through the bloodstream and lymphatic system to other parts of the body. (<http://128.240.24.212/cgi-bin/omd?action=Search+OMD&query=cancer>, 18/02/08).

28 Phlegmon (Latinised, as different from *phlegmonê* that is not in use) is a purulent inflammation and infiltration of connective tissue (Merriam Webster Dictionary, in: <http://medical.merriam-webster.com/medical/phlegmon>, 24/02/2005).

29 Cf. De tumor. prae. nat. 5: VII 719,1- 6.

30 Cf. among others, De sympt. caus. III 1: VII 211,3-8 K.

31 See De sympt. caus. III 3: VII 223,16 - 224,13, and De morb. diff. 12: VI 875,3 -6.

32 Cf. De temp. III 3: I 664,4-7 K.=97,11-14 Helmreich: “Cancer, *phagedena*, the corroding *herpes*, *anthrax*, malignant sores like Cheiron's, the wound of Telephus, and many other ulcers, are produced by ill humours”.

33 “... The inflamed ulcer and the putrid, being corroded and gangrened, of the kind of *erysipelas* and *cancer*, are painless or painful, and all the remaining, are referred as differences of ulcers, but in case someone describes an empirical treatment by writing it down, it will not be a matter of discussion for him to name the differences in the ulcers.” Cf. Med. Meth. III 10: 221,14 -222,4 K.

34 *Ibid.* later on, Galen explains that “there are many differences according to size, depth, form, time (old/new, etc.), being homogeneous or heterogeneous, total- or partially seen.”

35 *Anthrax*, Lat. *carbunculus*.

36 Cf. De tumor. prae. nat. 6: VII 719,7-18 K.

37 See *Epid.* II 1,1: V 73,2-6 L.= Hippocrates VII: 18,2-7 Smith, and Grmek 129, and note 59, p. 390.

38 See De tumor. prae. nat. 8: VII 720,14-19.

39 In the Lexicon of Zonaras, gamma.421,1-3, γάγγραινα is told “to be a kind of putrid

"... *herpes* does not always present ulcer, but when it happens, it does not remain in the same place. As its name indicates, it invades that which is nearby, the way a serpent does: it leaves the first location and goes to a second."⁴⁰ This eating ulcer just reaches the skin but not the flesh underneath.⁴¹

"*phagedaina* is an eating or corroding ulcer, or whatever name it is known by", writes Galen in *Med. Meth.* II 2:⁴² it is composed of the ulcer itself and the tumour around it.⁴³ It affects the skin and the flesh underneath.⁴⁴ I. Johnston translates it as "a cancerous sore".⁴⁵

elephas (or *elephantiasis*), according to Galen, is produced by the black bile, but firstly its origin is the melancholic blood, and only afterwards it becomes blacker than blood, when at the same time it smells bad and is terrible to see. Some of them present with ulcer... Sometimes the patients get bone prominences in the temples, some of them in other places. Sometimes it is called *satyriasmon*, because the affected face is alike to a satyrs' face.⁴⁶ In a fragment by Rufus of Ephesus transmitted by Oribasius,⁴⁷ Rufus mentions Straton, disciple of Erasistratus the physician (III B.C.E.), describing *elephantiasis*, which agrees "with the profile of low immune resistance leprosy" (Grmek, pp. 168-169). It belongs to the large group of leprosy identified in Ancient times in several forms. The pathogen agent is the *Mycobacterium leprae*. See discussion and evidence in Grmek, *Diseases*, ch. 6: "Leprosy", pp. 152-176. The prominences and the tubercula may appear in any part of the body, and disfigure it. In time the embossments become ulcerated.

"The term *erysipelas*, in Ancient Greek medical parlance⁴⁸ designates various diseases that <reddden the skin>, and also diffuse, purulent inflammations of internal organs, but in its commonest meaning it designates a group of skin diseases with hot, painful, reddish swelling, now thought to be strep-

and eating ulcer. Some people say that it is herpes or erysipelas" (γάγγραινα. ἔλκος, εἶδος σηπτικοῦ καὶ νεμομένου τὸν τόπον. ἔρπην τινὲς [αὐτὴν] εἶναι φασὶν ἢ ἐρυσίπελαν).

40 Cf. *Med. Meth.* II 2: X 83,16-18 K.

41 *De tumor. prae. nat.* 13: VII 727,4-9.

42 *Med. Meth.* II 2: X 83-85 K. ἀλλ' ἡ μὲν φαγέδαινα πάντως ἐστὶν ἔλκος ἐσθιόμενον, ἢ ἀναβιβρώσκον, ἢ ὅπως ἂν ἐθέλη τις ὀνομάζειν.

43 Cf. J. Jouanna, pp. 353-360 of: *La maladie sauvage dans la Collection Hippocratique et la tragédie grecque*, in: *Mètis. Anthropologie des mondes grecs anciens*, 3, 1988, pp. 343-360.

44 *De tumor. prae. nat.* 13: VII 727,4-9. See C. Prêtre, Ph. Charlier, *Maladies humaines, thérapies divines*, Paris, 2009, pp. 112-113.

45 Cf. Johnston, Galen: *On Diseases*... p. 61.

46 Cf. *De tumor. prae. nat.* 14: VII 727,14 -728,7.

47 In *Orib. Collect. medica* XLV 28,1,1-4,6: CMG VI,2,1 Raeder = Bussemaker et Daremberg, IV, 63-64. See C. Daremberg, C. E. Ruelle, *Oeuvres de Rufus d'Ephèse, Fragments extraits d'Oribase*, fr. 37, 305,4-10.

48 For the *erysipelas* in the Hippocratic Corpus, and in general, for the eating ulcers, cf. J. Jouanna, *La maladie sauvage dans la Collection Hippocratique et la tragédie grecque*, in: *Mètis. Anthropologie des mondes grecs anciens*, 3, 1988, pp. 343-360.

tococcic dermatitis. ... It did cover gas gangrene, a particularly serious disease caused by infection of wounds with certain species of *Clostridium*, *Aerogenes*, and *Bacteroides*" (cf. Grmek, Diseases, 129 and n. 56, with passages in the HC).

oidêma is rather common. Galen (In Hipp. lib. VI epidem. comment. I 2; XVIIa,801,5-802,2 K.= CMG V 10,2,2: 7,23 – 8,4 Wenkebach) writes that Hippocrates calls "*oidêma*" all the tumours *contra naturam*: those painless and hard, as *skirroï*, those painful, usually called *phlegmonai*, those painless and soft, usually called *oidêma*, while the younger physicians, such as himself, ascribe the name to just the third group. See as well De sympt. causis III 3; VII 224,3-9 K., where he adds that *oidêma* is produced by phlegm if it is just in a single place (otherwise *leukophlegmatia*), and In Hipp. de vict. acut. comment. IV 21: XV 769,11-771,5 K. = CMG V 9,1: 289,22 -290,17 Helmreich. It is usually translated by "swelling".⁴⁹

karkinos (Lat. *cancer*): "Besides boiling, the black bile provokes *cancers*, and in case it be pungent, ulcers appear that are blacker than those produced by inflammations. The veins get filled and become more tense than those in inflammations. The humour goes out of the vessels to the flesh around them, in a lesser extent than in the other, because of its thickness. The veins do not get red either."⁵⁰ While cancer happens in a part of the body affected by black bile, *elephas* affects in due time the whole body (cf. De sympt. caus. III 4: VII 224,1-2 K.: τῇ μελαίνῃ δὲ καθ' ὅλον μὲν τὸν ὄγκον ἐλέφας, καθ' ἓν δέ τι μέρος ὁ καρκίνος.)

phlegmonê: "at the points at which these [gram-positive or gram-negative] bacteriae enter into contact with the host organism, a local inflammatory reaction can be observed, which Ancient physicians described very precisely in terms of its four cardinal symptoms: heat, redness, swelling and pain." (Grmek, Diseases, p. 123). For the Ancient evidence of purulent inflammation, see Grmek, Diseases, pp. 119-132. It happened as a result of wounds, or was provoked by internal reservoirs of bacteriae. There is a superb description of *phlegmonê* in our treatise, section 3. I have translated it as "inflammation".

In most of these tumours, the colour of the skin is altered.⁵¹ On the other hand, in Med. Meth. II 2: X,82,17-83,17, Galen explains the origin of the names of those diseases, which refer to the colour (*erysipelas*, *anthrax*), to the main symptom (*phagedena*), or to the likeness of an animal (*elephas*, *karkinos*, *herpes*).

P. 142,5 γίγνεται δ' <ἐνίετε>] I guess that ἐνίετε got lost because of phonetic homoeoteleuton [gignetedeniote]. The correlation ἐνίετε καὶ καθ' ὅλον τοῦ ζώου τὸ σῶμα / ἐνίετε καὶ καθ' ἓν ὅτιοῦν μόριον appears in Gal. In Hipp.

⁴⁹ See I. Johnston, p. 57: "I have taken this to be a general term for swelling rather than specifically indicating fluid accumulation".

⁵⁰ De tumor. praeter nat. 7: VII 720,5-13 K.

⁵¹ Cf. De sympt. differ. 5,2: CMG V 5,3; 244,17-246,10 Gundert = VII 74,15-75,12 K.

de vict. acut. comment. IV 1: XV 737,6-7 K., CMG V 9,1; 273,19-20 Helmreich, while γίνεται ἐνίοτε, with μέν or δέ, can be found in Med. Meth. X 2: X 670,17 K., and In Hipp. Aph. comment. IV 50: XVIIb,730,8 K. ἐνίοτε - σῶμα, as in 142,2-3, also occurs in Gal. De plenit. 7: VII 548,4-5 K. = 52,7 Otte, while ἐνίοτε - μόριον (142,5) appears in Gal. De temper. I 9: 32,7 Helm.= I 559,12-13 K., and in p. 146,8-9 below (ἐνίοτε δὲ καὶ καθ' ἐν ὁτιοῦν ὁμοιομερὲς μόριον).

P. 142,6-7 ἢ <τῷ> ἐρυσσιπέλατι κάμνον ἢ <τῷ> καρκίνῳ] For the textual criticism, cf. Introduction, Relationships between the Greek manuscripts. Moreover, it does not seem necessary to add πάσχον after καρκίνῳ, as P does. As Galen mentions the next diseases with article (ll. 7-8), I added it in ll. 6-7.

P. 142,8 - 144,5 ἀλλὰ ... ξηρανομένων] Galen introduces the AD due to qualitative alterations, i.e. without flux,⁵² as opposed to the preceding one.⁵³ In fact, the *krasis* alluded to in *dyskrasia*, often is just a bad proportion of the qualities,⁵⁴ not directly related to the humours. It is the quality itself that alters a humour: such is the case in the external causes, that is, when intense cold or heat, cools down or heats up the body. As external is understood as well the lack of food or drink — which dries or moistens the body — and the excess of exercises, which dries it. Galen will return to it below, in Section 13.

In a first row of participles, ψυγόντων ... παθόντων, as causes of qualitative *dyskrasia* are mentioned intense cold and heat of external origin, as well as too much exercise or inactivity, which dries or moistens. These will be mentioned again in pp. 162,20 - 164,3, and 164,16-18. For inactivity making the body moist and weak, and intense activity producing dryness and making the body strong, cf. Hipp. Victu II 60,2:⁵⁵ CMG I 2,4; 182,26-28 Joly-Byl = VI 574, 4-6 L. Galen will mention them again below, in p. 162,20 - 164,1 and 164,16: ποτὲ δὲ ἐκ γυμνασίων πλειόνων, ἢ πόνων. Although here they are just mentioned as causes of qualitative *dyskrasia*, while in the next line the qualitative *dyskrasia* is said to be produced by exterior agents, both statements are correct.

⁵² For ὕλη as "matter", cf. Aristot. GC 320a.2 -5.

⁵³ In De morb. differ. 5: VI 848,14-849,13 K., Galen mentions the two kinds of (anomalous) *dyskrasia*, just changing the quality, or moving a flux upon the part. Among those last he mentions the series of part's diseases that he presents in our treatise, and some others, such as *psoras*, *leprâ* and *alphoi*. And an example of qualitative *dyskrasia* is fever.

⁵⁴ See V. Boudon-Millot, La notion de mélange dans la théorie humorale de Galien : Mixis ou Krasis?, for the dominance, in Galen, of the *krasis* in quality over that of humours.

⁵⁵ De diaeta VI 60,2 ῥαθυμὴ ὑγραίνει καὶ ἀσθενὲς τὸ σῶμα ποιεῖ ἀτρεμίζουσα γὰρ ἡ ψυχὴ οὐκ ἀναλίσκει τὸ ὑγρὸν ἐκ τοῦ σώματος· πόνος δὲ ξηραίνει καὶ τὸ σῶμα ἰσχυρὸν ποιεῖ.

On the other hand, probably both ἔγκαυσις and ἔκκαυσις could be understood as heat-stroke or sun-stroke. I have written ἐκ- everywhere, verb or noun.⁵⁶

P. 142,11 ἢ <πάντως> ἀργησάντων] I have added πάντως to ἀργησάντων; cf. “or a calm or inactivity that surpasses the convenient”, *Hun.*, and p. 168,14-16, below: χρή δὲ πάντως ἀργὸν προηγεῖσθαι βίον. It has been lost by the saut du même au même: ΠΑΝΤΩCAPΓHCANTΩN. A second choice would be ἀργησάντων <ὑπερβαλλόντως>, as in Galen's In Hipp. Aph. Comment. 28: XXVIIIa,41,4-7 K. (τὴν ὑπερβάλλουσιν ἀργίαν). For ἀργησάντων, P writes ὑγρότης *supra lineam*. Galen again mentions the inactivity in 168,14-16, below, as a cause of the *rhîgos*, with many precisions. *Post* ἀργησάντων *add.* *Hun.*^{MS}: “or the cold takes them because of the proximity of something cold as ice, or anything frozen, or an air very cold”. It does not seem to be original.

P. 142,11-12 ἢ τι ... παθόντων] The syntagm is a common expression in Galen and others, usually with the Present participle (Aorist here).

P. 142,12-13 οὐ μὴν ... ἐγγίγνονται] In σώμασιν ἡμῶν πλεῖον ἐγγίγνονται, probably the Δ-family has lost πλεῖον because of phonetic haplography in the series TOICCΩMACINHMΩNΠΛΕΙΟΝΕΓΓΙΓΝΟΝΤΑΙ, while ἐγ- gave place to πλείονες by means of wrong word-division.

P. 142,13-14 θερμαινομένοις — ὑγραינוμένοις] For the order of the four qualities in Galen's lists, see Lacy CMG V 1,2, 49-50. In fact, Galen usually chooses the (Hippocratic) hot-cold, dry-wet order, wet-dry being an alternative. Cf. the beginning of *De temper.* (I 1: I 509,1-2 K.=Helmreich 1,2-3): Ὅτι μὲν ἐκ θερμοῦ καὶ ψυχροῦ καὶ ξηροῦ καὶ ὑγροῦ τὰ τῶν ζώων σώματα κέκρται, a treatise mentioned by Galen immediately after. In *De temper.* I 2: I 510,1-518,17 K.=Helmreich 2,4-7,2, he discusses which pairs of qualities are possible, one of each pair of opposites coupled with one of the other pair. A complete description of the eight *dyskrasia* is found in *De temper.* II 1: I 572,3-573,1 K.=Helmreich 40,1-10. See as well Nutton, V 3,2 (*De propriis*), p. 66, 20-21.

P. 142,14-144,1 ἀπλαῖ ... δυσκρασίαι] Both number (Δ) and verb were probably lost in uncial letters, both by visual haplography in the series ΑΙΔ, and by phonetic haplography [disidi] in ΑΥΤΑΙΔΕΙCΙΑΥC. For the omission of the article with definite numbers, see Smyth & Messing, p. 297. For the word order, cf. Gal. *De plac. Hipp. et Plat.* VIII 1: CMG 5.4.1.2,1; 44.1 (488, 34) Lacy: αὗται τέτταρες ἀποδείξεις. The word δυσκρασίαι, extant in z, and *Hun.*,

⁵⁶ P. 164,2-3 δι' ἔκκαυσίν τινα ἔξωθεν ἐκθερμανθέντος; *ibid.* 16, 18 ἐπ' ἔκκαύσεσι.

disappeared in the others because of homoeoteleuton in -αι (ἀπλαῖ μὲν γὰρ αὐται).

P. 144,1-2 καθότι ... ἐδείκνυτο] For the singular of *krasis* in the title of *De temper.*, as in LP and *Hun.*, cf. as well *De simpl. med. temper. ac fac.* II 3: XI 468,5-6 and *In Hipp. Aph. Comment.* III 31: XVIIb,650,11. For the titles of Hippocratic treatises mentioned by Galen, cf. A. Roselli, *Un corpo che prende forma: l'ordine di successione dei trattati ippocratici dall'età ellenistica fino all'età bizantina*.⁵⁷ As I explain in the Introduction, any time that Galen mentions his books, he uses *Verbum finitum*. For the importance given by Galen to his treatises, see V. Boudon, *Galien par lui-même*, in: Manetti, *Studi ...*, pp. 119-133.

P. 144,2-5 σύνθετοι ... ξηρανομένων bis] Doing a chiasm, Galen turns to the composed *dyskrasia*. As for the conjunctions of the four pairs, I have chosen the same group in all of them, although the mss. are not consistent. I find very interesting the use of disjunctive predicates in nominal sentences. As a substance cannot be at the same time, say, good and bad, Greeks usually place the disjunctive particle before the first predicate as well, not just between them. Such is the case in this sentence: "Composed from them are four others, (ἢ) either both heated and moistened, (ἢ) or both heated and dried ... " Aristotle in *GC* II 3: 330a-b.1 mentions the six theoretical pairs, and then discharges the pairs of opposites, letting the usual four pairs stand.

P. 144,5-11 ὅτι δ' αἱ ... γνωρίζεται] The treatise introduces three periods of anteposed hypotactic sentences followed by main sentence (see Introduction, Composition). Galen often anteposes the hypotactic sentence in order to focus on its elements. These three periods open three rings, which will close below, p. 146,16-20. The first, ὅτι ... δῆλον, introduces the differences between heterogeneous and homogeneous *dyskrasia*, a fundamental notion for the understanding of the treatise. The second, ὅστις ... διελθεῖν, explains the intention of the book: to present the ways of the AD. The third, ἵνα δὲ ... γνωρίζεται introduces the necessity of some anatomical precisions, opening the anatomical section.

RING 1, outer. P. 144,6-11 ὅτι ... δῆλον] In διαφέρουσι τῶν ὁμαλῶν <μόνον>, I have added "only", lost by phonetic homoeoteleuton, but preserved by *Hun.* In l. 7 ὡσαύτως was saved in MP^{s1}z, while the others and *Hun.* have lost it by phonetic homoeoteleuton [tos], and palaeographical alikness in CΩMATOCΩCAΥTΩC. The expression ὡσαύτως ὑπάρχειν appears 8 times in Galen (TLG).

⁵⁷ In: *La letteratura pseudepigrapha nella cultura greca e romana*, ed. G. Cerri, Naples 2000, pp. 167-195.

The homogeneous *dyskrasia* has to be understood for the sake of the anomalous. Galen introduces a clear example of it: the *hektikos* fever, because throughout the treatise all fevers are explained as a result of the anomalous *dyskrasia*, and that one is an exception. It helps the author to explain transformation and pain. According to Galen, a pathologic ongoing alteration of the body is always accompanied by pain, while at the end of the process, the body is painless,⁵⁸ even if it has lost the capacity of a part (*vide infra*, Sections 5 and 10).

He exemplifies such process with the *hektikos* fever. In other fevers, only the humours and the pneuma are heated, but, in the *hektikos*, the solid parts are heated as well, so that the patient does not perceive pain, his entire body being equally heated (*cf.* p. 158,3-10, below, in Section 10). Transformation is painful: when it stops, pain stops. Galen takes this *hektikos* fever as a recurrent subject in the treatise. Four times its mention closes a reference to other fevers: πλὴν/χωρὶς τῶν ἐκτικῶν ὀνομαζομένων, including its presence in the first Frame (p. 142,4-5 and p. 170,9). In Section 10 (pp. 156,13 – 158,10), and Ring 8 (p. 158,11-14 and 162,3-4), near the middle of the treatise, the author explains its *genesis* and the limit of transformation. The patient may even have suffered a previous fever (AD, with transformation), which has turned into *hektikos* (p. 164,8-9).

RING 2, outer. P. 144,7-9 ὅστις ... διελθεῖν] The sequence ὅστις ... τῆς γενέσεως appears several times in Galen.⁵⁹ I have added μέν: an exact sentence ὅστις μὲν οὖν ὁ τρόπος ἐστὶ τῆς γενέσεως, in *De sympt. causis* I 7: VII 138,18, and II 3: VII 169,10 K. (κινήσεως). On the other hand, the sentence ἐν τῷδε ... διελθεῖν, is alike to *De antidotis* II 1: XIV 106,5-6: ἃς ἐν τῷδε τῷ γράμματι πρόκειται μοι διελθεῖν.⁶⁰ The loss of μοι in our treatise is caused by the phonetic sequence of [i] in [(gramma)tiprokitemidielthin]. The sentence is a favourite with Galen, see *Loc. Sim.* The use of several Galenic sentences (see above) that reappear in other treatises, points to a valid scheme of presentation, partially formular.

SECTION 2. ANATOMY

P. 144,9 – 146,17. For the sake of clarity, Galen introduces an anatomical description in order to explain *dyskrasia*. In *De morb. differ.* 3: VI,841,1-9, he states

⁵⁸ Cf. *De sympt. causis* II 5: 7.176.3-7 K.

⁵⁹ Cf. Gal. *De praesag. ex puls.* II 8: IX 307,5 K.; *De usu part.* VII 5: III 526,6-7 K. = 382,10 Helmreich.

⁶⁰ See as well Gal. *De anat. admin.* VII 1: II 589,1-2 K. = II 407, 2-3 Garofalo; Gal. *De sanit. tuenda* II 7,36: VI 133,10 K. = CMG V 4,2; 59,20-21 Koch; Gal. *De bonis malisq. sucis* 1: VI 757,14 K. = CMG V 4,2; 1,20: 393, 27-28 Helmreich; Gal. *De diff. puls.* IV 10: VIII 749,19 K.; Gal. *De simpl. medic. temp. ac fac.* IV 12: XI 661,1-2 K.

that there are three types of "combination and conformation": firstly of the homoeomer parts, secondly, of the organic parts, thirdly, of the whole body.⁶¹ We will find *dyskrasia* in the homoeomers, organs, and body: a quick anatomical review would allow the reader a thorough understanding of AD.

It is a rather clear explanation. Starting with the "big parts": arms, legs, stomach, thorax and head, he goes on "cutting" arms/legs into their smaller parts until he arrives at the fingers, whose simple parts are the homoeomers, excluding the vessels. He specially remarks the homoeomers, which have a paramount role in *dyskrasia*. The intervals inside and between them, as well as the intervals between composed parts, are precisely presented for the understanding of the flux that fills and presses them. Hard and soft parts are considered, the former, but not the latter, letting the intervals be perceivable. Galen mentions his Anat. adm. (II 215-731 K.=Garofalo I-II, + Proced. Anatom. III).

This second Section presents a different style. It introduces the reader (ἀναμνησαί <σε>), side by side with the writer (ἀρξαμένους). It mentions laymen (ἃ δὴ καὶ τοῖς ἰδιώταις γνωρίζεται, and οὐκ ἔστιν ὅστις ἀγνοεῖ), by means of a double turn of phrase, positive expression and litotes: γνωρίζεται/οὐκ ἔστιν ὅστις ἀγνοεῖ. The ring (R-3: 144,9-10 and 146,16-17) that encircles the description, focuses on the intended clarity. On the other hand, just using the verb τέμνω at the beginning and the end (p. 144,12 τεμνέσθω; p. 146,3 τέμνειν), Galen introduces the body's parts in seven triads of nouns, easy to learn by heart. Two of them are preceded by preposition (εἰς), and the remaining appear in Nominative (enumerative). The last four groups are homoeomers (immediately after, he writes that arteries and veins are composed by ἐξ ἰνῶν ... τε καὶ ὑμένων):

εἰς μηρόν <τε> καὶ κνήμην καὶ πόδα·

εἰς βραχίονά τε καὶ πῆχυν καὶ ἄκραν χεῖρα.

καρπός τε καὶ μετακάρπιον καὶ δάκτυλοι·

ὀστᾶ καὶ χόνδροι καὶ σύνδεσμοι,

καὶ νεῦρα καὶ ἀρτηρίαι καὶ φλέβες,

ὑμένες τε καὶ σάρκες καὶ τένοντες,

ὄνυχές τε καὶ δέρμα καὶ πιμελή.

The (second) mention of a Galenic book (p. 146,4-5 καθότι κὰν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν ἐλέγετο), isolates the homoeomers from the "places in between", where χωραὶ ... μεταξύ + G., and ἐν τῷ μέσῳ + G. are repeated.

The author again quotes Anat. Adm. between "intervals" and the "hard/soft tissues" (p. 146,9-10 καὶ περὶ τούτων ἀπάντων ἐν ταῖς ἀνατομικαῖς

⁶¹ See notes in Johnston, Galen, p. 137.

ἐγχειρήσεσιν εἴρηται), where the oppositions μαλακά/σκληρὰ καὶ ξηρά, and ἀδήλους ἐργάζεται πρὸς τὴν αἴσθησιν/πάνυ φωράσαις <ἄν> αὐτῶν αἰσθήσει τὰ διαλείμματα, are characterised by finite verbal forms that emphasize a second reference to the reader (φωράσαις <ἄν>).

The Section ends with a new reference, this time to De temperam. (p. 146,16 ἐν τοῖς περὶ κράσεως εἴρηται). At the close of the three rings (p. 146,16-20), AD is mentioned three times, but no longer in Nominative: the coming focus is the muscle.

RING 3, inner. P. 144,9-11 ἵνα δὲ ... ἀγνοεῖ] The third ring introduces and begins the subject of Anatomy. The ἵνα-sentence was associated with the former clause by Gerard of Cremona, but the ring with p. 146,16-17 leaves no doubt of the dependence of ἵνα on the next ἀναμνησαί <σε> χρή.⁶² In ἀναμνησαί <σε> the pronoun was lost because of phonetic haplography [sese]. *Hun.* (*om.* *Hun*^{MP}) and *Nic.* keep it. Similar expressions in *MedMeth.* II 7: X 149,9-10 K., In *Hipp. Progn. Comment.* III 15: XVIIIb,251,6-9 K.=CMG V 9,2; 340,14-16 Heeg, and *Med.Meth.* X 6: X 695,1-4. In *Ad Glauc. de med. meth.* II 6: XI 105,13-14,⁶³ the text includes Galen's desire for clarity as well.

The Δ-family rightly keeps ἀρξαμένους in the plural (U has ἀρξαμένων as a consequence of homoeoteleuton with μορίων). The expression is rather common in Galen, at the beginning of an exposition; cf. *De ossibus*, proem.: II 739,11-13 K.⁶⁴ In ll. 144,11-12, the author introduces laymen twice (ἃ δὲ καὶ τοῖς ἰδιώταις γνωρίζεται, and ... οὐκ ἔστιν ὅστις ἀγνοεῖ). His aim is to catch the attention of the reader for the description to come.

In l. 11, ΓΝΩΡΙΖΕΤΑΙ in Pz, gave way to ΓΙΓΝΩΣΚΕΤΑΙ, *lectio faciliior* in uncial letters.⁶⁵ In l. 12, οὐκ ἔστιν ὅστις ἀγνοεῖ, the pronoun ὅστις was simplified in ὅς in LM. For the double negative, cf. *De simpl. med. temper. ac fac.* I 24: XI 423,5-6 K. and VI 3: XI 847,16-18 K.

P. 144,12 - 146,5 τεμνέσθω ... ἐλέγετο] By "cutting" arm and leg —organs— in their own *partes*, Galen at last reaches the *similares* or homoeomers. The de-

⁶² See pp. 142-145 of my *Composition et style du traité de Galien De inaequali intemperie: avantages et désavantages pour la transmission du texte*, in: A. Garzya, ed., *Storia e ecdotica dei testi medici greci*, pp. 141-154.

⁶³ περὶ δὲ τῆς κατὰ λεπτομέρειάν τε καὶ παχυμέρειαν αὐτῶν διαφορᾶς ἐνδεικτικῶς μὲν εἴρηται, σαφῶς δ' οὐδέπω. διὸ νῦν ἀναμνησαί σε προσήκει τῶν ῥηθέντων ἡμῖν πρὸς ἀλλήλους.

⁶⁴ Cf. *De ossibus*, proem.: II 739,11-13 K., ἐπὶ ταύτῃ τῶν ὀνομάτων τῇ συνθήκῃ καιρὸς ἂν εἴη λέγειν ἤδη περὶ τῶν ὀστέων ἰδίᾳ καθ' ἕκαστον, ἀρξαμένους ἀπὸ τοῦ κρανίου. See as well *De optima corp. nostri const.* 1: IV 738,5 -7 K.; *De usu part.* II 8: III 120,9-11 K. = 88,5 Helmreich; VI 10: III 292,14-16 K. = 214,22 Helmreich; VII 12: III 557.12-13 K. = 405,18-19 Helmreich; *De caus. morb.* 1: VII 1,4-6 K.

⁶⁵ Interestingly, Lacy translates γνωρίζεται into "recognise" as different from "know", in *On the elements*, p. 102.

scription begins and ends with the same verb: τεμνέσθω, τέμνειν, forming a ring.

P. 144,12-13 τεμνέσθω ... μόρια] Galen does not usually employ προσεχῇ with μόρια or μέρη, but in De temper. III 1: 87,6 Helmreich=I 648,5-7 K., we find προσεχεῖς ὕλαι.⁶⁶ For the meaning, the quotation is interesting: in reference to "matter", Galen says that προσεχῇ, οἰκείαν and ἰδίαν are equivalents, "for they refer to that which is nearby". Thus, "contiguous" is right. The usual word for "continuous" is συνεχής. Cf. my commentary to p. 160,6-10, and p. 152, 6 and 11. In De elem. II 1: CMG V 1,2: 140,11-14 Lacy=I 493,14-15 K., Galen explains προσεχής as "the term customarily applied to the matter from which a thing first comes into being, when it has no need of any other intermediate alteration" (Lacy).

In p. 144,15, μέρη in Δ, against μόρια in Λ, is an error both of perseveration and anticipation (in καλούμενα μόρια· σκέλος μὲν).

P. 144,13-14 σκέλος ... πόδα] οἶον ante εἰ τύχοι is rather usual (*lectio* of z), but the simpler εἰ τύχοι is enough: Galen uses it very often. On the other hand, the optative is frequently changed into indicative in the mss. In this case, the subjunctive appeared (iotacism in all of them).

The reading σκέλους, LM (and σκέλη, T), is due to the loss of εἰς in Λ, which produced intents of concordance. οἰκεῖα μόρια is alike to προσεχῇ ... μόρια in l. 13. See above, Commentary. For the progressive use of καὶ μὲν δὴ in l. 15, see Denniston 396-397.

P. 144,13-16 σκέλος ... δάκτυλοι] Galen describes the anatomy of muscles and ligaments of the arm, in Anat. Adm. I, of the leg in Anat. Adm. II. The same order in De usu partium: arm in books I-II, leg in book III.⁶⁷ For a description of the bones in arms and legs, see De ossibus 16-24; Garofalo-Debru, Galien VII 73,6 -83,21 = II 732-778 K.

"Now let me go through the account as it applies to the human being: he is made of the primary and simplest visible elements, those called homoeomers, fibre, membrane, flesh, fat, bone and cartilage, ligament, nerve, marrow, and all the other (structures) whose parts all have the same form". The simple parts are generated from the humours, which proceed from that which we eat and drink, and these last from air, fire, water and earth, produced by matter and qualities. Such is the doctrine of Galen in De element. I 8: I 479,10-480,6

⁶⁶ Galen uses this adjective with στοιχεῖα as well.

⁶⁷ For a description of arm and leg in Aristotle, see HA 493b1- 494a4.

K.= CMG V 1,2: 126,1-9 De Lacy. The homoeomers⁶⁸ are alike to present-day tissues.

The series of homoeomers is presented by him in several places: see especially De const. art. med. 3: I 234,17-235,4 K. = CMG V 1,3; 62,19-21 Fortuna; De elementis I 6,29: I 465,12 -466,4 K.= CMG V,1,2: 110, 16-21 De Lacy; De nat. fac. I 7: II 16,11-15 K.=SM III: 112, 17-21 Helmreich.

In our treatise, he includes at first the vessels, which will be left out in the next sentence, for in fact they are not simple, but composed of fibres and membranes (for the vessels, see Commentary to Section 3 below). In fact, Aristotle in PA 647b.10-20 (see below), includes them among the homoeomers, as Galen does. Just in order to mention the separate structures that can be found in a finger, Galen includes the vessels, and shortly after he improves the detailed description by indicating the *similares* or homoeomers that form them.

In De differ. morb 3: VI 841,1-8 K., he also mentions arteries and veins among the homoeomers: it has to be understood that he is considering homoeomers (first), organs (second), and body (the third). A similar passage in NatFac I 6.

The anatomy of the vessels is explained in De usu part. XVI, and Anat. Adm. II, III, IV, and XV (just Arabic). They are presented as well in De ven. art. dissect. 1-8: veins (Galien VIII: L'Anatomie des veines et des artères, pp. 76-114), and 9: arteries (*ibid.* pp. 115-122). More references (LocAff, and several Comm. in Hipp.) in Debru and Garofalo, Galien VIII, pp. 57-58.

In NatFac I 6: II 12,12-13,4 K.= SM III: 109,21-110,5 Helmreich, Galen explains that bones, cartilages, nerves, membranes, ligaments, veins and the like, in the first formation of the animal, were made by Nature using completely its creative and transformative capacity, and partially the (capacity of) heating, cooling, drying and moistening, and the result of their mixing. For the Platonic genesis of these parts see Pl. Tim. 82b6-82e1.

P. 146,4-5 σύγκεινταιί ... ὑμένων] The word order is preserved by P, the other mss. having lost τε because of phonetic homoeoteleuton, and sending the verb to the end of the sentence. On the other hand, the omission of τε in Pz misplaced the verb in z, but not in P.

P. 146,5-17 καὶ μὲν ... λεχθήσεσθαι] The description of the interstices includes the differences between hard and soft bodies: the former let the hollows be clearly perceived, such as cavities in the bone, while the latter prevent perception —such as of the pores in the skin—. As for ὅσα δ' <ἐστὶ> σκληρὰ καὶ

⁶⁸ All sorts of details in De part. homoeom. diff. G. Strohmaier, CMG Suppl. Or. III, Berlin 1970.

ξηρά, a reference to the hard and dry parts appears in Med.Meth. III 4: X 189,6-8, where we learn that they do not have the capacity of growing together (συμφῦναι). *Vide infra*, commentary to 146,15-16.⁶⁹

In PA 647b.10-20, Aristotle divides the animals' homoeomers into "soft and fluid", and "hard and solid". Among the first: blood, fat, semen, bile, milk, flesh, and those alike; as hard and solid: bones, nerves, veins.

P. 146,7-9. <οὕτω> ... δέρματι] οὕτω has been lost⁷⁰ in the row:

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In the comparative clause with the hypotactic sentence in anteposition, Galen uses οὕτω καί in the main sentence.⁷¹ Cf. *inter alia* De usu part. I 1: III 1,2-6 = 1,3 Helmreich. On the other hand, καθ' ἐν ὅτιοῦν is a common syntagm in Galen.

P. 146,9-10. καὶ περὶ ... εἴρηται] A second mention of Anatomical Procedures (first in p. 146,5) does not appear in *Hun.* However, the composition of the text backs the mention of a Galenic book at the end of a block (see Introduction, Composition). Furthermore, the author twice quotes De temper., in p. 144,1-2 and p. 146,16: why not Anat.Adm. that in fact is mentioned a third time (p. 156,74)?

P. 146,10-12. τὰ μὲν ... αἰσθησιν] In τὰς μεταξὺ ... ἐργάζεται, I added κενάς, lost in the homoeoteleuton τὰς μεταξὺ χώρας κενάς, and kept by *Hun.* Cf. the similar passage above, p. 146,6 χώραι κεναὶ πολλαί τινες μεταξὺ τῶν ... In πρὸς τὴν αἰσθησιν we have the first hint at perception, which will be developed in relation to transformation and pain. *Vide infra*, Comment. to Section 5.

P. 146,11-13. ὅσα ... σήραγγας] The verb ἐστὶ was lost by phonetic haplography in the sequence [e-sti-skli], cf. Meth.Med. III 4: X 189,6-8 K. The word order σκληρὰ καὶ ξηρά is the right one, as in Meth.Med., *ibidem*. On the other hand, ἄν disappeared because of haplography in uncial letters: ANAYΤΩΝ. πάνυ of the Λ-family was misunderstood as the *facilior* κᾶν by the Δ-family. Once lost ἄν, κᾶν could be kept in order to reintroduce the particle. *Hun.* reads κᾶν. The next αὐτῶν is better than τούτων in Δ, and is backed by "in them" of *Hun.*, and by the loss of ἄν.

⁶⁹ The text 146,5-15 καὶ μὲν ... πόροι is repeated in the *spureus* In Hipp. de alim. comment. III 1: XV 253, 6-18 K. See K. Schubring, Bemerkungen zu der Galenausgabe Karl Gottlob Kühn und zu ihrem Nachdruck, in: Kühn XX, p. clviii.

⁷⁰ Cf. The Sources. Relations between the Greek manuscripts, for the importance of this omission in the transmission of the text.

⁷¹ See my Syntaxe et critique textuelle des traités hippocratiques et galéniques, in: Boudon et alii, edd., Ecdotica..., 2006, pp. 117-123.

In l. 13, διαλείμματα, "intervals", can be used for space or time, and Galen usually uses it for time, while διαστήματα (in U), is basically used for space, as in Aristotle, who often uses διάστημα for "extension" (cf. Sorajbi, Matter, esp. pp. 9-14). For the hollows in the bones, διάστημα is the convenient word. Nevertheless, as the former is *difficilior*, I guess that διαστήματα is no more than a gloss. For perceivable intervals, using αἰσθητὸν διάστημα, see Galen's Anat. Adm. VIII 10: II 547, 3-5 Garofalo = II 703, 12-14 K., *inter alia*.

P. 146, 14-15. ἔχουσι ... παρεσκευασμένον] τοῖς ὀστοῖς is *Dativus auctoris* of the Perfect παρεσκευασμένον: the bones have prepared their own nutrition. The bone marrow is explained in De Nat. Fac. III 15: SM III 255, 6-11 Helmreich = II 212, 6-11 K. As blood is responsible for the nutrition of the flesh in all muscles and viscera, marrow is responsible for bones. "In the small bones, which have not hollows, the marrow is in the (medullar) cavities, while in those big and having hollows, it is collected in those last."

P. 146, 15-16. οἱ δ' ... εἴρηται] Galen explains in De temper. II 5, the formation of the pores in the skin (64, 14-70, 27 Helmreich = I 611, 7 - 621, 21 K.) Galen compares the skin with a cheese. In the humid and soft skin, the pores do not remain but get closed, as in a tender cheese, while in the dry and hard they remain, as the hollows in the dry cheese. In the dry and hot skin the heat drags the inner humidity to it, and the channels cannot close, so that the pores remain and become *syringes*.

The title of De temper. is written in singular just in *Hun.* and U (κράσεως, complexione Pet.), while in p. 144, 1, above, κράσεως is in *Hun.*, and LP. In so short an interval, Galen probably mentioned the treatise with the same words.

RING 3', inner. P. 146, 16-17. ταυτὶ ... λεχθήσεσθαι] At the close of the third ring (opening in 144, p. 9-11), σαφής becomes σαφηνείας, and the anatomical description ends. It is an inner ring, dealing with the same subject as the encircled section.

PU have ὑπομνήσαι, while the other mss. have ἀναμνήσαι because of the next ἀναγκαῖον: ἀναγκαῖον ἦν ἀναμνήσαι. Galen sometimes uses ὑπομνήσαι for reminding the reader of something written or discussed in advance by himself or by somebody else, as in De diff. resp. I 25: VII 823, 15-17 K., De caus. puls. I 7: IX 22, 15-18 K., De cris. I 14: IX 612, 15-17 K. = 108, 15-18 Alexanderson, and II 1: IX 640, 2-4 K. = 126, 1-3 Alexanderson. Of course, ὑπόμνημα is one of the names for book or treatise. ἔνεκεν of L is mainly used before vowel in Galen, while ἔνεκα (Pz) is universal.

SECTION 3. ANOMALOUS DYSKRASIA IN A PART: INFLAMMATION

P. 146,17 - 150,1. At the beginning, the third Section includes the close of rings 2' (146,17-19) and 1' (146,19-20), and a couple of sentences dealing with the differences among AD: the aim is to come back to AD after the anatomical excursus. The author reassures himself of the reader leaving aside anatomy. The sentences in the two parts of the rings are alike:

RING 1, opening: ... τῷ μὴ κατὰ πάντα τὰ μέρη τοῦ δυσκράτως διακειμένου σώματος ὡσαύτως ὑπάρχειν

RING 2, opening: ὅστις <μὲν> οὖν ὁ τρόπος ἐστὶ τῆς γενέσεως ...

RING 2', close: περὶ δὲ τῆς ἀνωμάλου δυσκρασίας ... ὅποια τέ τις ἢ φύσις ... καὶ <ὅπ>όσοι τρόποι τῆς γενέσεως

RING 1', close: ὅτι μὲν δὴ μία κρᾶσις οὐκ ἔστιν ἐν ἅπασιν τοῖς μέρεσιν τοῦ πεπονθότος οὕτω σώματος ...

Variatio and clarity go hand in hand.⁷²

As for style, there are two foci: flux/blood, and vessels. While the vessels appear and reappear as passive subjects of finite verbs, the flux is the agent that fills up the vessels.⁷³

Flux/blood	Vessels
τὸ ρεῦμα	ἀρτηρίαι τε καὶ φλέβες
ρεύματος θερμοῦ κατασκήψαντος	ἐμπίμπλονται τε καὶ διατείνονται
ὅταν σφηνωθῇ καὶ μηκέτι στέγεται τὸ ρεῦμα ... διηθεῖται πρὸς τοῦκτός·	(τὸ μὲν τι) κατὰ τὸ στόμα, (τὸ δέ τι) καὶ διὰ τῶν χιτῶνων αἱ ἀρτηρίαι καὶ αἱ φλέβες ... ὀδυνῶνται
καὶ γὰρ ἔνδοθεν ὑπὸ τοῦ ρεύματος	θερμαίνονται τε καὶ διατείνονται καὶ διασπῶνται
κᾶκ τῶν ἔξωθεν	θερμαίνονται τε ἅμα καὶ θλίβονται καὶ βαρύνονται
τὸ μὲν γὰρ αἷμα ζέει ... συνεκθερμαίνει δ' αὐτῷ	τοὺς χιτῶνας τῶν ἀρτηριῶν καὶ τῶν φλεβῶν

The verbs related to the remaining parts⁷⁴ are mostly Infinitives (148,9 ὥστε καὶ θερμαίνεσθαι καὶ περικλύζεσθαι; 14-15 τὰ δ' ἄλλα μέρη, τὰ μὲν

⁷² Cf. my Composition et style ...

⁷³ The flux appears as Genitive partitivum of verbs of filling, or as "personal" agent with ὑπό.

⁷⁴ The exception are the interstices: p. 2,16 αἱ μεταξὺ χώραι ... πίμπλονται ρεύματος.

τῷ θερμαίνεσθαι μόνον ἢ θλίβεσθαι, τὰ δὲ τῷ συναμφοτέρῳ κάμνει). The section is opened and closed by an Absolute Genitive formed by the flux coupled by a participle Aorist (punctual aspect):

opening	ρεύματος θερμοῦ κατασκήψαντος
close	νικήσαντος μὲν τοῦ ρεύματος

The vessels are the subject of two triads: (ἐνδοθεν) ὑπὸ τοῦ ρεύματος θερμαίνονται τε καὶ διατείνονται καὶ διασπῶνται, and (ἐξωθεν) θερμαίνονται τε ἅμα καὶ θλίβονται καὶ βαρύνονται. The verbs are tetrasyllabic, excepting θλίβονται: the author inserted τε ἅμα καὶ instead of just τε καί, in order to keep the syllabic volume.

We immediately understand the fundamental rôle of the vessels in the genesis of inflammation, no less because they are the grammatical subjects of finite forms of the verbs.

RING 2', inner. P. 146,17-19. περὶ ... τῆς γενέσεως] The genesis of AD will begin by explaining inflammation. Galen likes the series ὅποῖος ... ὅπόσος, using the composed pronouns in the order -οῖος -οσος, or the other way round, more often in plural ("how many") than in singular.⁷⁵ He uses these pronouns for introducing indirect questions, as they offer an easy and clear way of presenting an explanation, be it temperaments, as in De temper. I 1: I 509,8-510,2 K., or tumours, as in Med. Meth. XIV 1: X 945,4-6 K, or anything else. The mss. often present divergences between the simple and the composed forms.

RING 1', outer. P. 146,19-20 ὅτι ... εἴρηται] See Commentary to 144,5-7, above, for the homogeneous *dyskrasia*. On the other hand,⁷⁶ z presents the interesting ρευματισθέντος, instead of πεπονθότος of the others. As Galen is going to explain inflammation, which is a local anomalous *dyskrasia*, he could refer to a body attacked by flux. However this (unusual) participle is always coupled by "a part", not by the whole body. On the other hand, the opening of the ring (1) points at "the (whole) body affected by *dyskrasia*": τοῦ δυσκράτως διακειμένου σώματος. The participle πεπονθότος appears a second time in the next line: πεπονθότων σωμάτων, where it refers to "parts"; in both lines the use of this participle is correct. Consequently, the possibility of an error due to "anticipation" must be rejected. For a description of inflammation including ρευματίζομαι, cf. De cris. III 12: IX 693,12-13 K.= 159,19-20 Alexander.

P. 146,21 - 148,2. ἀλλὰ ... δυσκρασίαν] By differentiating *dyskrasia* in the muscle, which is a composed part, from *dyskrasia* in the flesh, which is a *similar*

⁷⁵ See my Syntaxe et critique textuelle..., in: Boudon et alii, edd., Ecdotica ..., 2006, pp. 117-123.

⁷⁶ Hun. lost ἅπασι because of homoeoteleuton.

part, the reader is prepared to understand the genesis of the former, which implies *dyskrasia* in its *similares* parts as well, but not in the same way. For the use of ἄλλως ... ἄλλως in Galen, cf. De usu part. XIV 7: IV 166,10–12 K. = 332,2 Helmreich. The word δυσκρασίαν is attested in the passage by U and P^{ve} (δυσ), and by Hun. as well, against κῶσιν in the other mss. For the synonyms of δυσκρασία in Galen, there is an interesting passage in In Hipp. Nat. Hom. comment. I 21: XV 62,4–6 K. = CMG V 9,1; 33,28–30 Helmreich, where he mentions ἀνωμαλία κράσεως. Galen sometimes uses ἀνώματος κῶσις, e.g. In Hipp. Epid. VI comment. I 14: XVIIa, 858,14–16 K.=CMG V 10,2,2; 37,5–6, referring to air, or to the precise disease, as in De caus. puls. II 13: IX 93,8–12 K.

P. 148,2 - 150,20. The genesis of inflammation⁷⁷ is now explained. The *phlegmonê* is produced by hot blood when it falls upon a muscle. At the beginning, it fills up and stretches the vessels themselves, and afterwards the many and small hollow places nearby. The precision and brevity of the description attracted Oribasius, who included it in his *Collectiones Medicae*.⁷⁸ See below.

Some precise words are always associated with the process. The hot flux is ῥεῦμα θερμόν, which attacks (κατασκήψαντος) the muscle. Suddenly (αὐτίκα) the big vessels (αἱ μείζονες ἀρτηρίαι τε καὶ φλέβες, τὰ μείζω τῶν ἀγγείων) are filled up and stretched (ἐμπίμπλυνται, διατείνονται, ἐξαίρεται), up to the point of the flux getting "wedged" (σφηνωθῆ). As they cannot retain the blood (μηκέτι στέγεται, μὴ στέγοντα, μηδ' ἐν τούτοις στέγεται), it goes out through them (διηθεῖται, διυδροῦται ... πρὸς τοῦκτός), and fills up the cavities and the hollow places (τὰς μεταξὺ τῶν ἀγγείων εὐρυχωρίας, αἱ μεταξὺ χώραι κεναί). See especially Med. Meth. XI 6: X 695,1–8 K., and In Hipp. Progn. comment. I 42: XVIIIb, 107,2–14 K.=CMG V 9,2; 256,19–24 Heeg, which describe inflammation and quote the treatise. For the formation of the *phlegmonê*, cf. as well Med. Meth. XIV 3: X 877,15–17 K., and De tumor. praeter nat. 2: VII 707,3–714,18 K. (see below).

In De tumor. praeter nat. 2, quoted above, Galen explains many details of inflammation. I include some of them (summarized):

The name *phlegmonê* is usually applied to a large tumour in the fleshy parts, accompanied by tension, hardness, throbbing pain and heat, with *erythêma*. However the cause is not known by all the doctors. The way to discover it is this one. (VII 707,2–11 K.)

The body's substance is affected by one of these two: either the body's substance boils because of too much heating flux, or new matter coming from outside is aggregated to the former ... *Pneuma* is not seen in the inflammation

⁷⁷ The definition of inflammation by Celsus (III 10,3: 117,23–24 Marx) is remarkable: it presents *calor* (warmth), *dolor* (pain), *tumor* (swelling) and *rubor* (redness and hyperaemia).

⁷⁸ Oribasius introduces two specific passages dealing with inflammation in Syn. ad Eust. VII 24, and Ad Eunap. III 41 (CMG VI 3).

as it is in many other tumours; and when getting cooled, it comes back easily to the former state. That there is not *pneuma* is evident when cutting the inflamed part, for a lot of blood floods and all the place gets full of it, but *pneuma* does not go out. The colour is important as well (for the diagnosis), for there are no other red parts or humours, except flesh and blood. (VII 707,12-708,11 K.) The tumour is bigger than one according to nature, and the colour in the healthy borders does not remain at all, as it changes from the former nature (VII 708,11-709,4 K.)

Sometimes, very large inflammations happen with ulcers, and a subtle waterish *ichôr*⁷⁹ appears flowing out of them. The place around it appears bloody ... In fact, the *ichôr* is more subtle than blood, and more thick than *pneuma*. If the tumour gets empty once, it would quickly be restored (VII 709,5-18 K.).

The genesis of inflammation produced by injury proves that fact [that the humour is just blood]. At the beginning, the moment the injury is produced, a lot of blood goes out. But immediately it is withheld because we get cold, or the injury does, because of the surrounding air. This also happens when we put a bandage on: the blood cannot go out. In the orifices of the cut vessels the blood gets thick and is retained in a way similar to a *thrombos*⁸⁰ ... but in a *thrombos* the adhesion of much blood is perceived. When blood is retained, because it gets thicker and the orifices get narrower, the *ichôr* still goes out. All these facts show that there is a lot of blood in the inflammation's places (VII 709,19-710,13 K.).

If you cool the inflammation, it does not disappear, but becomes livid and cold, and changes into a *skirros* (a sort of induration) ... It is necessary to cool and empty it ... Although being full of blood, the inflammation is not very hot at the beginning, but it will be within time, as transpiration is avoided ... In time the blood putrefies, as happens to something wet and hot collected in a wet place, not being able to get empty and cool. That way, the putrefaction's heat increases the heat of the inflammation (VII 712,1-713,2 K.).

That there is more blood (than before it happens) in the inflammation, is evident, because the veins that were unperceivable become visible when they get swollen by a larger amount of blood ... Within time the skin rises, as happens to the tunics of the vessels, the membranes, the nerves and the tendons ... (VII 713,3-714,3 K.) At times, the inflammation reaches the bones as well (VII 714,4-8 K.)

79 The name is still used for the watery discharge from a wound. I just transliterate.

80 Nowadays "thrombus" is a clot consisting of fibrin, platelets, red blood cells, and white blood cells that forms in a blood vessel or in a chamber of the heart and can obstruct blood flow. Source: <http://medical-dictionary.thefreedictionary.com/thrombus> (12 May 2008).

P. 148,2-5 ἀντίκα ... μικροτάτων] For an interpretation of ἀντίκα as "for example, to begin with", see L-S, s.v., and Lacy, CMG V 1,2: Element. 13,12; 152,4. However, the parallel texts that explain inflammation have the same adverb, and the meaning is "suddenly". On the other hand, Galen has both μετὰ ταῦτας δὲ ... and μετὰ δὲ ταῦτας; much alike In Hipp. Progn. Comment. I 42: XVIIIb,107,2-14 K. = CMG V 9,2; 256,19-24 Heeg. See Plato, Polit. 276c 3 -4.

P. 148,5-7 ἐν αἷς ... τοῦκτός] In σφηνωθῇ *Hun.* reads "when it is too much in excess." Maybe he read or understood σφριγωθῇ (but σφριγωθῇ would be *difficilior*), because of iotacism, and under the phonetic influence of ἰσχυρῶς.⁸¹ The reading σφηνωθῇ is correct, being associated to the process of inflammation everywhere (see above). For the pair ἰσχυρῶς σφηνωθῇ, cf. Gal. De usu part. VIII 7: III 655,12-14 K. = 475,20 Helmreich. For τὸ μέν τι ... τὸ δέ τι, see De fac. nat. III 10: 2.178,13-19 K.=SM III 230,17-20 Helmreich.

P. 148,7 διὰ τῶν κινούντων αὐτὸ χιτώνων] In fact, the tunics move the vessels, and consequently the blood in them (αὐτό); cf. De praesag. ex puls. II 9: IX 311,16- 312,2 K., and De propriis, CMG V 3,2: 3,4; 60,19-62,2 Nutton, and (Commentary) pp. 146-147. Arteries have two coats, while veins have just one. Cf. De fac. nat. III 11: II 181,10-15 K.= SM III 232,16-19 Helmreich. The arteries' outer coat is alike to the veins' coat, but the inner coat is much thicker and harder.⁸² The arteries' coats are full of porous⁸³ openings,⁸⁴ for they take air in the diastole, and expel sooty matter in the systole.⁸⁵ See Harris, 281-282. Galen refers to the coats below, pp. 148,17 - 150,1. The pores in arteries and veins are explained by Aristotle in HA 510^a 14. In Galen, cf. *inter alia*, De usu puls. 5: V,164,14-165,8 K. The arteries contain blood in smaller quantities than the veins.

P. 148,7 διηθεῖται πρὸς τοῦκτός] P^{s.l.} has διυδροῦται, which appears in contexts identical with this one, and is a probable synonym written in the margin. See Med. Meth. X 6: X 695,1-8 K. On the other hand, Galen often uses the crasis τοῦκτός when coupled by a preposition. See Anat.Adm. I 11: II 277,13 K.= I 69,6 Garofalo (εἰς τοῦκτός). II 4: II 297,4 K.= I 89,3 Garofalo (ἐπὶ τε τοῦκτός), and II 4: II 300,13 K.= I 91,25 Garofalo (πρὸς τοῦκτός).

81 On the other hand, Oribasius, in Syn. ad Eustath. V 44,13,1 -14,1 (CMG VI 3), writes: καὶ αἱ φλέβες δ' εὐρεῖται τυγχάνουσιν, ὥσπερ δὴ καὶ αἱ ἀρτηρίαι μεγάλαι τέ εἰσιν ἅμα καὶ σφοδρότατα σφύζουσιν. He deals with the diagnôsis of the bodies with dyskrasia, but the reference to the throbbing is not adequate to our passage.

82 See Anat. Admin. VII 5: II 601,4-602,4 K.= II 421,10-26 Garofalo.

83 As for the reading in U, somebody may have written διὰ τῶν πόρων <αὐτῶν> as a gloss in the margin that entered the text: αὐτῶν is kept by Pet.: cf. per poros ipsos.

84 De usu puls., 5: V 164,14-165,2 K.

85 De puls. causis I 4: IX 6,6-7,14 K.

P. 148,7-8 *κὰν τούτῳ*] *Dyskrasia* is the only disease of the homoeomer parts,⁸⁶ injury excepted. In the composed parts, disease may be due to *dyskrasia* or to a loss of continuity in any of their homoeomers ... it may also result from a defect of structure (*diaplasia*) arising when the formation of the body ... or from trauma. See P. Brain, Bloodletting, p. 8.

P. 148,9-10 *ὥστε ... ἅπαντα*] *Hun.* translates *ὥστε* as "up to happening ...", and *Nic.* writes "ut (calefiant)". However, it is a normal consecutive sentence with Infinitive (virtual): "so as to get hot and soaked all around from every place by the moisture." On the other hand, *Hun.* does not have *ἅπαντα* at the end of the sentence. However, the composition of the treatise backs the use of this pronoun as anaphoric closing blocks or opening them. See Introduction, Composition.

P. 148,10-12 *νεῦρα ... ὀδυνῶνται*] Galen presents the word order *ὑμένες καὶ σύνδεσμοι* in three similar series of homoeomers: *De fac. nat.* I 7: II 16,11-15 K.= SM III 112,19. *Med. Meth.* III 9: X 216,15 K. And (in Ac. sing.) *De placitis* CMG V 4,1,2: VI 8, 24,6 (412,16) Lacy. The demonstrative (*αὐταί* PU) at the beginning of a sentence is a favourite of Galen, and is preferred to *αὐταί* in the other mss. that couple it with the preceding *σάρκες*. Arteries and veins play a most important role in the treatise (see above), as Galen focuses the local *dyskrasia* in the inflammation, which is the more frequent local *dyskrasia* with flux.

In *πρῶται καὶ μάλιστα, πρῶτως* of ΛU has been produced by the next *ποικίλως*. Now, *πρῶται* (or *πρῶτως* or *πρῶτον*) *καὶ μάλιστα* is the right word order. Compare I. 17, below, and *De usu part.* VI 12: III 465,5 K. = 339,13 Helmreich: *πρῶτον μὲν καὶ μάλιστα*.

In I. 12, *ὀδυνῶνται* is the first mention of pain (see *infra*, S. 5, p. 152,1 *ὀδυνώμενα*, S. 14, p. 166,6 *ὀδυνῶνται*). Coupled with transformation, pain is a theme-excursus of the treatise. See Table II in Introduction, and *ibid.* B 1. Contents. 4. Transformation/pain, for the Commentary of this passage. Pain interests Galen, as we would guess. On the one hand, it reflects disease, be it in the painful part, reflecting a general affection, or being sympathetic. See *De loc. aff.* I 4: VIII 35,1-44,6 K. and Siegel, Galen on sense, 184-85. Pain, on the other hand, is capital as a symptom; *cf.* *Diff. symp.* 3,3-6: CMG V 5,1; 218,18-222,2 Gundert = VII 56,18-58,11 K., and Johnston 189. For the diagnosis of pain, *cf.* *De loc. aff.* II 5-10: VIII 79,11 -135,4 K.

As for pain in the vessels, Galen, in *De usu part.* XVI 12: IV 336,11-14 K. = II 430, 19-21 Helmreich, writes that arteries and veins do not perceive at all (*ἀναίσθητοι γίνονται παντάπασιν*). F. Vallés⁸⁷ explains that, probably,

⁸⁶ For the designation of the *similares* as first bodies, see *De placitis* CMG V 4,1,2: VIII 4, 8-9,7 (500,3-10) Lacy, where Galen states that Hippocrates did not call them that way.

⁸⁷ In his Commentary to the treatise: see Sources, Commentaries in the Renaissance.

ὀδυνῶνται, in our passage, means they "undergo or suffer", not they "feel pain". So I have translated: "(they) are affected by manifold suffering".

P. 148,14-15 τὰ δ' ... κάμνει] While σύνδεσμοι get heated (θερμαίνεσθαι), νεῦρα and ὑμένες get compressed (θλίβεσθαι), and σάρκες suffer both.⁸⁸ Although very scarce, the singular συναμφοτέρον is attested in this meaning in Plato and Demosthenes; see Pl. Soph. 250c3- 4. In Galen, the singular Dative appears in similar sentences: De dieb. decr. II 1: IX 842,1-2 K. (τὰ μὲν ἐμπειρία, τὰ δὲ λόγῳ, τὰ δὲ συναμφοτέρῳ) and De comp. med. per gen. IV 5: XIII 688,6-7 K. For πρώτους μὲν καὶ μάλιστα in l. 17, cf. l. 11, *supra*.

P. 148,15-16 καὶ καλεῖται ... μυός] The author encircles the explanation of inflammation with a ring, remarking that it is a *dyskrasia* of the muscle, so that the reader does not forget or get confused:

148,1-2 ἄλλως μὲν γὰρ ἢ ἀπλῇ σάρξ, ἄλλως δ' ὁ σύμπας μῦς, εἰς ἀνώμαλον ἀφικνεῖται δυσκρασίαν.

148,15-16 καὶ καλεῖται μὲν τὸ νόσημα φλεγμονή, δυσκρασία δ' ἐστὶν ἀνώματος τοῦ μυός.

P. 148,17 - 150,2 συνεκθερμαίνει ... πάντα] The heated up blood warms together with it the vessels, and in turn the tunics and the outside. I corrected αὐτῷ (αὐτῷ codd.)

SECTION 4. DEPOSITS

P. 150,2-20.⁸⁹ καὶ δυοῖν⁹⁰ ... σπλάγχνοις] After his precise description of inflammation, Galen considers the processes involved in the local *dyskrasia*. In fact, the effects of inflammation are of two kinds: healing, as dissipation or *apostasis*, and disease, that is, general *dyskrasia* in the body. As the *dyskrasia* with flux is rather frequent, and more so the inflammation, Galen treats the matter completely, including not just the related body's *dyskrasia*, but the different kinds of healing as well.

The process could be reversed in two ways, the easiest and healthiest being dissipation. The second is concoction of the obstructed blood, that is, the formation of pus and deposits (see below).

⁸⁸ The *scholium* has σύνδεσμοι *supra* θερμαίνεσθαι, and νεῦρα καὶ οἱ ὑμένες *supra* θλίβεσθαι, while *supra* συναμφοτέρῳ Σ *scripsit* μῦες σάρκες.

⁸⁹ The text of Sections 4-6, pp. 150,2 -154,4, καὶ δυοῖν γε ... τὸ ζῶον αἷμα, is transmitted as well by Oribasius, *Collectiones medicae* XLIV 1,10,5 – 1,13. See Sources. Indirect tradition.

⁹⁰ The syntagm δυοῖν - ἀναγκαῖον, in 150,2 also appears in Gal. De usu part. VI 2: III 414,15 K.

The author encircles the explanation of the deposits with a precise ring (R-4): "*rheuma* wins (A) / body defeated by *rheuma* (A)". This device permits the isolation of the *apostasis*' subject, which does not get mixed with *dyskrasia*, and to return at the end to the local and becoming-general *dyskrasia*. There is a quiastic disposition:

A 150,3 νικήσαντος μὲν τοῦ ῥεύματος, φθορὰν τῶν νικηθέντων σωμάτων·

B 150,4 νικηθέντος δέ (τοῦ ῥεύματος), τὴν εἰς τὸ κατὰ φύσιν ἐπάνοδον τῷ μυῖ.

B' 150,4-5 καὶ δὴ καὶ νικάσθω πρότερον τὸ ῥεῦμα ...

A' 150,20-22 (beginning of next Section) εἰ δὲ νικηθείη τὰ σώματα πρὸς τοῦ ῥεύματος ... τὴν ἐνέργειαν ... φθαρῆναι τῷ χρόνῳ·

One of these two processes necessarily happens:

A. overcoming the flow, destruction of the overcome bodies (parts);

B. the flow being overcome, the return of the muscle to its natural state.

B'. let the flow be overcome, for it is preferable to start from the better side.

A'. if the bodies were overcome by the flow ...

Using a metaphor, Galen states the two eventual results of the attack, in terms of war: "overcoming the flow, destruction of the overcome bodies; the flow being overcome, the return of the muscle to its natural state", and begins by the second: "because it is preferable to start with the better side", that is, healing. At the end of the section, he closes the ring (A'). The author inserts into the treatise such sorts of calls to attention in order to make the text easier and more dynamic.

The style of the section on deposits is splendid for being understood and learnt by heart. There are just three *verba finita*: ἀφίσταται, συρρήγνυται / ἐκρῆγνυνται; the exposition is founded on parallel expressions without a verb. The deposit "is formed into" is constructed by means of εἰς (9 times), or ὑπό (4), and Acc. On the other hand, the article is enough to refer to the "place by (the brain, etc.)": τοῖς κατὰ τὸν ἐγκέφαλον, or to the "deposits": ἡ alone or αἱ δὲ κατὰ ... The relative pronoun (ἥπερ, ἥν) contributes to the nominal style. There are many superlatives: μεγίστην, ἀκυροτάτην, βελτίστη, καλλίστη. Opposed adjectives μοχθηρά/ἀγαθή and καλλίστη/μοχθηρά.

There are three blocks (every repeated word is underlined), with one finite verbeach (ἀφίσταται, συρρήγνυται, ἐκρῆγνυνται: marked by double line). (MS=Main Sentence; HS=Hypotactic Sentence; rel=relative; partic=participle).

1. MS ἀφίσταται δέ

ποτε μὲν εἰς τὴν μεγίστην τε καὶ ἀκυροτάτην τῶν παρακειμένων κοιλιῶν,

HSrel ἥπερ δὴ καὶ <ή> βελτίστη τῶν ἀποστάσεων ἐστίν·

MS ἐνίστε δ' εἰς μεγίστην μὲν, οὐ μὴν ἄκυρον,

ἢ εἰς ἄκυρον μὲν, οὐ μεγίστην δέ.

2. MS τοῖς μὲν οὖν κατὰ <τὴν> γαστέρα,

καλλίστη τῶν ἀποστάσεων ἐστίν ἢ εἰς τὴν ἐντὸς εὐρυχωρίαν,

HSrel εἰς ἣν καὶ συρρήγνυται τὰ πολλά·

MS μοχθηρὰ δὲ ἢ ὑπὸ τὸ περιτόναιον.

MS οὕτω δὲ καὶ τοῖς κατὰ τὸν ἐγκέφαλον·

ἢ μὲν οὖν εἰς τὰς ἐμπροσθίους δύο κοιλίας ἀγαθὴ,

μοχθηρὰ δὲ ἢ τε ὑπὸ τὰς μήνιγγας

καὶ ἢ εἰς τὴν ὀπισθεν κοιλίαν.

3. MS αἱ δὲ κατὰ τὰς πλευρὰς ἀποστάσεις,

εἰς τὰς τοῦ θώρακος εὐρυχωρίας ἐκρήγνυνται

καὶ τῶν μὲν μυῶν, ὑπὸ τὸ δέρμα·

τῶν δὲ σπλάγχχνων,

ἢ εἰς τὰς ἀρτηρίας καὶ τὰς φλέβας τὰς ἐν αὐτοῖς,

ἢ ὑπὸ τὸν ὑμένα τὸν περιέχοντα,

HS-partic καθάπερ τι δέρμα καὶ αὐτὸν ὑπάρχοντα τοῖς σπλάγχχνοις.

P. 150,4 νικηθέντος ... μνῖ] For the return to the natural state, cf. De elem. I 3: I 435,16-436,2 K=CMG V 1,2: 3,40,1-2 (78, 19-20) Lacy.

P. 150,5-9 διττὸς ... ἀπόστασις] The group δ' οὖν is frequent in Galen. *Inter plura*, cf. Ars medica 7: I 324,8 K. = Galien II: 292,12 Boudon. The syntagm ἐξ ἀνάγκης ἔπεται (in this word order) is a favourite of Galen, appearing over 40 times.

P. 150,5-20 διττὸς - σπλάγχχνος] Dissipation (διαφύρρησις) is, in fact, a cure for the inflammation, while the apostasis of pus is just a good outcome. In Adversus Lycum 7: XVIIIa,239,3 -13 K. = CMG V 10,3; 7,9,1-10,1 Wenkebach, Galen indicates that hot water or oil, or any (hot) humid substance, are the swiftest to be completely dissipated, while earth, stone, or any other dry and cold entity are not. The two qualities apt to dissipation are heat and dryness. Consequently, a child's body, being hot and humid, is very prone to sweat, while that of an elderly person is not. Galen opposes διαφύρρησις (dissipation, sweating off) to διαμονή (abiding).

In the Hippocratic Corpus, putrefaction was conceived as a kind of *pepsis*: "In the Hippocratic Corpus, *sêpô* and their derivatives designated decomposition through putrefaction, the deterioration of the humours, the formation of pus, and at the same time the digestion of foodstuffs, especially its final stage" On the other hand, *pepainô* and their derivatives are used "to designate the maturation that corrects disturbances, a kind of cooking that allows an organism to overcome and eliminate harmful substances. This process can also produce pus" (Grmek 124).

Pus may come from phlegm (Morb I 15: VI 164, 1-6 L. = Wittern 36, 4-10). In De alimento 52 (IX 118,12-13 L.= CMG I 1; 84, 18 Heiberg = Hippocrate VI,2: 147,12-14 Joly), we read: "pus comes from flesh ... and the purulent humour comes from blood and liquid", and "... in the Hippocratic Corpus, pus is formed either from decaying battered flesh or extravasated blood or, more rarely, from the aqueous humour, or even from phlegm." (Grmek 124-125). As Galen asserts in De tumor. praeter nat. 4: VII 717,17-718,2 K., in the origin of those *apostêmata* is not just inflammation, but other humours as well.

In De tumor. praet. nat. 3: VII 715,1-10 K., Galen explains the concoction of a tumour and the pus' elimination (I summarize). As nature prevails in due time, all the flux gets concocted, pus is produced and goes out of the flesh, thanks to the (flesh's) capacity for secreting alien matter (*δυνάμειως ἀποκριτικῆς*). At times, there is either a natural and important passage, a sort of channel, which is prepared for the expulsion of the excess, or, as the place itself gets loose, it eliminates by transpiration a part of the pus, and makes flow the other in a perceptible way. At times, the surrounding skin gets compact and hard, retains the pus and separates itself from the flesh underneath, and after that, it erodes by the acridness and goes out, unless avoided.

In Ancient Greece, the sites of purulent inflammation most often mentioned are the internal organs: tonsils, the ear and the cranial sinuses, the meninges, the lungs and pleura, joints, the kidneys and the perirenal region, the biliary organs, the peritoneum, the rectum, and the uterus and its annexes (Grmek, p. 130).⁹¹

However, the good outcome of the *apostasis* is dependent on the place where it happens, and on the cavity that receives it. The unimportant cavity is, in general, preferable, as is the bigger one. In the Hippocratic Corpus, "suppuration towards the exterior, and the subsequent evacuation of pus, were means by which an organism's physis eliminated harmful substances and prevented relapse" (Grmek, pp. 126 and 388, n. 42).

P. 150,9-14 ἀφίσταται - πολλά] While *κοιλίων* in PU (l. 10) means precisely a body cavity, *κοιλοτήτων* (cett.) does not. The proximity of ἀκυροτάτην may

⁹¹ See suppurative otitis media in Epid. VII 5: V 373-76 L.= VII 302-306 Smith = Hippocrate IV 3: 53,1 – 55,6 Jouanna.

have turned κοιλιῶν into κοιλοτήτων.⁹² For the superlative μεγίστην without article in l. 11, cf. De comp. medicam. sec. locos VIII 2: XIII 132,3-7 K. and In Hipp. aphoris. comment. V 58: XVIIb,856,11-16 K., where it means “very big”, and not “the biggest”. In line 12, κατὰ <τὴν> γαστέρα, <ή> καλλίστη, both articles were lost in the series ΤΗΝΓΑΚΤΕΡΑΗΚΑΛΛΙΣΤΗ. The syntagm εἰς μεγίστην μὲν, οὐ μὴν ἄκυρον (litotes) is an elegant way of opposing the two adjectives: “(at times) to a very big, but not unimportant one”; see De meth. med. VI 41: X 422,6-8 K.⁹³ The use of ἄκυρος with cavity is present as well in Aristotle GA 778a.

On the other hand, ἡ ἐντὸς εὐρυχωρία is a frequent designation for an ample cavity. In De temper. II 6: I 623,13-15 K., it contains lungs and heart, in De usu part. XIV 10: IV 186,11-13 K. = 318,14 Helmreich, it refers to the uterus, in De morb. differ. 7: VI 859,18-860,3 K., to the intestines (ἐντέρα); in De locis affectis I 6: VIII 36,12-19 K., to the stomach (γαστήρ).

P. 150,9-20 ἀφίσταται ... σπλάγχνοις] Of good or bad prognosis is the formation of deposits into a cavity, these last being differentiated by size and importance. After an initial and general statement (the formation of deposits into a very big and unimportant cavity is the best; the cavity could also be very big and important, or not important and not big), the author refers to the deposits in the stomach, the thorax and the brain. Those in the muscle and in the viscera are mentioned afterwards.

P. 150,12-14 τοῖς μὲν ... περιτόναιον] The nutritional organs are described in Anat. Admin. book VI, and De usu part. books IV-V. The peritoneum, in Anat. Admin. book IV, ch. 4-5.

P. 150,14-16 οὕτω - κοιλίαν] Let us review the cavities in the brain, so as to understand the accuracy of Galen's Anatomy.

While Aristotle described the two meningeal layers and noted the cerebellum, he did not ascribe to it an important function, for he considered it bloodless, although he deemed significant its function as a thermoregulator (Rocca, Galen, 29-31). On the other hand, Diocles of Carystus and Praxagoras of Cos were cardiocentric. Praxagoras identified the heart as source of the arteries, and considered that the arteries become nerves at their distal ramifications (Rocca 32-33).

Rocca (Galen, 146) remarks the ability of Galen “in constructing a coherent account of a set of cavities that are not immediately discernible on first

⁹² Nevertheless, Galen makes ample use of κοιλότης for hollow/cavity. Cf. De usu part. VI 15: III 483,13-18 K. = 352,18-21 Helmreich.

⁹³ ὥστε οὐκ ἴσασιν εἴτε τῶν ἀναγκαίων ἐστὶν εἰς τὸ ζῆν εἴτε τῶν οὐκ ἀναγκαίων μὲν, οὐ μὴν ἀκύρων γε παντάπασιν

inspection of a fresh brain". It is necessary to continue cutting in succession, in order to see membrane after membrane, duct after duct. Galen advises finding a thin and dry ox, and proceeding to cut, keeping the bones intact as far as possible —or the brain would be just a mass.

Although the Hellenistic anatomists Herophilus and Erasistratus had described the brain with its four ventricles and the membranes, the dissections performed (mostly in oxen) by Galen, provided him with more precise observations, even if it is not possible to ascertain their exact nature (Rocca, Galen, 33-42). Herophilus considered for the first time the importance of the ventricles of the brain,⁹⁴ and Erasistratus, at least when he was old, described the four ventricles and the membranes, and saw that the brain is the source of the nerves (Galen, *De placitis in Hipp. Plato VII 3*: CMG V 4,1,2: 3,4-36 (440,20-448,3) Lacy: V 602-604 K. = Erasistratus, fr. 289 Garofalo).

Galen explained the brain in *Anat. Adm. IX* (*vide infra*). In *UP VIII-IX* he follows the same order (*cf.* Garofalo in: Vegetti, Garofalo ... 302 ff.). Galen (*cf.* J. Rocca, Galen, esp. ch. 4, 113-167) describes the four ventricles: two front cavities (called lateral now), a middle, and a posterior, which is the ventricle of the cerebellum. The cerebellum ends where the seventh cranial nerve (the twelfth presently) arises, a precision that corrects the description of other anatomists (unnamed by him). The anterior ventricles come together at the middle ventricle, via the interventricular foramina for the sake of the creation of the canal (the cerebral aqueduct), which joins the anterior ventricles with the fourth ventricle. This connection is essential in enabling psychic *pneuma* to be sent from the anterior ventricles to the spinal cord (Rocca, 137-138). For Galen, the anterior ventricles elaborate psychic *pneuma*, are the instruments of olfaction,⁹⁵ discharge residues, and ensure the passage of psychic *pneuma* to the eye via the optic tract (Rocca, 135).

The middle ventricle permits the removal of the heavier waste-products of nutrition. There is communication among the ventricles, and between the fourth and the spinal marrow. Psychic *pneuma* in the ventricles passes into the spinal marrow, and hence, to the nerves. The spinal marrow is the source of all the hard nerves of the body.

The *meninges* are the membranes or covering layers of the brain. Galen described the thick or outer *meninx*, and the thin or inner one. *Cf.* J. Rocca, sp. 91-105. Although they had been described earlier, Galen provides much substantial data (see *Anat. Adm. IX 12* [Arab.]; pp. 17-18 Duckworth=Proced. *Anatomici*, III: 845-847 Garofalo), and *UsuPart. 20,24-21,24* Helmreich= III 711-12 K.

⁹⁴ For the knowledge of the brain's anatomy by Herophilus, see von Staden, Herophilus, pp. 155-161, and fr. 75-79 in pp. 195-200. For the vessels, find pp. 169-181 and fr. 115-128 (comm. in pp. 240-241).

⁹⁵ See Gal. *De instrumento odoratus* (J. Kollesch, CMG Suppl. V, Berlin 1964).

P. 150,16-20 αἱ δὲ κατὰ - σπλάγχνοις] The cavities in the thorax, and the organs of respiration in general, are found in Anat.Adm. VII-VIII. Muscles are described in Anat.Adm. IV-V. In fact, the inflammation in the muscle has been reviewed above.

For *apostasis* in the viscera, there are two paths: the vessels, or the membrane that covers them. Throughout the treatise, the vessels often appear, because blood has a paramount rôle in *dyskrasia*, be it local as in inflammation, or general as in fever. Consequently the homoeomers that compose them (fibres and membranes), the anatomical dissection that permits differentiating the tunics, the effects of inflammation, the kind of blood in the one and the other, and the viscera's deposits breaking into them, are thoroughly explained.

SECTION 5. TRANSFORMATION-1

P. 150,20 - 152,11. Galen now stresses the (bad) consequences of inflammation, i.e. the flux destroys the capacity of the part if not prevented by the body. He will come back to this subject in Sections 7, 8, 10 and 18.

Before describing the next steps of the physiological process (from inflammation to fever), Galen starts to consider transformation. The sequence is the following: (Tr.= transformation. Inf.= Inflammation)

S. 5	S. 6	S. 7	S. 8	S. 9	S. 10
Tr.-1	Inf.→fever 1	Tr.-2	Tr.+Inf.	Inf. →fever 2	Tr.-3

He encircles the fundamental process inflammation→fever, by stating the theory of transformation in three steps, so that he does not advance in the process inflammation-fever without explaining before how and why and when the heat reaches the whole body.

┐ Section 5 (150,20-22). Transformation-1: εἰ δὲ νικηθείη τὰ σώματα πρὸς τοῦ ρεύματος ... ὥς καὶ τὴν ἐνεργεῖαν αὐτῶν ἀπολέσθαι καὶ φθαρῆναι τῷ χρόνῳ·

└ Section 10 (156,18-19). Transformation-3: ὅρος δ' ἐστὶ τῆς ἀλλοιώσεως ἐκάστω τῶν μορίων, ἢ τῆς ἐνεργείας αὐτοῦ βλάβη·

A Hippocratic sentence summarises the relationship change-pain, and Galen profits from it by composing a sort of table, which includes in its first half "change and pain", and in the second "change and quality". Both parts are divided by the Hippocratic sentence, which closes the first (quotation), and introduces the second (Galen repeats the sentence, now in his own words).

In the first part (150,20 - 152,4), the focus of the Section is change and pain: ongoing transformation vs. complete transformation. The former is painful, the latter, painless. The subject is introduced by a series of verbal forms meaning alteration: μεταβάλλοντι, μεταβάλλεσθαι, διαλλαττομένοισι, διαφθειρομένοισιν, all of them in Present tense, durative aspect, while others refer to the end of it: ἐξομοιωθῇ (punctual Aorist), μεταβεβλήσθαι (Perfect of result).

In the second half (152,5-11), the qualitative changes spoil the affected part or body, hot and cold being the most aggressive qualities, dry or moist being second to them. The other situation is the loosening of continuity. The style now is very different, parallel passages guiding the reader to opposed contents. (MS=Main Sentence. HS=Hypotactic Sentence)

1. Change and Pain (150,20 - 152,4)

*Painless when change is no more:

MS παύσεται δ' ὀδυνώμενα τότε πρῶτον⁹⁶

HS ὅταν ἐξομοιωθῇ τῷ μεταβάλλοντι.

MS οὐ γὰρ ἐν τῷ μεταβεβλήσθαι τὴν <φύσιν>,

*Painful while change is ongoing:

ἀλλ' ἐν τῷ μεταβάλλεσθαι πονεῖ τὰ μόρια,

HS καθότι καὶ ὁ θαυμασῖος Ἱπποκράτης ἔλεγεν·

MS «τοῖσι γὰρ τὴν φύσιν διαλλαττομένοισι καὶ διαφθειρομένοισιν, αἱ ὀδύναι γίνονται».

2. Change and Quality (152,5-11)

*A part gets destroyed:

MS διαλλάττεται δὲ καὶ διαφθείρεται τὴν φύσιν ἕκαστον,

BY MEANS OF:

*changes in quality (all four): Pres. Part.

ἢ θερμαινόμενον, ἢ ψυχόμενον, ἢ ξηραίνόμενον, ἢ ὑγραίνόμενον,

*loosening of continuity: Pres. Part. ἢ τῆς συνεχείας λυόμενον·

*In AD: ἐπὶ μὲν ταῖς ἀνωμάλοις δυσκρασίαις,

BY MEANS OF:

*changes in quality I, hot or cold (διὰ τὸ + Infinitive)

διὰ τὸ θερμαίνεσθαι ἢ ψύχεσθαι μᾶλλον·

δραστικώταται γὰρ αὗται αἱ ποιότητες·

*changes in quality II, dry or moist (διὰ τὸ+Infinitive):

ἤδη δὲ καὶ διὰ τὸ ξηραίνεσθαι τε καὶ ὑγραίνεσθαι·

⁹⁶ P. 152,1 τότε πρῶτον is often found in Galen, several times followed by ὅταν.

*Situation of the body I, sick, hungry or thirsty (ἐν δὲ τῷ +Infinitive):

ἐν δὲ τῷ πεινῆν ἢ διψῆν,

*cause I: missing dry or moist substance (AbG pres.)

ἐπιλειπούσης ἔνθα μὲν τῆς ξηρᾶς οὐσίας,

ἔνθα δὲ τῆς ὑγρᾶς.

*Situation of the body II: diversely injured (ἐν δὲ τῷ +Infinitive):

ἐν δὲ τῷ τιτρώσκεσθαι καὶ ἀναβιβρώσκεσθαι καὶ

τείνεσθαι καὶ θλίβεσθαι καὶ διασπᾶσθαι,

*cause II: loosening of continuity (AbG pres.)

τῆς συνεχείας λυομένης.

P. 152,1-3 οὐ γὰρ ... ἔλεγεν] I wrote φύσιν instead of κρᾶσιν of the mss., as below in line 5, and of course in the sentence of Hippocrates. Throughout the process of changing —as the *krasis* is altered— the inflamed part loses its natural disposition, i.e., its physis is altered, because the change is παρὰ φύσιν.

As usual, Galen refers to Hippocrates as admirable. Both adjectives, θαυμάσιος or θαυμαστός, are used by him in connection with his hero, but θαυμάσιος is by far the more frequent: maybe it is the adequate formula. The variant θαυμαστός, as in De diebus decr. I 11: IX 823,3 K. ὁ πᾶν θαυμαστός Ἱπποκράτης ἔλεγε, presents a minimal difference in uncial letters: I/T.

P. 152,3-4 τοῖσι - γίνονται] The Hippocratic sentence is found in De loc. in hom. 42; VI 334, 7-8 L.= Hippocrate XIII; 71,21 -72,1 Joly = 78,18-19 Craik. Cf. E. Craik, De loc. in hom., comment. p. 204, and the comparison with Galen's text in A. Anastassiou, D. Irmer, "Zur Schmerzentsstehungstheorie der Hippokratischen Schrift de Locis in Homine (Kap. 42)", RhM 134, 1991, 39-49. Galen quotes the sentence as well in : De tremore 6: VII 620,6-8 K., In Hipp. Epid. VI comment. VI 6: XVIIb, 334,2-4, K. = CMG V 10,2,2; 343,2-4 Wenkebach, and De sympt. causis I 6: VII 115,14-15 K. and I 5: VII 176,9-10 K.⁹⁷ While in the former two, the participles are transmitted with -σ-, the Attic διαλλαττομένοισι is unanimously transmitted in De inaequali, as it is in the *loci similes* in De sympt. causis, and the end in -οισι in the participles is unanimous as well. I have corrected it to διαλλασσομένοισι. The scribe may have been influenced by the next διαλλάττεται.⁹⁸

⁹⁷ Cf. Testimonien II 2, 250-251.

⁹⁸ While the group -ττ- is usually considered Attic in prose, -σσ- is usually Ionic and Koiné. However, it appears in Attic Tragedy (in the iambic trimeters, which have a taint of Ionian), and sometimes in other Attic texts.

P. 152,5-7 διαλλάττεται - μάλλον] For the notion of “loosening of continuity”, cf. comm. to Section 11, p. 160,6-11, below. The syntagm also appears below in 152,11.

In ἐπὶ μὲν ... δυσκρασίαις, the Δ-family has ἐν, due to anticipation of μὲν, EPIMEN → ENMEN. Galen often uses μάλλον (in P) after the mention of a preferred item of a pair or series, be it a cause or not. Cf. Quod animi mores 7: IV 792,14-16 K. In our passage, μάλιστα (cett.) could have appeared because of anticipation of the next δραστικώταται γὰρ αὐται αἱ ποιότητες.

P. 152,7-9 διὰ τὸ θερμαίνεσθαι ... ὑγραίνεσθαι] Oribasius 1, 1-4 (CMG VI 2,2; 4, 75, 2-21 Raeder) includes Hippocratic references to the activity of the qualities.⁹⁹ Hot and cold are deemed by Aristotle the active (ποιητικά) qualities, while dry and moist are passive (παθητικά).¹⁰⁰ As for Galen, the first pair is the hardest, as in Med. Meth. VII 5: X 470, 6-10 K. However, the four qualities can transform a substance or a body's part. Cf. De placitis VIII 4,17: CMG V 4,1,2; 502, 5-9 Lacy, and Lacy, CMG V 1,2, comment., p. 187-188, with many references.

In De const. art. med. 8, 4,1- 5,1: I 252,10-15 K. =CMG V 1,3; 80, 2-9 Fortuna, Galen asserts that "just heat and cold are able to modify the substance nearby. Humidity and dryness are able to as well, but not so quickly ... It is necessary to call and consider them active, specially the first (pair), and, in it, mostly heat: for it is the most active (δραστικωτάτη) among the qualities, and after it, cold, after it, humidity, and then dryness."

P. 152,10-11 ἐν δὲ - λυομένης] Splendid sentence, a jet of infinitives in -σθαι that stresses the tragedy of being attacked by *dyskrasia*.

ἐν δὲ τῷ τιτρώσκεσθαι

καὶ ἀναβιβρώσκεσθαι

καὶ τείνεσθαι

καὶ θλίβεσθαι

καὶ διασπᾶσθαι, τῆς συνεχείας λυομένης.

Some of the verbs have been earlier mentioned, when explaining the effects of hot blood on the vessels (section 3, p. 148,12-14):

καὶ γὰρ ἔνδοθεν ὑπὸ τοῦ ῥεύματος

θερμαίνονται τε καὶ διατείνονται καὶ διασπῶνται,

καὶ τῶν ἔξωθεν

θερμαίνονται τε ἄμα καὶ θλίβονται καὶ βαρύνονται

⁹⁹ See Testimonien, I 360-361.

¹⁰⁰ Cf. Aristotle, Gen. Corr. 329b,23-25: Θερμὸν δὲ καὶ ψυχρὸν καὶ ὑγρὸν καὶ ξηρὸν τὰ μὲν τῷ ποιητικά εἶναι, τὰ δὲ τῷ παθητικά λέγεται. See Sambursky, Stoics, p. 3.

All of them are related to external and/or deep wounds, as we have seen in the exposition of *dyskrasia* with flux, section 1. There are some other similar lists of verbs or nouns related to loosening of continuity: see *Ars medica* 20: I 357, 6-9 K.,= Galien II, 336,8-11 Boudon, *De const. ars med.* 5, 4,1-6,4: CMG V 1,3; 66,7-17 Fortuna= I 238,11-239,6 K., and *In Hipp. de fract. comm.* III [34]: XVIIIb 586,5-15 K. There are specific names as well according to the injured part/organ.

SECTION 6. INFLAMMATION TO FEVER–1

P. 152,12-154,4. The two Sections dedicated to the process of inflammation to fever, 6 and 9, mention at the beginning *the heat of the inflammation's blood*: it is an internal Ring (5) that marks the limits of the preceding Sections:

- └ R-5. Sec. 6 ... ἡ τε θερμότης τοῦ αἵματος ἢ κατὰ τὸ φλεγμαῖνον μόριον ..
└ R-5'. Sec. 9 ... ἐκπεπυρωμένου τοῦ κατὰ τὴν φλεγμονὴν αἵματος ...

There are four periods of conditional clauses, whose hypotactic sentence refers to the blood in the inflammation (A), while the main is related to the whole body's blood (B). Hypotactic sentences (HS) are anteposed while Main sentences (MS) close the periods. The scheme of the first period is repeated throughout. See English scheme, in Introduction, Contents, 4. Galen precisely qualifies the blood's heat both in the inflamed part and in the whole body, considering four degrees. He adds that the arteries' blood gets heated before the veins', because the former is hotter and more pneumatic. Cf. Commentary to 156,9-11, Section 9, below.

A (HS)	B (HS)	B (MS)	A + B (HS)
1 εἰ μὲν οὖν ἡ τε θερμότης τοῦ αἵματος ἢ κατὰ τὸ φλεγμαῖνον μόριον ἐπιεικῆς ὑπάρχῃ	καὶ τὸ περιεχόμενον αἷμα καθ' ὅλον τοῦ ζώου τὸ σῶμα μετρίως ἔχει κράσεως,	οὐ πάνυ τι ῥαδίως συνεκθερμαίνεται τῷ πεπονθότι	
2 εἰ δὴ [τοι] ζέει σφοδρότερον	ἢ καὶ τὸ καθ' ὅλον τὸ ζῶον αἷμα χολῶδες ὑπάρχῃ	παραχρηῖμα σύμπαν ἐκθερμαίνεται	

3 καὶ τὸ κατὰ τὴν φλεγμονὴν αἷμα θερμὸν ικανῶς εἶναι,	καὶ τὸ καθ' ὅλον τὸ ζῶον <αἷμα> χολῶδες.	πολύ δὲ μᾶλλον (σύμπαν ἐκθερμαίνεται)	ἐπειδὴν ἄμφω συνδράμη
4 εἰ δ' ἐγγύς εἴη τῶν πολυαίμων σπλάγχνων τὸ φλεγμαῖνον μόριον		ἔτι καὶ θᾶπτον αὐτῷ συνεκθερμαίνεται τὸ καθ' ὅλον τὸ ζῶον αἷμα	

P. 152,12-14 εἰ ... κράσεως] For ἐπιεικής in the usual meaning of μετρίως, cf. A. Roselli, pp. 104-108, in: Il commento di Galeno a Sulle Fratture. The syntagm καθ' ὅλον τοῦ ζώου τὸ σῶμα (as in p. 142,2-3) appears some seven times in Galen. It has two *faciliores* counterparts, καθ' ὅλον τὸ σῶμα (ca. 96 times), and καθ' ὅλον τὸ ζῶον, as in 152,15 and 18, below. As for ἔχω with Genitive and adverb, as in μετρίως ἔχοι κράσεως, cf. Lasso de la Vega, pp. 522-523.

P. 152,14-15 οὐ ... πεπονθότι] The litotes οὐ πάνυ τι ῥαδίως, "not easy at all", is rather frequent in Galen. We find τοι instead of τι, in z, and two other Galenic passages that belong to quotations of Hipp.:¹⁰¹ most probably it is due to iotacism. It is scarcely attested in other authors, where it is probably due to iotacism as well.

P. 152,15-16 εἰ ... ἐκθερμαίνεται] The transmitted εἰ δ' ἦτοι ... ἦ is well attested (common in Plato, cf. Denniston 553), but a second εἰ is transmitted by LMP after ἦ: εἰ δ' ἦτοι ἦ εἰ, forming an illogical construction (if either ... or if). I guess that the second εἰ is right, but ἦτοι after εἰ at the beginning, is not. At times, Galen uses εἰ δῆ.¹⁰² And τοι may have appeared because of anticipation of the next ζέοι, and phonetic perseveration of the immediate πεπονθότι. For εἰ ... ἦ εἰ, cf. De optima doctrina 3: SM I 86,22-87,1 Marquardt= I 46,2-3 K. (ἦ εἰ in Marquardt, not in Kühn).

101 Cf. In Hipp. Aph. comment. II 27: XVIIb,515,13-15 K., and V 70: XVIIb,885,1-2 K.

102 Cf. De temper. I 9: I 568,12-14 K.=37,21 Helmreich. De usu part. VII 9: III 547,6-7 K. = 398,1 Helmreich.

The group καθ' ὅλον τοῦ ζώου τὸ σῶμα in P is *difficilior* against καθ' ὅλον τὸ ζῶον (Uz Orib.), but *variatio* is a favourite of Galen. The form χολῶδες is better than χολωδέστερον, because it is mentioned in the same way in the next sentence. The comparative form is a contamination from the former σφοδρότερον.

For bilious blood and heat, cf. as well De comp. med. sec. loc. X 2: XIII 333,7-9 K.: "For the bilious blood produces in the patient an intense sensation of heat, and, when other heating (substances) are added, paroxysm is reached".

On the other hand, Galen often uses the composed adjective σύμπαν when referring to the whole body, and the reference here is to the whole blood.

P. 152,16-18 πολὺ - χολῶδες] The second αἷμα disappeared because of saut du même au même in the series of -O- and -Ω-, in uncial letters: ΟΛΟΝΤΟΖΩΟΝΑΙΜΑΧΟΛΩΔΕC.

P. 152,18 - 154,2 ἐκθερμαίνεται ... φλέβας] "First to get hot is the blood in the arteries, because by nature it is hotter and more pneumatic" In fact, the *pneuma* is told to have the thinnest parts (below, 154,8: εὐαλλοιωτότατον μὲν οὖν τὸ πνεῦμα, διότι καὶ λεπτομερέστατον). See Commentary to 154,8-13, below. The blood in the arteries is hotter than that in the veins, and it moves much faster (Harris, The Heart, pp. 363-364). Their *pneuma* is hot as well. The arteries draw blood from the veins at the diastole through the capillaries in order to feed their coats. They take just the lighter constituents (cf. in general De usu part. VI 10: III 444,14-457,7 K. = 324,17-333,16 Helmreich). At the systole, the arteries press *pneuma* through the capillaries into the veins. Their coats just need the blood, but they use *pneuma* as well (cf. Harris, The Heart, p. 364).¹⁰³

P. 152,2-4 εἰ δ' ... αἷμα] Galen again refers to the viscera with much blood in 154,21 below. The fact of inflammation becoming fever, is an example of the susceptibility of alteration of the four humours and the *pneuma*, which Galen immediately explains (Section 7).

SECTION 7. TRANSFORMATION-2

P. 154,4-13. This Section is composed by means of parallel sentences where nouns, adjectives, verbs and even sentences themselves (or their opposites), are repeated. Such a style, which we have seen before, is the best for under-

¹⁰³ For *pneuma* in the arteries, see, in D. Manetti, pp. 308-309 of "Saggio d'edizione di P. Lit. Lond. 165 [the Anonymous Londinensis]" in Garzya, ed., Storie e ecdotica, Naples 1996, pp. 307-317, the discussion of the author against Erasistratus regarding this subject.

standing and memory. At the same time, he uses finite verbs for alteration, but nominal sentences for the qualities. The ring *συνελόντι δ' εἰπεῖν ... ἐνὶ δὲ λόγῳ* at beginning and end embraces the passage.

There are five blocks (B):

B 1. Alterability and hot/cold quality. Finite verbs.

In short,

in everything that	gets hot,
the more alterable it is, or hot by nature,	
	it gets hot firstly
as (it) certainly (happens) as well	
in <everything> that	gets cold:
the more alterable it is, or cold by nature,	
	it gets cold firstly

B 2. Alterability and thin/thick parts (*pneuma*). No verbs.

most alterable, *pneuma*,
because as well, thinnest.

B 3. Hot/cold (humours); follows block 1. No verbs.

hottest by nature	the yellow bile,
coldest	the phlegm;
of the other humours,	
blood	second hot after the yellow bile,
the black bile	second cold after phlegm.

B 4. Alterability and hot/cold (humours), picks up 1. Finite verbs.

In fact, gets altered by everything that acts against it:

the yellow bile	easily
the black	with difficulty.

B 5. Alterability and thin/thick parts, follows block 2. No verbs

In a couple of words,

everything	of thin parts	easily alterable
	of thick parts	difficult to alter.

Galen introduces the notion of *leptomerês/pachymerês*, (of thin/thick parts; see below), along with *eualloiôtos/dusalloiôtos* (easy/difficult to alter).

P. 154,4-7 συνελόντι ... καταψύχεται] The syntagm συνελόντι δ' εἰπεῖν at the beginning of the section has its counterpart at the end: ἐνὶ δὲ λόγῳ (12-13). In the Absolute Infinitive συνελόντι δ' εἰπεῖν, it seems that Galen avoids the hiatus δὲ ε- when it appears in the middle of a sentence, but keeps it at the beginning. Cf. De anat. admin. VI 1: II 535,11 K.= Garofalo II 341, 2; and II 536,12= Garofalo, II 341, 21. The initial ἐπὶ παντός τοῦ θερμαίνοντος has its precise counterpart in καπὶ <παντός> τοῦ ψύχοντος, where παντός disappeared in the row ΚΑΠΙΠΙΑΝΤΟΚΤΟΥΨΥΧΟΝΤΟC. On the other hand, ὅσον <ἄν> εὐαλλοιώτον ἤ in ll. 5 and 7, has lost ἄν in uncial letters: (OCONANEΥΑΛΛΟΙΩΤΟΝΗ).

P. 154,8 εὐαλλοιωτότατον ... λεπτομερέστατον] As it seems, the Superlative form of εὐαλλοιώτος is a hapax, while the Comparative εὐαλλοιωτότερον is found in De usu part. VIII 6: III 636,18-637,2 K. = 461,9-12 Helmreich, where he adds: "... and what is softer is more easily altered than what is harder".¹⁰⁴

The notion of λεπτομερής is precisely explained by Armelle Debru, in: Philosophie et pharmacologie: la dynamique des substances *leptomères* chez Galien.¹⁰⁵ Galen considers it essential to distinguish a substance as being composed of thin/thick layers, and he makes use of it when referring to pharmacology. In the field of physiology that we are considering, he applies the quality to *pneuma*,¹⁰⁶ arterial blood, and to humours to a certain extent. See Commentary to 12-13, below.

For the nature and function of *pneuma* in Greek Physics, see below.¹⁰⁷

P. 154,9-11 θερμοτάτη ... φλέγμα] Of the humours' quality, Galen just mentions here hot/cold, for he is dealing with inflammation and fever. The complete set of humours' qualities, appears several times; cf. De temper. II 3: 59,20-60,5

¹⁰⁴ Loc. sim. in: Theophilus Protospatharius, De corporis humani fabrica, IV 5: 7 -9 Greenhill.

¹⁰⁵ In A. Debru, ed., Galen on Pharmacology, Vth International Galen Colloquium, Lille, 16-18 March 1995, ed., Leiden, New York, Köln, 1997, pp. 85-102.

¹⁰⁶ As for the importance of the Pneumatists in Galen's Physiology, in synthesis, let me quote Jutta Kollesch: "Den Höhepunkt und Abschluß den antiken Physiologie stellt die physiologische Lehre Galens dar, die bis zum Beginn der Neuzeit autoritative Stellung behielt. Die Basis seiner Physiologie bildeten die hippokratische Humorallehre und die Pneumatheorien der Pneumatiker". See Lexikon der Antike, s.v. *pneuma*. M. Wellmann, Die pneumatische Schule..., J. Kollesch, Untersuchungen... and F. Kudlien, Der griechische Arzt... are fundamental sources.

¹⁰⁷ The interesting pseudo-Aristoteles, De spiritu, deals with several questions on *pneuma*. See the Commentary and translation of Amneris Roselli, with new edition (Roselli, [Aristotele]: De spiritu).

Helmreich=I 603,7-604,2 K. In NatFac II 11 (SM III 194,2 - 196,15 Helmreich=200, 5 - 202, 26 Brock), Galen describes the humours and their qualities, whilst attacking Erasistratus.

It is expedient to remind the reader of the meaning of hot and cold in Greek Science. For Galen, yellow bile is the hottest, blood is second to it, as phlegm is the coldest, and black bile is second to it.¹⁰⁸ Thus, blood is not said to be colder than yellow bile, and black bile is not said to be hotter than phlegm in the humours' system. Yellow bile and blood are just hot, phlegm and black bile are just cold. The qualitative theory works in oppositions hot/cold, dry/wet.

P. 154,11-12 καὶ μὲν ... δυσκόλως. For the emphatic καὶ μὲν δὴ καί, see Denniston 396-7, "progressive". δυσκόλως is *difficilior* and well transmitted in AP, while μόλις and μόγις could be glosses that entered the text. The reverse is more improbable. *Hun.* translates "with effort and intensity"; however, *Hun*^L has "scarcely", i.e. μόλις, the reading of z and U^{i.m.} The readings with /m/ and /l/ may be due to the preceding word μέλαινα.

P. 154,12-13 ἐνὶ ... δυσαλλοίωτον] In De diff. febr. I 2: VII 278,3-7 K., Galen states that "every substance of thin particles is altered more easily than one of thick particles".¹⁰⁹ And he adds: "The substance of thinnest particles is the substance of air, that of thickest particles is the substance of the solid bodies; in the middle between them is that of the humid bodies."

The notion of λεπτομερής is usually accompanied by εὐαλλοίωτος, as it happens here. It is often coupled by παχυμερής. The word appears throughout Galen's books, as A. Debru (*ibid.* Philosophie et pharmacologie: la dynamique des substances leptomères chez Galien) underlines. The medicaments are predicated of thin/thick parts, those qualities being very important in pharmacology (see Debru, Philosophie, *passim*).

He uses it as well for distinguishing the capacity of the senses, in a scale from sight (the most *leptomerês*) to touch. Cf. De loc. aff. IV 3: VIII 229,13-17 K., and Debru, Philosophie, p. 89.

In the two sections dedicated to the process of inflammation to fever, 6 and 9, first the arteries' blood and then that of the heart's left cavity, are said to be *pneumatôdes*, the latter being the more so. At the same time, that cavity's blood is formed by the thinnest particles: in fact, *pneuma* has the subtlest particles. This same capacity is said of the arteries' blood.

In De plac. Hipp. et Plat. VI 8,38,1 -39,4 (CMG V 4,1,2; 416,4 -9 Lacy=V 573,17 -574,2 K.), Galen states that the arteries' blood is thinnest and hottest.

¹⁰⁸ For every aspect of black bile, cf. H. Flashar, Melancholie und Melancholiker in den medizinischen Theorien der Antike, W. de Gruyter, Berlin, 1966.

¹⁰⁹ He also states it earlier in the same chapter I 2: VII 276, 3-4 K.

And he goes on: "In fact, the beginning and origin of the arteries as well of the pneumatic and boiling blood, is for animals the heart, and because of that, the spirited part (τὸ θυμοειδές, tr. Lacy) of the soul is shown to reside in it."

SECTION 8. TRANSFORMATION AND INFLAMMATION

P. 154,14 - 156,2. After the exposition of the susceptibility of alteration in *pneuma* and humours, the text goes back to the factors involved in the process from inflammation to fever, which were presented in Section 6 (INFLAMMATION TO FEVER-I). Galen encircles the section with a rather precise Ring (6).

┐ R-6 (154,14-15) "so that necessarily multiple are the alterations upon inflammation, because the bodies (parts) are as well of many kinds"

INFLAMMATION'S BLOOD:

1. more/less hot
2. sepsis according to its nature
3. more/less obstructed
4. hot and humid
5. near/far the polyhematic viscera

BODY'S BLOOD:

1. bilious or melancholic or phlegmatic or pneumatic
2. more/less

└ R'-6 (154,23 - 156,2) "so that necessarily multiple are the alterations ..."

The author stresses the fact of the multiplicity of conditions in the one and the other blood. Two factors of the inflammation's blood have been described in Section 6: heat, and proximity to the polyhematic viscera, but not in the same way. Galen insists on the subject of more or less (and near/far). It is not a theoretical explanation of A becoming B, but an appreciation of the complex ways of nature.

We find here the first mention of humours' sepsis at the start of fever. He will speak of it again, in R 7 (p. 156,11-13 and 162,15-18). It is correlated with the obstruction of the humour: "for that which does not breath through, gets putrid quicker, as (it happens as well) in all the external things".

P. 154,14-23] The ring composition in 14/23, ὥστ' ἀνάγκη πολυειδεῖς γίγνεσθαι τὰς ἐπὶ ταῖς φλεγμοναῖς ἀλλοιώσεις / ὥστ' ἀνάγκη πολυειδεῖς γίγνεσθαι τὰς ἀλλοιώσεις, backs the word order in AP for l. 14. However, Uz offer

good readings from time to time, and their ταῖς φλεγμοναῖς (ἐγ-)γίγνεσθαι τὰς ἀλλοιώσεις, is simple and could be correct. Galen uses ἐγγίγνεσθαι (z) with ἀλλοίωσιν in De plac. Hipp. et Plat. VI 8, 10: CMG V 4,1,2; 410, 3-4 Lacy: ἀναγκαῖον ὑπὸ τῆς οἰκείας οὐσίας τοῦ ἥπατος ἐγγίγνεσθαι τὴν ἀλλοίωσιν αὐτῷ, but the Dative agrees with the preverb. In ἐπὶ ταῖς φλεγμοναῖς the meaning of the preposition is temporal.

P. 154,15-16 πρῶτως ... θερμός] πρῶτως of Tz is *difficilior*, although the ending of πολυειδῶς could have provoked it. πρῶτος is the second *difficilior*, but *Hun.* "as for the beginning of the subject" favours an adverb. πρῶτον is *facilior* and could have appeared because of the following endings in [-n]. Charterius (πρῶτον) does not read P; he just writes an adverb. On the other hand, "the humour that provokes the inflammation" (ὁ τὴν φλεγμονὴν ἐργαζόμενος χυμός) appears three more times in Gal.: De loc. aff. V 3: VIII 309,2-3 K., De simp. med. temp. ac fac. V 8: XI 729, 6-8 K., and De tumor. praeter nat. VII 712,15-713,2 K.

P. 154,16-19 ἐφεξῆς ... ἀπάντων] Cf. Comment. to R-7, below.

P. 154,17 κατὰ τὴν οἰκειαν φύσιν appears 9 times in Galen-TLG.

P. 154,17-18 οὐχ ... <τὸν χυμόν>] παρὰ with Accusative may be interpreted as comparative, "not unimportant as well in relation to the humour being more or less wedged". *Hun.* translates it as κατὰ in the line before, cf. *Ger.* secundum; so he probably read κατὰ, as U reads. Nic. writes *penes*, which would agree with παρὰ. In Section 13, p. 164,4-5, below, we find παρὰ + Ac. with a similar meaning.

In τὸ μᾶλλον τε καὶ ἥττον ἐσφηνῶσθαι <τὸν χυμόν> τὰ γὰρ μὴ διαπνεόμενα, θᾶττον, the subject τὸν χυμόν is necessary, and its loss is an easy saut du même au même: μᾶλλον ... ἥττον ... χυμόν ... θᾶττον.

P. 154,19-20 ὅταν ... μάλιστα] The omitted noun would be either χυμός or αἷμα, but only the latter could agree with the adjectives. In my opinion, the series with many A, that is, ΑΠΑΝΤΩΝΟΤΑΝΔΕΤΟΑΙΜΑΚΑΙΘΕΡΜΟΝ produced the plausible omission of αἷμα. As for the group τότε δὴ καὶ μάλιστα, it is used by Galen four other times. δὴ is emphatic with temporal adverbs, cf. Denniston 206-7. For καὶ with superlative, cf. Denniston 319.

P. 154,21 τῶν πολυαίμων ἐστὶ σπλάγχνων] The word order in Uz avoids the sequence πολυαίμων σπλάγχνων, and is more elegant as well. For the polyhematic viscera, cf. 154,2-3.

P. 154,21-22. καὶ τὸ ... πνευματῶδες] The series of adjectives, applied to χυμός this time, follows the same order in De loc. aff. V 3: VIII 309,3 -4 K. For the diseases related to flux, cf. Commentary to p. 142,5-8, above, and to Section 18, below.

P. 154,23 - 156,2 ὥστ' ... ἐαυτό] ἀλλοιώσεις, "transformations", is feminine, but the subject of παραβαλλομένου (ἐτέρου τε πρὸς ἕτερον παραβαλλομένου καὶ αὐτοῦ τινὸς πρὸς ἐαυτό) has to be masculine or neuter. The last pronoun is transmitted as ἐαυτὸν (LMUz) or ἐαυτῶ (TP). In fact, the opening of the Ring shows that it has to be "body" (τὰ σώματα). In this passage, the humours, or more precisely blood itself, are referred to as bodies: the ring composition ensures it. I inserted σώματος, which was lost by homoeoteleuton in CWMATOCTEΠPOC, and I corrected the last pronoun to a neuter form. In the meaning of comparing, παραβάλλω is accompanied by πρὸς (or παρὰ) and Accusative, or is just followed by Dative (there are variants in the text for the endings of the pronouns).

SECTION 9. LOCAL TO GENERAL AD = INFLAMMATION TO FEVER-2

P. 156,2-11. After commenting the multiplicity of factors involved in the processes from inflammation to fever, Galen moves to the resulting anomalous hot *dyskrasia* of the whole body. He recalls the intense heat of the inflammation's blood as the main factor, and after that, the heat of the viscera's and left ventricle's blood. The beginning of Section 9 brings forth the heat in the inflammation's blood, as happened in Section 6, forming Ring-5:

- Γ R-5, p. 152,12 ἥ τε θερμότης τοῦ αἵματος ἢ κατὰ τὸ φλεγμαῖνον μόριον
"the blood's heat in the inflamed part"
- Λ R'-5, p. 156,3-4 ἐκπεπυρωμένου τοῦ κατὰ τὴν φλεγμονὴν αἵματος
"being too much heated the blood in the inflammation"

That way, it marks the limits of Section 5/6, and Section 8/9. The focus of the Section is the heart's left cavity, whose blood is the hottest.

There are two blocks in this Section 9. The first (156,2-8 αὕται πᾶσαι ... αἰσθήσῃ θερμασίας) includes a single period, rather long (MS main sentence, HS hypotactic sentence, AbG Absolute Genitive):

MS-AbG¹-AbG²-HS¹-HS²-AbG³-HS²-HS³-HS¹ -MS

A Main Sentence is placed at the beginning, while two Absolute Genitives, and three Hypotactic Sentences, appear and reappear, in order to stress

the heat in the left heart's blood. In fact, the first HS, a relative clause (εἰς ἣν), continues until the end, receiving on the way a conditional and a comparative. In it the author again introduces the reader, emphasizing the possibility of actually perceiving the heat in the left cavity. Galen brings forth the reader's rôle by means of Verba finita of the second person (ἐθελήσαις, αἰσθήσῃ).¹¹⁰

Anoma- lous <i>Dyskrasia</i> MS ¹	inflam- mation's heat AbG ¹	left cavity's heat AbG ²	whom HS ¹	If HS ²	not feverish AbG ²	you touch HS ²	as I told to HS ³	will feel the inten- se heat MS ²
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The second block, οὐκουν ... διαπαντός (156,8-11), just emphasises the extreme features of the left cavity's blood: maximum heat (construction of ἄκρον plus Genitive: εἰς ἄκρον ἦκειν θερμότητος), thinnest parts (λεπτομερέστατον), *pneumatic* at its most (πνευματωδέστατον).

P. 156,2-3 αὗται ... γίνονται] The reference of αὗται πᾶσαι to the next δυσκρασία is simple and correct (*lectio brevior, potior*). However, the composition of Galen's blocks, backs the reference of the anaphoric pronouns to "alterations". *Hun.* translates: "all of them, the alterations of many kinds, are the cause of the heterogeneous *dyskrasia*". The homoeoteleuton may have provoked the loss of ἀλλοιώσεις between πᾶσαι and δυσκρασία, but even without the noun ἀλλοιώσεις, the meaning of the sentence can be that one. However, in the treatise, γίγνομαι in Present tense is not used as εἰμί: that only happens when the verb is in Aorist and Perfect tense (see Index verborum). Its meaning is intransitive: "All these dyskrasias of the body occur."

P. 156,4 ἐφεξῆς ... καρδίαν] P has τὰ ἄλλα (I wrote τᾶλλα), which has been lost in the others because of haplography at the beginning and end: ΚΑΤΑΤΑΛΛΑΚΠΛΑ-, but is preserved in (some) Nic.

P. 156,5-8 εἰς ἣν ... θερμασίας] Ps.l. has ὑγιαίνοντος ἔτι, lost in the mss. in uncial letters, because of saut du même au même: *EICHNEIYTIAINONTOCETI*. *Hun.* has "yet" (ἔτι; cf. adhuc *Ger.*) It is a γράφεται in P. The other mss. have καὶ ζῶντος (and P^{i.1}): the scribe goes from εἰ to ἔτι, and "reads" -οντος with the next ζῶου, because of the next πυρέττοντος (ωντος/οντος phonetically the

¹¹⁰ The two other Vf are dedicated to AD (as expected: γίνονται) and to himself (as expected: ὡς ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσι γέγραπται).

same). The insertion of καὶ before ζῶντος appears in the row ΥΠΙΑ/ΝΟΝΤΟC (dittography). For the (posterior) vanishing of ἔτι, there was saut du même au même in ΤΟCΕΤΙΤΟΥ. It is an error in two steps. For the expression, compare De cris. I 19: IX 634,10 K: ὑγιαίνοντος ἔτι τοῦ κάμνοντος.

In 156,6 μῆπω in UD is *difficilior* than μηδέπω in ΔΡ. As for the verb, the Main Sentence presents a future form. In the protasis, Uz have ἐθελήσας against ἐθελήσεις in the others. At times, Galen uses the Future tense in protasis and apodosis (the so-called "emotional Future conditions", cf. Smyth p. 525), as in De meth. med. X 166,14-16 K.,¹¹¹ and in An in art. 8: IV 733,3 K.=19, 14 Albrecht: εἰ ἐθελήσεις. However the Aorist Optative is *difficilior* than the Future, and it is easier to let the Future enter because of iotacism in ἐθελήσας [ethelises >ethelisis], than the other way round. In a rather parallel passage, Present Optative is used in the protasis, and Future in the Apodosis: De usu puls. 2: V 158,16-159,2 K.

P. 156,8-9 οὐκουν ... μάλιστα] In the second block, the meaning as a reinforced negative of οὐκουν ... οὐδ', is emphatic (cf. Smyth-Messing, 661). On the other hand, εἰς ἄκρον + Genitive is a favourite of Galen; cf. with ἥκειν or ἥκει, Ars medica 14: I 343,2-3 εἰς ἄκρον ἥκει συμμετρίας ἀπάσης, and De temper. II 2: I 585,6 εἰς ἄκρον ἥκειν ἀρετῆς.

P. 156,2-11 αὐται ... διαπαντός] In the left ventricle resides the innate heat,¹¹² in the arterial blood. "The function of respiration is to moderate the intensity of the innate heat in the left heart: pneuma or breath derived from inspired air is mixed with the arterial blood in the left heart, and distributed with it." (Brain, Bloodletting, p. 9). For respiration, see De resp. usu 1-2: IV 471,2-484,9 K. = Furley, Wilkie 80,1-98,2. For the innate heat, cf. De trem. 6: VII 616,6-618,10 K.

For the blood in the left ventricle hotter than in the right, see De plac. Hipp. et Plat. VI 8: V 573,17-574,2 K.: the blood that goes out of the left ventricle is hotter and rather pneumatic. Cf. as well De foet. form. 3, 23: IV 670,5-12 K.=CMG V 3,3: 74, 8-11 Nickel, and Commentary, *ibid.* p. 129. And De propr. plac. CMG V 3,2: 60,19-62,2, and Comment. 146-147 (Nutton). Similar to our passage is De temper. II 3: 58, 13-18 Helmreich=I 601,9-13 K., where Galen remarks that the left cavity is the hottest part of the body, and invites the reader to touch it with his fingers in order to perceive it.

In Section 6 (152,18 - 154,2)¹¹³ above, the quality of the arterial blood is said to be hotter and more pneumatic (than that of the veins). The present passage goes back as well to Section 7 (154,4-13), where the four qualities as

111 εἰ γὰρ ἐθελήσεις οὕτω θεραπεύειν, αὐτῇ γνώσεις τῇ πείρᾳ...

112 Cf. R. M. Moreno Rodríguez, Acerca de la cualidad del calor innato en las fiebres, según Galeno, in: Dynamis 5-6, 1985-1986, pp. 11-30.

113 ὅτι καὶ φύσει θερμότερόν ἐστι καὶ πνευματωδέστερον.

well as *leptomerês/pachymerês* are predicated of humours and pneuma. Now (156,9-11) the qualities of the blood in the heart's left ventricle are mentioned: it has the thinnest parts and is most pneumatic (καὶ γὰρ λεπτομερέστατον <τὸ> αἷμα καὶ πνευματώδέστατον ἔχει, καὶ κινεῖται διαπαντός).

RING 7, OUTER. SEPSIS TO FEVER

P. 156,11-13 ἀλλ' ἐν ... ὀρμηθεῖσαν] Sepsis as cause of fever is first introduced in Section 8; 154,14 - 156,2, above, among the factors that modify the process of fever upon inflammation. But fever is not just provoked by inflammation (Ring 7, opening). The subject will again appear after section 12 (Ring 7, close; p. 162,15-18), among the causes of fever. And Galen reminds the reader that a substance left with no transpiration, becomes putrid, if it is prone to. It specially happens when the substance is hot and humid.¹¹⁴ The sepsis' process comes along the "wedging" of the humours. Fever upon humours' sepsis is explained as well, *inter alia*, in De diff. febr. I 5: VII 287,5-9 K., and I 9: VII 304,11-305,9 K., and De cris. II 12: IX 692 K.¹¹⁵

In ἐν τοῖς ... πυρετοῖς, and in τὴν ... θερμασίαν,¹¹⁶ the word order is unusual, but correct:¹¹⁷ cf. De sympt. causis II 5: VII 177,11-13 K.

SECTION 10. TRANSFORMATION-3

P. 156,13 – 158,10. This third passage dealing with transformation (Sections 5, 8, and 10) goes back to the first, Section 5 (150,20 – 152,11). There are four parts:

1. The ongoing alteration (156,13-18), is again expressed by verbs of change: μεταβάλλεται καὶ ἀλλοιοῦται (Present tense, durative), οὐδ' ... τελέως ἡλλοίωται (negation plus Perfect tense), and the verb of heating (θερμαίνόμενα, θερμαίνεσθαι -Present tense as well-); the end of the alteration is indicated by the Perfect τεθερμάνθαι, after the aorist μεταβληθείη.

2. The limit of the alteration (156,18-19) ὅρος ... τῆς ἀλλοιώσεως, is the harm to the part's capacity (ἡ τῆς ἐνεργείας αὐτοῦ βλάβη). In 150,21-22 (Section 5), *dyskrasia* was said to destroy the capability of the part: τὴν ἐνέργειαν αὐτῶν ἀπολέσθαι καὶ φθαρεῖναι τῷ χρόνῳ. Pain is introduced as a measure of the alteration.

¹¹⁴ See De tumor. praeter nat. 2: VII 712,17-18 K.

¹¹⁵ In Med. Meth. Galen contends with Erasistratos, who related fever just to inflammation. (see Hankinson, Galen..., 183).

¹¹⁶ Cf. Xen. Anab 4.2.6.2 - 3, ἡ στενὴ αὕτη ὁδὸς ἐφ' ἣ ἐκάθηντο οἱ φύλακες.

¹¹⁷ παρὰ φύσιν is acting as an attributive adjective.

3. Once finished the process of alteration (158,3-8), pain is no more. The paradigm is the *hektikos* fever.

4. Such (158,8-10) is the opinion of the physicists (philosophers of nature).

P. 156,13-16 οὐ μὴν ... θερμαινόμενα] For the correspondence οὐ μὴν οὐδέ ... οὐδέ, cf. *Ars medica* 7: I 325,16-17 K.= Galien II, 294,10-11 Boudon: οὐ μὴν οὐδ' ἀπτομένοις θερμὰ τὰ περὶ τὴν κεφαλὴν, οὐδ' ὀρῶσιν ἐρυθρά. The mss. have οὐθ' ... οὐτ', excepting U that presents οὐδ' in the first.

As for the participle, PU have παρὰκειμένων, while the others present περι-. In the row ΑΛΛΟΤΙΤΩΝΠΑΡΑΚΕΙΜΕΝΩΝ, ΠΑΡΑ- can easily change into ΠΕΡΙ- because of the following KEIME. περικειμένων is twice as common as παρὰ- in Galen, although the participle of the verb περι- is less frequent than that of παρὰ-. The "adjacent bodies" are the homoeomers. For the bodies adjacent to the arteries, cf. An in art. 8: IV 733, 1-5 K=19, 13-16 Albrecht: "Would you like to undress anyone of the visible and large arteries, first the skin, then the beneath and next bodies, so as to be able to go round it ... ?" The dissection of the large and visible arteries goes on *ibid.* (8: IV 733, 1-19 K.) The coats of arteries and veins have already been mentioned (see S. 3: p. 148,7).

In Section 5, p. 152,1-2, *supra*, Galen, referring to pain, uses μεταβληθῆσθαι and μεταβάλλεσθαι (Perfect tense versus Present), in the meaning of ἀλλοιοῦται/ἡλλοίωται here. For the last contraposition, cf. *inter alia* De meth. med. I 3: X 88,1-2 K.: "is changing that which is getting black, is changed that which has got black".

Change and alteration (see Section 5, above) are treated in extenso in NatFac, along with the different faculties of the body. The pair μεταβάλλεται καὶ ἀλλοιοῦται is usual in Aristotle, in active or middle voice, and is frequent afterwards. Cf. as well (Pseudo?) Aristotle, Spir. 481b.10=Roselli 2, 10: μεταβάλλον καὶ ἀλλοιοῦν. See as well Theophrastus, De lapidibus (= fr. 2, Wimmer) 45,5, D. E. Eichholz. In our treatise it is related in both cases (*vide infra*, p. 172,6) with the alteration provoked by heat. Cf. as well Gal. De temper. III 3: I 661,17-662.2 K. = 96,2-5 Helmreich; NatFac I 10: II 22,8-10 K.=Brock 36, 1-4; and De symp. diff. 1,4: CMG V 5,1; 202,2-5 Gundert =VII 44,17-45,1 K.

P. 156,16-18 εἰ δ' ... φύσιν] For the opposition θερμαίνεσθαι/ τεθερμάνθαι, cf. De differ. febr. I 1: VII 276,4-8. It follows the former, ἀλλοιοῦται/ἡλλοίωται.

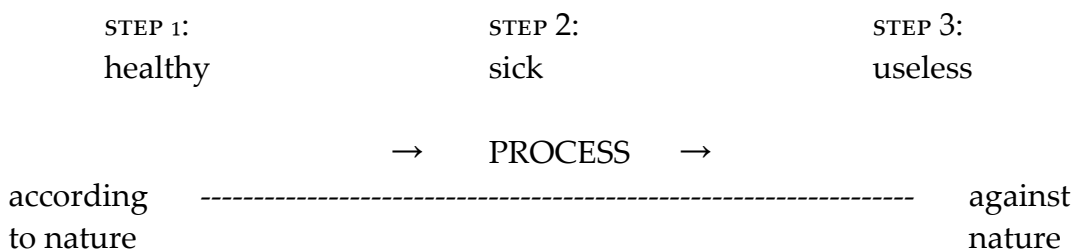
P. 156,18-19 ὅρος ... βλάβη] The harm of the capacity as the end or limit of the transformation was presented in Section 5, p. 150,20-22, above. In De sympt. diff. 4,20: CMG V 5,3; 244, 8-9 Gundert: VII 74,2-3 K., Galen calls "disease" the cause of the harm of the capacity, and "health" the cause of the capacity, while in Med. Meth. he calls "disease", the harm of the capacity, and cause of

the disease, the disposition (*diathesis*) that provokes it (De meth. med. II 6: X 116,8-12 K.)

On the other hand, the limit (ὅρος) would be again invoked in Sect. 11, p. 160,10-12, below, where limit of the *ametria* in heat or cold, is the loosening of continuity. Between the two passages, Galen explains pain as transformation, and the disappearance of pain when the alteration is complete. ὅρος is used elsewhere by Galen in the meaning of limit. Cf. De nat. fac. III 13: II 198,17-199,4 K.=Brock 306.

P. 156,19-20 τὸ δ' ἄχρη ... φύσιν.] Instead ἅπαν, ὁδός, LM present ἐπ'ἀνοδός, i.e., the return to the natural state or the good situation, clearly inadequate in this passage. For μέσον as the medium between two opposites in Aristotle, see S. Byl, Recherches, pp. 238-251. Galen uses ἐπίμικτος for something mixed from two different things, such as the *rhigos* in quartan fevers (De sympt. caus. II 5: VII 190, 11-17 K.), which is mixed from hot and cold (cold from the black bile, and hot from the putrefaction); in De diff. febr. II 7: VII 359,19-360,9 K. we find a paroxysm of a mixed kind, from bilious and phlegmatic. In De simp. med. temp. ac fac. VI 4: XI 884,12-13 K., we find a plant having a mixed capacity: the groundsel, which cools and is slightly dissipating.

The expression "mixed, common and mean arisen from two opposites": ἐπίμικτόν τε καὶ κοινὸν καὶ μέσον ἐξ ἀμφοῖν τῶν ἐναντίων γεγονός, appears as well in De simp. med. temp. ac fac. V 6: XI,723,14-18 K., ἐπίμικτος ἐξ ἀμφοῖν καὶ μέση, and it is referred to the transformations suffered by the animals: the first is concoction, according to nature; the second is putrefaction, against nature; and the third is mixed from the two of them. In our passage, the transformation or process begins in a healthy part (according to nature) and ends in the same part when it has lost its capacity (against nature), because of *dyskrasia*. When the process is ongoing, the body's part is sick, but not yet useless. "Mixed, common and mean" is the range between step 1: healthy, and step 3: useless, i.e. the process of sickness itself. Let us take a look at a simple illustration:



For the relevant opposition "according to nature/against nature", cf. state of the art and thoroughly study in Kovačik, Der Begriff der Physis ...

P. 158,1 ἐν δὴ τούτῳ τῷ χρόνῳ παντί] For emphatic δὴ after preposition, as in ἐν δὴ τούτῳ, cf. Denniston, 229. The syntagm τούτῳ τῷ χρόνῳ παντί appears as well in De meth. med. IX 4: X 609,18 K.

P. 158,3-6 ὅταν ... περιεχόμενος] I write αὐτά where the mss. (and *Hun.*, "all") have ἅπαντα. The emphasis of the clause stresses the solid parts: *the solid parts themselves*. It is not necessary to add "all of them". Galen uses this same expression several times, as in De diff. febr. I 2: VII 278,11-13, De praesag. ex puls. II 9: IX 310,12-14, or De meth. med. VII 12: X 518,9-11, and he never adds "all of them".¹¹⁸ It is an uncial error by dittography, ΑΥΤΑΤΑ becoming ΑΠΑΝΤΑΤΑ under the influx of the repetitive presence of "all/whole" from l. 11 on. In some of the passages, as in De nat. fac. I 7: II 16,11-15, Galen enumerates the so-called solid parts: arteries, veins, nerves, bones, cartilages, membranes, ligaments and tunics, that is, the elementary, homoeomer and simple parts, plus arteries and veins, as opposed to humours and "pneuma".

For the text transmitted by Oribasius, and Paulus Aeg., see The Greek Indirect Tradition, 2.

The *hexis* was a fundamental notion in the physics of the Stoics, cf. p. 160,6-11, below, commentary. For a comparison of the words κατασκευή, διάθεσις, ἔξις, σχέσις, in Galen, cf. A. Bertini Malgarini, Costituzione del corpo nel De optima corporis nostri constitutione e nel De bono habitu di Galeno, in: A. Garzya, ed., Tradizione ..., 1992, pp. 41-50.

Galen uses the Perfect tense of καταλαμβάνω and Accusative to indicate the action of the so-called *hektikos* fever on the solid parts, as in P. 162,3-4, below: ὁ δ' ἐκτικὸς ἐκεῖνος πυρετός, ὁ τὴν ἔξιν ἤδη τοῦ ζώου κατεληφώς. See as well In Hipp. Prorrh. I comment. I 33: XVI 580,12-16 K. = CMG V 9,2; 47,13-14 Diels. In the parallel passage in Oribasius, Synopsis ad Eustathium filium 6.21.1. - 3, we find συνίσταται.¹¹⁹ Galen himself uses this verb (συνίστασθαι) with the *hektikos* fever in De marcore 7: VII 694.2-5 K. However, the author only uses the participle περιεχόμενος in all the sentence in order to underline the relationship of *hektikos* to ἔξιν ἔχουσι (see below). The participle and ἄν express an unreal or potential process/state.¹²⁰ The syntagm ὥς ἂν μηκέτι appears five times in Gal. accompanied by a participle, and its value is causal and conditional (μηκέτι): "as if not just". On the other hand, the reference to the solid parts is unavoidable. Consequently it happens in the *locus similis* of Orib. (and Paulus Egin.) I guess τοῖς στερεοῖς became lost in the

118 In Dative, cf. as well, De temper. II 2: I 581,14-17. De san. tuenda I 11: VI 55,6-11 K. De caus. puls. IV 10: IX 176,5-8.

119 It is as well in the loc. sim. in Paulus Aegineta, Epitomae medicae libri septem 2.31.1.1 -2.31.1.4, Raeder, CMG 9.1 and 9.2.

120 Cf. Goodwin, Syntax, pp. 70-71.

sentence: *KAITOICCTEPEOICEΞINEXOYCICΩMACI*, because a scribe went from OIC OIC to CIC CI.

Here Galen puts together the four words *έκτικός*, *έξιν*, *έχουσι*, *περιεχόμενος*, so that the etymological relationship between them could not be forgotten, letting us understand that the so-called *hektikos* fever becomes one with the body. Galen plays an untranslatable etymological trick with *έκτικός*, *έξιν*, *έχουσι*, *περιεχόμενος*: I may tentatively translate *πυρετός έκτικός* as *constitutional* fever, so that a pseudo-similar effect could be achieved: "being already *constituted* in the *constitution* itself of the solid bodies (parts) that are *constituted* with a *constitution*." *Hun.* just translates all the sentence with a concise: "but it is as well in the solid parts". I assume that *έξιν έχουσι σώμασι* indicates that "the solid bodies hold a permanent condition", as opposed to the humours and pneuma.

All the parts (the solid parts as well) are equally heated by the so-called *hektikos* fever, that is, by a homogeneous *dyskrasia*, so that there is no pain or perception of it by the patient.¹²¹ In the *Suda* (nu. 495.1–14 Adler), the cause of being painless is said to be the incapacity of the organs of perception (the homoeomers). However, Galen puts it in the absence of ongoing change, as he has repeated before. There is no alteration on the way but a complete —and finished— transformation: as such, pain is excluded: no ongoing change, no pain.¹²²

Galen uses an Aristotelian expression: *τὸ μὲν ποιεῖ, τὸ δὲ πάσχει* (p. 158,12-13: see *loc. sim.*). It is not that of the parts, "the one is active, the other, passive," all of them having already become the same to each other, and having an homogeneous *krasis*. Of the differences, say, in heat, between different parts, he will speak at once.

Let's compare two fevers, the *hektikos* and the *êpialos*:

FEVER	HEKTIKOS	ÊPIALOS
AD	NO	YES
HD	YES	NO
HEAT	EVERYWHERE	PARTIAL
COLD	NO	PARTIAL
PAIN	NO	YES
ONGOING CHANGE	NO	YES
HEAT PERCEPTION	NO	YES
COLD PERCEPTION	NO	YES
IF IT KEEPS GOING ON	IT DOES NOT CHANGE	IT ARRIVES TO HEK- TIKOS

¹²¹ Cf. *De sympt. causis* II 5: 7.176,3-7.

¹²² A peculiar description of the *hektikos* fever in Paulus of Nicaea, 3; 55,1-14 Ieracci.

P. 158,6-8 ἀνώδυνος ... μορίων] The mss., U excepted, add. ὥς post οὕτω(ς) in l. 6. It is a dittography in uncial letters: ΟΥΤΩCΩC. The construction is a correct infinitive sentence, dependent on νομίζουσιν.

The question of perception is introduced here in reference to heat in the *hektikos* fever. Pain in fact is perceived along the transformation, but not in the transformed body.

P. 158,8-9 καὶ δὴ ... λογισμοῖς] More often than not Galen uses ὁμολόγηται and Dative (*Dativus auctoris*) for introducing the unanimous opinion of philosophers or physicians, the Perfect tense adding stress to it. Cf. *inter alia* De diebus decr. III 11: IX 936,12-14 K. The reading ὁμολογεῖται¹²³ is phonetically identical with the Perfect form so that a confusion is rather suspected. The Present tense is used by Galen in this meaning, with the prepositions παρά + Dat., ὑπό and πρὸς + Gen., and sometimes just with Dative. However the Present tense should not have *Dativus auctoris*.¹²⁴ It would be worthwhile to check the mss. of the concerned passages to see if the Perfect is transmitted as well.

With ὁμολογεῖται in Present tense, Galen often points to an agreement in a subject that is being discussed for the time being, and there is at least another different opinion in the context. The physician or philosopher mentioned usually belongs to an existing group or the reference is rather general, as in De simp. med. temp. ac fac. V 2: XI 709,2-10 K., specially 709, 5-6: such and such is agreed on not just by all the doctors, but by laymen as well. In my opinion the Present tense is suspected.

On the other hand, ἀνδράσιν of Λ, is necessary, being τοῖς φυσικοῖς a generic denomination that may refer to books, criteria, bodies, organs, and should be coupled by a substantive. Cf. *inter alia* De diebus decr. III 11: IX 936,12-14 K., quoted above. The mention of the φυσικοὶ ἄνδρες appears in Galen from time to time. Cf. De simp. med. temp. ac fac. I 26: XI 427,7-9 K.; II 1: XI 460, 2-5 K.; and III 16 : XI 585,10-12 K.

Plato's "Theaetetus" and "Timaeus", the opposite views in Aristotle's "On the soul" II 5 –III 2 and "On perception and Perceptibles",¹²⁵ and Theo-

123 ὁμολογεῖται in LP^{i.l} is a vox nihili (confusion with γνωμολογεῖται?).

124 Cf. Smyth-Messing, p. 343-344.

125 See now V. Carson, Aristotle's Psychology in: M. L. Gill, P. Pellegrin, A Companion to Ancient Philosophy, Blackwell Companions to Philosophy, Malden (Mass.), 2006, pp. 316-346 (with rather good bibliography).

phrastus' "On the senses",¹²⁶ are fundamental sources for the study of perception in the IV c. B.C.E. and afterwards. The back stage of the reasoning on perception and the senses is change: if admitted, we have an initial knowledge of nature as perceived by the senses. While Parmenides and Plato rejected the reality of the physical world, Heraclitus or Aristotle took into account perception by the senses and change. Experience as opposed to reasoning, an *a posteriori* knowledge.

P. 158,9-10 οὐτε γὰρ ... ὀδύνη] Cf. p. 150,20-22, above.

RING 8, OUTER. HEKTIKÓS FEVER

P. 158,11-14. By means of Ring 8, placed at the end of Section 10, Galen connects that passage, dealing with Transformation, to the end of the following (Section 11, Different is noxious, same helps), so that he will come back to the perception of fever. In fact, Ring 8 encircles Section 11, which does not explain Anomalous *dyskrasia*.

Let us take a look at the composition of Sections 9 to 13:

- S. 9. local AD to general AD = inflammation to fever-2 [156,2-11]
 ┌R-7. outer: sepsis to fever [156,11-13]
- S. 10. transformation-3 [156,13 – 158,10] change painful, no change painless
 ┌R-8 outer: *hektikos* fever, no change painless [158,11-14] ┐
- S. 11. different is noxious, same helps [158,14 – 162,2]
 └R'-8 outer: *hektikos* fever, no change painless [162,3-4] ┘
- S. 12. hot+cold AD =fever, painful + *rhîgos* [162,4-14]
 └R'-7. outer: sepsis to fever [162,15-18]
- S. 13. hot AD. other causes of fever [162,19 – 164,17]

P. 158,11-12 <διὰ> ταῦτ' ... κάμνουσιν] The demonstrative pronoun ταῦτα by itself (without διὰ) does not have a meaning here. *Hun.* understands "because of that". On the other hand, διὰ ταῦτ' ἄρα appears twice in Galen, in De san. tuenda IV 4: VI 260,18 K. = CMG V 4,2; 115,6 Koch (διὰ τοῦτ' ἄρα), and De cris. I 12: IX 597,17 K. = 99,9-10 Alexanderson. In the series ἡ ὀδύνη διὰ ταῦτ', the preposition disappeared because of phonetic haplography (*iodin-idiata*), coupled by haplography in uncial letters: HOΔΥΝΗΔΙΑΤΑΥΤΑ. For the previous τελέως (158,10), LM present τελείως that is *difficilior*, but could have been written through influence of the next word: τελείως ἡλλοιωμένοις.

¹²⁶ See now Baltusen, Theophrastus against the Presocratics and Plato: peripatetic dialectic in the De sensibus, Leiden, Brill, 2000.

Moreover, it is written twice in the same line, and a different spelling does not seem probable to me.

5,23-24 οὐ γὰρ ... κρᾶσιν] For the Aristotelian τὸ μὲν ποιεῖ, τὸ δὲ πάσχει, i.e. to act/to be acted upon, see Introduction, Contents.

5,24 ὁμοίως U: ὁμοίων *cett.* Σ. In three Galenic passages we find series of πάντων ὁμοίως followed by a participle in -ων, as in De caus. puls. I 7: IX 17,14-15 K., De comp. med. per gen. V 14: XIII 845,11-13 K., and De ossibus ad tirones 3: II 746,15-17 K. The ὁμοίων is due to homoeoteleuton.

SECTION 11. DIFFERENT IS NOXIOUS, SAME HELPS

P. 158,14 – 162,2. Section 11 presents three aspects of the compatibility of parts and humours in the same animal, and in different animals, and the application of such doctrine to the more general fields of maintaining health or attacking disease.

There are three blocks:

- 1 Block. 158,14 - 160,4. Adjacent parts with different but moderate *krasis*
- 2 Block. 160,4-13. All diseases are but wounds
- 3 Block. 160,13 - 162,2. Different is noxious, same helps.

First block. 158,14 - 160,4 εἰ δὲ δὴ ... αἰσθανόμεθα] The question of neighbouring parts with different *krasis* is now explained in order to understand the qualitative anomalous *dyskrasia* as the result of an intense opposition hot/cold, as he will show when referring to *êpialos* fevers.

Galen states that adjacent parts could be hot vs. cold —such as flesh and bone— not being harmful to each other, because the excess of, say, heat, or cold, is not immoderate. The natural differences of the parts to each other are called by him "anomaly", meaning that they have different *krasis*. However, such anomaly does not bring *dyskrasia* with it, because the difference among them (flesh and bone, in the example) is moderate (μέτριος). That indication will be important when dealing with *dyskrasia*, in the fevers where chills are present (cold/hot, see Sections 15-18, below). He goes on introducing hot/cold air, in the same situation as neighbouring parts: it is not inconvenient until its quality is immoderate (ἄμετρος). The moderate differences in between (ἐν τῷ μέσῳ) do not bring harm to us.

Galen is rather didactic. He finds everyday situations that can help the explanations. As he introduces air here, we will be told below of a man under a hot sun upon whom we throw cold water, in order to understand the per-

ception of fever and chills at the same time (p. 166,12 - 168,1). The pain in the nails when somebody, having very cold hands, comes near a source of heat (p. 164,21 - 166,3), is very illustrative as well.

In *De temper.* I 9: I 568,16 – 571,3 K. = 37, 14 ... 39,12 Helmreich, at the end of the first book, Galen explains the quality of the homoeomers and of some composed parts. After the hair that is coldest and driest, bone is second to it, cartilage is not as dry as bone, ligament follows cartilage, and tendon follows ligament. After those, membrane, artery and vein. Flesh is drier, but more humid than skin, and hotter. For a complete presentation of this subject, see the thorough account of Rameis, *Die Krasislehre*, pp. 58-60.

P. 158,14-17 εἰ δὲ ... κρᾶσσει] At the beginning of the Section, we have two conditional clauses¹²⁷ with Optative (A, B), with a common apodosis (C), a consecutive sentence dependent on B (D), and a causal sentence dependent on C (E). Let us take a look:

1. A if one (part) of them were hotter and the other colder
2. B but (if they were) so much hotter <or colder>
3. D as [not] to hurt the one nearby,
4. C [or] that way would be harmful to each other <all> the parts
in their natural state,
5. E for they are in fact different in their *krasis*.

The text is not well transmitted. The apodosis needs Optative more than Imperfect (potential instead of unreal), and U has it: εἴη against ἦν in the others. The whole period may be understood with a minimum of change. The second ψυχρότερον disappeared because of homoeoteleuton in -τερον, but *Hun.* and *Nic.* have it, and Charrier inserted it. A negative adverb μή was wrongly introduced in the consecutive sentence, but *Nic.* does not have it. And a disjunctive particle ἢ appeared at the beginning of the apodosis. I have eliminated the two of them. In the main sentence I inserted πάντα, according to *Nic.*'s *universe*, easily lost in the sequence [παντατακατα]¹²⁸. All the mss., except M, add a superfluous τὰ before μόρια, and most probably M has omitted it because of error (M reads ἔχον τὰ μόρια). It is to be eliminated in any case.

After πλησιάζον, *Nic.* added *neque ita dolebunt*, translated into Greek by Fuchs (and Lalemant): οὐδὲ οὕτως ὀδυνησεται. Such "not even this way it will have pain", does not have a place here, in my opinion.

¹²⁷ The group δὲ δὴ is rather common in Galen (over 370 times).

¹²⁸ For the sequence, cf. τὰ δ' ἄλλα πάντα τὰ κατὰ φύσιν ἔχοντα διασώζει τὴν ἑαυτῶν οὐσίαν, in *De simp. medicament. temp. ac facult.* V 6: XI 723,8-9 K.

P. 158,18 - 160,1 σὰρξ ... ὑπεροχῆς] For the position of ἐστι in θερμόν <ἐστι> μόριον, cf. *inter alia* De elem. ex Hipp. I 1: I 419,13=CMG V 1,2, Lacy: 62,15-17: ἐπειδὴ τὸ στοιχείον ἐλάχιστόν ἐστι μόριον. It disappeared in the series ΘΕΡΜΟΝΕΚΤΙΜΟΡΙΟΝ, saut du même au même. For the place of the next ἐστίν in ἀνώδυνός <ἐστίν> ἡ ἀνωμαλία, cf. De loc. aff. II 3: VIII 76,2-3 K. (ἐν τε ταῖς χωρὶς ὄγκου δυσκρασίαις ἀνώδυνός ἐστίν ἡ τῶν ἀρτηριῶν κίνησις) It has been lost by homoeoarcton in the row ΑΝΩΔΥΝΟΕΚΤΙΝΗΑΝΩΜΑΛΙΑ.

P. 160,1-2 οὕτω ... ἐκτραπῆναι] L's reading θέρμανσιν, is an error by homoeoteleuton with the previous ψῦξιν. Usually the counterpoint of ψῦξις (cooling vs. heating) is not θέρμανσις, but θερμασία or θερμότης, as in line 9, below; for θερμασία, cf. *inter alia*, Hipp. Nat. Puer. 15,3; Hippocrate XI: 57,20-24 Joly = VII 494,11-15 L.; Aristotle GA 764b.7 - 8, and Cat 8b.35 - 37. For θερμότης see Aristotle, Cat 8b.35 -37, Meteor 351a.30 -33, and Gal. Adv. Lyc. XVIIIa,204,3 K.=CMG V 10,3: 7,19 Wenkebach: ἔστι δ' ὅτε ἄμετρον ψῦξιν ἢ θερμότητα μεμφόμεθα. Galen uses θέρμανσις for *healing* heating, as opposed to ψῦξις, cooling: cf. De sanit. tuenda III 10: VI 219, 16-17 K. = CMG V 4,2; 97,1 Koch.

Second Block:¹²⁹ 160,4-13 κινδυνεύει ... πρόδηλον] "All diseases are but wounds." Galen brings forward the Hippocratic dictum (De fract. 31, 526, 9-10 L. = II 94,10-11 Kühlewein),¹³⁰ as he does in his Commentary to Hipp. De fract. (III, 33: XVIIIb, 585, 16-17 K.) including the sentence "probably that reasoning is adequate",¹³¹ in order to explain the effects of local cold/hot *dyskrasia*, comparing them with wounds, as they loosen the continuity. See Commentary, below.

P. 160,6-11 συνεχείας ... δόξειεν] For συνεχείας λύσις cf. Section 5, p. 152,6, and 11, above. On the grounds of the loosening of continuity that is not just produced by exterior injury, but by *dyskrasia* as well, Galen goes on to describe the types of action exerted by local *dyskrasia*. The συνέχεια or coherence¹³² is a fundamental notion in the Physics of the Stoics:¹³³ "The term coherence (συνέχεια) was originally used by Aristotle to express continuity in an essentially geometrical and topological sense, but the Stoics gave it the physical and

¹²⁹ The first sentence, κινδυνεύει ... ἐπιείκειαν is translated by Hun. "as for this comparison, the soul is hardly calm with those words that have been told, as Hipp. ..." I cannot find any sense in it.

¹³⁰ Cf. Testimonien II 2, p. 235.

¹³¹ For this meaning of ἐπιείκεια in Galen, cf. A. Roselli, pp. 184-108, of Il commento di Galeno a Sulle Fratture. Specimina per la nuova edizione, in: Studi su Galeno, ed. D. Manetti, pp. 93-117.

¹³² A text of Parmenides (fr. 28 B 8, 25 Diels) affirms that everything is contiguous/continuous (συνεχές) to something.

¹³³ Cf. S. Sambursky, Physics of the Stoics, p. 1.

dynamic significance of cohesion within the physical world." In their doctrine, the *pneuma* and its tension (τόνος), produce the cohesion of matter.¹³⁴ For the Stoics, the *pneuma* generates the physical qualities, and cohesion becomes *hexis*, the physical state of the body.

The *pneuma* and its tension give form, a precise size, and so on, to the parts of matter.¹³⁵ In the Stoic theory of matter:

"*hexis* denotes the structure of matter in a similar way to which *physis* expresses organic structure, and *psyche*, the structure of the living being."¹³⁶

"... the living body was regarded similarly as a united structure, as was shown ... in the passage where he [Galen] describes the faculties of the human body as structural elements of its physio-logy, extending throughout the whole body."¹³⁷

As synonyms of συνεχείας λύσις, Galen mentions ἐνώσεως λύσις "loosing of unity" and διαφθορά ἐνώσεως "destruction of unity", in De const. art. med. 5: I 238,7 - 239,2 K.= CMG V 1,3; 66, 3-6 Fortuna; De causis morborum 11: VII 37,10-13 K., and Med. Meth. VII 2: X 459,6 - 8. In De constitutione, *ibidem* (66,7-10 Fortuna), he mentions the actions that provoke it: "of bone, nerve, vein, artery and flesh, the continuity is destroyed ἐν τῷ νύττεσθαι τε καὶ διαβιβρώσκεσθαι, καὶ τέμνεσθαι, καὶ διασπᾶσθαι, καὶ ῥήγνυσθαι (by piercing, eroding, cutting, stretching out, and breaking)."

In our Section 5, p. 152,10-11, he writes: "getting wounded, eroded, stretched out, compressed, or torn asunder" (ἐν δὲ τῷ τιτρώσκεσθαι καὶ ἀναβιβρώσκεσθαι καὶ τείνεσθαι καὶ θλίβεσθαι καὶ διασπᾶσθαι).

The name of the injury is different according to the harmed part, as he explains in De const. art. med. 5: I 238,16 - 239,7 K.= CMG V 1,3, 66,10-17 Fortuna. Daniela Manetti and Amneris Roselli (pp. 86-87 in: Note per una nuova edizione dei commenti di Galeno ai trattati chirurgici di Ippocrate, in: M. Vegetti, Studi ... in onore Paola Manuli) comment on some of the names applied to the actions that provoke wounds/ulcers.

In the present text, both the strong heating and the top cooling loosen the continuity: the former by separating and cutting through, the latter by contracting and compressing in; consequently they squeeze out some matter,¹³⁸ and crush some other. The sentences are rather parallel (9-11):

134 It is related to living beings in as much as *psychê* is made of dry and warm *pneuma*, while *physis* is made of moist and cold *pneuma*.

135 See Sambursky, Physics of the Stoics, pp. 7-8.

136 Cf. Sambursky, Stoics, p. 8.

137 See NatFac II 3: II 81,11-88,8 K. = SM 159,5 - 165,6 Helmreich, and Sambursky, Stoics, p. 9.

138 Ps.I. notes that ἐκπιέζει, "compresses", is exerted on the hard parts (τὰ σκληρότερα), while θλά, "breaks", acts on the soft (τὰ μαλακώτερα).

ἡ μὲν γὰρ πολλὴ θερμασία,
 τῷ διακρίνειν τε καὶ διατέμνειν τῆς οὐσίας τὸ συνεχές,
 ἡ δ' ἄκρα ψῦξις,
 τῷ πιλεῖν τε καὶ συνωθεῖν εἴσω,
 τὰ μὲν ἐκπιέζει, τὰ δὲ θλά·

Galen enumerates at the beginning and end of this book (p. 142,5-8, and 170,13-14) the names of those local *dyskrasia*. On the other hand, to the "loosening of unity" is especially dedicated *De causis morb.* 11: VII 37,10-41,3 K., tr. Johnston 178-179.

In *Hipp. de vict. acut. comment.* II 1: XV 515,11-516,3 K. = CMG V 9,1; 163,19 – 164,3 Helmreich, Galen explains that pain in the homoeomers happens along with an intense change against nature, which is double, at times caused by a hard alteration in the quality, at times by loosening the continuity. The parts are intensely altered by the active qualities (*vide supra*, p. 152,5-11) when being heated up, cooled down, dried or moistened, and the continuity of them is destroyed.

R. Rey (*Histoire*, 42) remarks: «Pour comprendre la signification de la douleur comme variation d'intensité il faut rappeler que pour Galien toute sensation suppose un changement interne qui est la condition de la mise en éveil du pneuma psychique: sans cette altération ou transformation, il n'y pas de sensation possible.» In fact, from the homoeomers that are the perceiving parts, the nerves carry the sensation to the brain.

Amneris Roselli,¹³⁹ underlines that Galen, in his *Commentary to De fracturis* (see above),¹⁴⁰ states that every disease can be understood as a loosening of continuity, because all diseases provoke pain.¹⁴¹ Palladius remarked that every pain is caused by loosening of the continuity.¹⁴² As Galen explains the notion of all diseases as wounds in his *In Hipp. Fract. comment.* III 34 : XVIIIb 586, 1 - 587,12 K, let us take a look at it:

139 See pp. 104-108, of *Il commento di Galeno a Sulle Fratture. Specimina per la nuova edizione*, in: *Studi su Galeno. Scienza, filosofia, retorica e filosofia*, Daniela Manetti ed., Firenze, 2000, pp. 93-117.

140 In *Hippocratis De fracturis comment.* III 34 : XVIIIb, 585,16 ... 587,12. K.

141 Palladius, *Comment. in Hippoc. librum sextum de morbis popularib.* 2,159,28-29 Dietz.

142 According to Roselli, the key texts in Galen are: *In Hipp. Fract. comment.* III 34 : XVIIIb 586, 12; *De inaequali* p. 6, 7-11= 7, 744, 17 - 745, 3 K.; *De locis affectis* II 5: VIII 80,12 - 17; *In Hippoc. Acut. comment.* II 1: XV 515,14=CMG V 9, 1, pp. 163 ff. Helmreich; *In Hipp. Epid. VI comment.* IV 10: XVIIIb 158,13 -15 K.= Pfaff CMG V 10, 2,2, pp. 335-36. See as well Palladius, *Comment. In Hippoc. librum vi de morb. popul.* 2,137,21 -22 (to *Epid. VI* 3, Dietz 159 ff.) and 2,159,28 -160, 1.

1. Obviously the loosening of continuity is a wound.
2. Moreover, the alteration in a *dyskrasia* taking place all at once, loosens the continuity.
3. Heat corrodes the continuity.
4. All pain happens at the genesis of wounds.
5. All diseases are but wounds.

P. 160,10-13 καὶ τοῦτόν ... πρόδηλον] For τις ὅρον τιθέμενος cf. Dem. Or. 21, 105,1-5; Plut. Bruta animalia ratione uti 989.B.3 - 5, and Gal. In Hipp. de victu acut. comment. II 10: XV 534,12-14 K. = CMG V 9,1 Helmreich. The verb appears in Participle Aorist in those texts, as in P's reading, θέμενος, but the subject in them is the writer himself, and so the reference is to a previous (punctual Aorist) action ("made"), while a third person is the subject here, and the action is placed at the time of the statement ("making"; durative, Present tense).

Technically, ὅρος is understood as definition. See J. Kollesch, Untersuchungen, 66-74, where she does not ascribe definitions to a single school: treatises consisting of collections of medical definitions are known since the Hellenistic period, and the Pneumatists are not the first to use them.

In <τῆς> ἀμετρίας the article is necessary because the noun is determined by the Genitive. It disappeared because of iotacism and/or visual haplography in the homoeoarcton TICOPONTIΘEMENOCTHC.

In 160,1 and 10, Galen uses ἄμετρον and ἀμετρία to denote the excess, as opposed to τῷ μετρίῳ of 158,19. Dealing with pulse (De dign. puls. II 3: VIII 860,15 - 861,8 K.), he remarks that big, small, quick, slow, hard and mild, refer to *ametria*, the way that hot, cold, dry or moist *krasis*, is not the best of *krasis*. Of course *dyskrasia* is an *ametria*. As far as fevers are concerned, *ametria* is said of heat, which becomes as high as to produce pain and to harm the activity. As fever is an excess of heat, it has to be treated by cooling (Meth. med. VIII 1: X 532, 5 - 535,2 K.) In De sanit. tuenda V 2: VI 318, 8-9, he states that, in order to counteract any *ametria*, it is necessary to go to the opposite *ametria*.

From p. 158,14 to p. 160,14, the usual order hot-cold is kept (cf. De Lacy, V 1,2, De elementis, *passim*), but when treating of air (160,2, above), Galen puts cold first. Could it be because the impact of ice-cold air is more obvious than that of hot air in a country so used to heat? Maybe he is preparing the presentation of *êpialos* fever and of *rhîgos* as well (see below).

P. 160,11-13 <ἀλλ' > εἴθ' [δ'] οὗτος εἴτ' ἄλλος τις ὅρος ἐστὶ τῆς ἀμετρίας,

[ἀλλὰ] τὸ γ' ἐν τῷ πρὸς τι πᾶσαν ὑπάρχειν ἀμετρίαν

I guess the scribe displaced ἀλλὰ from its line to the next: some 40 letters to the line in the *archetypus*. I moved it to the beginning of the clause, cf. De const. art. med. 7: I 247,3 - 5 K., ἀλλ' εἴτε ποιότητα χρῆ καλεῖν, εἴτε ἄλλο τι τὰ τοιαῦτα,

πρός γε τὸ προκείμενον οὐδὲν διαφέρει. The function of ἀλλά would be here the same as that coupled by Imperative, that is, a strong adversative. It is an independent sentence. The composition argues for the preferred position in as much as Galen uses ἀλλά as resumptive, and so at the end or beginning of a block/section concerning the same subject.

As for πρὸς τι: in Stoic philosophy, there are "two kinds of relations, the relative state and the relative: The first [πρὸς τί πως ἔχον] denoted a state defined by that of another thing outside it ... The relative [πρὸς τι] referred to things capable of change ... whereby the relation is given through comparison of two states of this change (e.g. two degrees of sweetness)." The second applies here.

Block 3: 160,13 - 162,2 οὐ γὰρ ὡσαύτως ... λόγος] The reasoning is the following:

1. bodies are not constituted in the same way in relation to heat and cold. (160,13-14)

2. some animals have the humours compatible to each other, and some, destructive to each other. (160,14-19)

example: men /vipers, scorpions

both of them kill the other with their saliva

3. (160,19 - 162,2):

similar = friend

opposite = enemy and harmful

similars make to grow

opposites make to die

health, kept by similars

disease, attacked by opposites

P. 160,13-14 οὐ γὰρ ... διατίθεται] Different bodies (=animals) have different qualities, or have them in a different intensity. Each body has its own qualities. In De temper. I 6: I 538,11 - 539,3 K. Galen explains that the four qualities precisely apply to elements, while other entities are not just "hot and humid", or the like, but they are "hot or humid in relation to": thus men are hot and humid as compared to plants, men are rather humid as compared to dogs, and those are rather dry as compared to men.

P. 160,16-19 τὸ γοῦν ... ἀσπίδα] Galen uses both σίαλον and σίελον for saliva. In De simpl. med. temp. ac fac. X 16: XII 288,7-8 K., he declares that the two of them have the same meaning, and adds πτύελον (sputum) as well.

Hun. translates the (first) verb ἀναιρήσειας in the same way in this sentence and the next. I have corrected the Future form ἀναιρήσεις of the *codd.*, into the Optative form ἀναιρήσειας, taking into account the next sentence, where P reads ἀναιρήσειε. The first ἄν disappeared in the homoeoarcton ΟΥΤΩΓΑΝ→ΟΥΤΩΓΟΥΝ. Besides that, γοῦν appears in the former sentence, and could have been repeated by the scribe. For οὕτω γ' ἄν cf. De

usu part. III 4: III 185, 13-15 K. = 135,25-26 Helmreich (ἀλλ' οὕτω γ' ἂν ἄχθος τε περιττὸν γίγνοιτο καὶ πᾶν μᾶλλον ἢ ὠκύτητος ὄργανα), and De venae sect. adv. Erasim. 9: XI 183,12-14 K. (ἐπεὶ οὕτω γ' ἂν οὐδὲ τὰ φωλεύοντα ζῶα τροφῆς ἀποροῦντα διαρκεῖν ἐδύνατο). The loss of the second ἂν was easier: haplography in ΜΗΝΑΝΑΝΘΡΩΠΙΟC. ἔχισ ἔχιν is *difficilior* against ἔχιδνα (P's reading).

Galen describes, in De simpl. med. temp. ac fac. X 16: XII 288, 15-18 K., a therapeutic use of human saliva, in case of *leichên* (lichen), precisely a baby's saliva. Aristotle mentions in HA the effect of human saliva on scorpions and vipers (HA 607a.27 - 607a.30), when referring to their mortal bites: "Among all of them, the bite of animals with poison is rather difficult (i.e. dangerous), in case they bite one another, such as scorpions and vipers. For most of them, men's saliva is enemy". In De simpl. med. temp. ac fac. X 16: XII 288,12 - 290,3 K. Galen goes on describing the effects of it on those animals who kill men by it. He says how he firstly had attended a scene: somebody salivated on a scorpion,¹⁴³ and, repeating it twice, it died. After that, Galen could check the effect of saliva on scorpions, which is quick if the man has neither eaten nor drunk, and slow after having eaten and drunk too much. He makes a summary of it in NatFac III 7: II 163,4 -7 K. = 218,25 - 219,3 Helmreich. In De loc. aff. III 11: VIII 195,4 - 198,5 K., he mentions the paradoxical effect of the bite of scorpions, which kill so swiftly, the bite being so tiny, and the sting remaining unspoilt ... and the similar effects of vipers and asps. In Diocles fr. 177 Eijk (145 Wellmann), 16-26, the Pseudo-Dioscorides¹⁴⁴ includes a similar passage on scorpions and vipers

Block 3.3.: 160,19 - 162,2 τὸ μὲν γὰρ ... ἐναντίων] The style and composition of the passage is rather brilliant. There are three periods of opposed groups. Observe that the first and last contain no verb, being nominal sentences in a description, whereas the central introduces verbs, being a narration:

τὸ μὲν γὰρ ὅμοιον, οἰκεῖόν ἐστι καὶ φίλιον·
 τὸ δ' ἐναντίον, ἐχθρὸν καὶ ἀνιερὸν.
 αὖξεται γοῦν ἅπαντα καὶ τρέφεται πρὸς τῶν ὁμοίων,
 ἀνιερῆται δὲ καὶ φθίνει πρὸς τῶν ἀνομοίων·
 ἡ μὲν τῆς ὑγιείας φυλακὴ διὰ τῶν ὁμοίων,
 ἡ δὲ τῶν νοσημάτων ἀνιερῆσις διὰ τῶν ἐναντίων.

¹⁴³ Leonardo da Vinci mentions the peculiarity of a man killing a scorpion with saliva: "Saliva, spit out when fasting will kill a scorpion. This may be likened to abstinence from greediness, which removes and heals the ills which result from that gluttony, and opens the path of virtue." In the Vol. II nr. 1240, "the scorpion", of the so-called The Notebooks of Leonardo Da Vinci, transl. by Jean Paul Richter. Available in Project Gutenberg Literary Archive Foundation, <http://www.gutenberg.org/etext/4999> (12 february 2006).

¹⁴⁴ De venenatis animalibus, proemium, pp. 47-49 Sprengel.

what is similar, is related and friendly,
 what is opposite, is inimical and harmful.
 everything grows and is nurtured by similars,
 but is destroyed and perishes by dissimilars.
 the watchfulness of health by means of similars,
 the destruction of diseases by means of opposites.

P. 160,19-20 τὸ μὲν γὰρ ... ἀνιερὸν] The notion of opposites being destructive to each other is brought forth by Aristotle, Ph. 192a.21-22 φθαρτικὰ γὰρ ἀλλήλων τὰ ἐναντία, and Cael. 286a.33 - a.34 πάσχει γὰρ καὶ ποιεῖ τὰναντία ὑπ' ἀλλήλων, καὶ φθαρτικὰ ἀλλήλων ἐστίν: "the opposites are passive and active to each other, and are destructive to each other." For the group οἰκεῖόν τε καὶ φίλιον, see De usu part. VII 8: III 541,1-4 K. = 393,11-13 Helmreich, where it is opposed to ἀλλοτρίαν τε καὶ φθαρτικὴν (ποιότητα). In l. 19, φίλιον is better than φίλον in LPU.

On the other hand, οἰκεῖος is an important notion in Stoic Philosophy, as "endeared by nature to all animals", including man. Galen takes the primary ability of *physis* to distinguish *oikeion* from *allotrion*, from the Hippocratic Corpus and Plato (Kovačik, Der Begriff der Physis, p. 144).

P. 160,20-21 αὖξεται ... ἀνομοίων] That growth and nutrition is common to animals and plants, while feeling/perceiving and (voluntary) motion (αἰσθάνεσθαι τε καὶ κινεῖσθαι κατὰ προαίρεσιν) only belong to animals, is an Aristotelian doctrine. Galen, at the beginning of De nat. facult. I 1: II 1,2 -2,5 K.= SM III 101,1-15 Helmreich, attaches *physis* to the former, and *psychê* to the latter. On the other hand, discussing the functions of *psychê* and *physis*, Galen comments that Plato and Aristotle considered *psychê* not just the instrument of reasoning and memory, but also that of plants as well: "they grow, are nurtured and preserved by *psychê*, until they dry." ἀλλὰ καὶ τὴν ἐν τοῖς φυτοῖς, ἣ τρέφεται τε καὶ αὖξεται καὶ διασώζεται, μέχρι περ ἂν ἐν τῷ χρόνῳ ξηρανθῇ (In Hipp. Epid. VI comment. V 5: XVIIb, 250, 12-17 K. = CMG V 10,2,2; 272,25 - 273,2 Wenkebach).

That everything grows and is nurtured by similars, and destroyed by opposites, is present at the Hippocratic Corpus: Cf. Hipp. Morb. IV 34: Hippocrate XI, 87,9-12 Joly = VII 548, 2-5 L.: ἔλκει γὰρ ἐκ τῆς γῆς ἡ ὁμοίη ἱκμάς τὴν ὁμοίην, καὶ τούτοισιν αὖξεται καὶ τρέφεται, καὶ οὐδὲν ἕτερον ἑτέρῳ ὁμοίον ἐστὶ τῶν φυομένων, οὔτε ἴσην οὔτε ὁμοίην ἐκ τῆς γῆς ἱκμάδα ἔλκον. "Car l'humeur tire de la terre l'humeur semblable et, grace à elle, la plante se développe et se nourrit; aucun (espèce) de plant n'est semblable à une autre, puisqu'elle ne tire de la terre une humeur ni identique ni semblable." (tr. Joly).

P. 162,20 ἡ μὲν ... ἐναντίων] The verb disappeared in uncial letters: ANAIPECICECTAIΔIATΩN, by homoeoteleuton and homoeoarcton.

"... the system of treatment, which Galen says is Hippocratic, by which opposites are the cures for their opposites."¹⁴⁵ In fact, in the Hippocratic NatHom 9,¹⁴⁶ the subject is introduced: "Voici ce qu- il faut savoir en outre: les maladies causées par la réplétion sont guéries par la vacuité; celles qui proviennent de la vacuité sont guéries par la réplétion ... Pour résumer toutes ces notions, le médecin doit s' opposer au caractère établi des maladies ... C' est la meilleure méthode, en effet, pour apporter du soulagement à la partie malade." (tr. Jouanna). Galen, in his Commentary to NatHom, explains the Hippocratic passage quoted above.¹⁴⁷

The same subject appears as well in Hipp. Aphorisms II 22: VI 476,6-8 L. = Hippocrates IV 21,23 Jones, and in Flat. 1: VI 92,5-15 L. = 6,10-12 Nelson= CMG I 1; 92,7-8 Heiberg: ἐνὶ δὲ συντόμῳ λόγῳ, τὰ ἐναντία τῶν ἐναντίων ἐστὶν ἰήματα. "In a single word, opposites heal opposites".

Galen remarks in De sanit. tuenda V 2: VI 318, 8-9 K. = CMG V 4,2; 140,27-28 Koch: "Every ametria is healed by the opposite ametria". In Meth. med. VIII 1: X 532,5 - 535,2 K., quoted earlier, we find: "as in the fevers the *dyskrasia* is *ametria* of heat, its treatment, to reach *eukrasia*, is the contrary *ametria*, that is, intense cooling (διὰ ψύξεως)". See Commentary to 160,10-13 above. There is a similar statement in Meth. med. IX 1: X 634,9 -10 K.: ἀλλ' ὥσπερ τηρεῖται διὰ τῶν ὁμοίων, οὕτως ἀναιρεῖται διὰ τῶν ἐναντίων. "However as it is preserved by means of similars, likewise it is destroyed by means of opposites".

P. 162,2 περὶ μὲν τούτων ἕτερος ἂν εἴη λόγος] Pz have written twice περὶ ... λόγος, but the first time they present a sentence without a verb as the other mss. do, and the second they rightly have ἂν εἴη, that PD eliminated when correcting. ἂν εἴη was easily lost because of homoeoteleuton ΕΤΕΡΟCΑΝΕΙΗΛΟΓΟC.

As for the book alluded to, see B 1. Author and Date, 2, above. As it often happens, block and section are closed by a reference to the writings of Galen.

RING-8', OUTER. THE HEKTIKOS FEVER.

P. 162,3-4 ὁ δ' ἐκτικὸς ... κάμνοντι] Section 11 is enclosed in a ring that deals with *hektikos* fever (R-8 R-8'), the only fever that does not represent an anoma-

¹⁴⁵ P. Brain, Galen on Bloodletting, Cambridge 1986, p. 7.

¹⁴⁶ NatHom 9: VI 52,4 -11 L.= CMG I 1,3; 9,1-2; 188,3-10 Jouanna.

¹⁴⁷ In Hipp. nat. hom. comment. II 1: XV 115,10-116,4 K. = CMG V 9,1; 60,16-26 Mewaldt.

SECTION 12. HOT + COLD AD = FEVER + RHÎGOS

12 heat+cold/
 13 heat/
 14 heat + cold
 15 cold+heat/
 16 cold/
 17 heat+cold/

Section 12, R' 7, Section 13, and their subdivisions, are closed by a reference to Galen's writings, be it future treatises-to-be, or past and present to the ongoing. All of them, as everywhere else in his treatises, has a *Verbum finitum*:

part 1, ending: ἀλλ' ἐν ταῖς τῶν συμπτωμάτων αἰτίαις ὑπὲρ
ἀπάντων εἰρησεται.//

R'-7, ending: εἰρήσεται δὲ καὶ περὶ τῆς τούτων ἐπιτηδειότητος ἐτέρωθι.//

part 1, ending: εὐδελον εἶναι νομίζω.//

part 2, ending: εἰρήσεται δὴ καὶ περὶ τούτων ἐπὶ πλέον αὐθις, ἐν ταῖς τῶν νοσημάτων αἰτίαις.//

R'-8 and Section 12 bring us back to the beginning of the treatise, Frame 1. The anomalous *dyskrasia* produces all the fevers, excepting the *hektikós*. But there is a new mark, already introduced in Section 10 and R-8: all of them are painful, but the *hektikós* is not. And another subject is added: some fevers are accompanied by *rhîgos*. Fevers will be treated up to the end of the book, while the description of *rhîgos* will be explained side by side with fever in Sections 13 to 17.

Section 12 is composed by two parts, P. 162,4-11: τῶν δ' ἄλλων ... εἰρήσεται, and 162,11-14 ἐπάνειμι ... λέλεκται.

P. 162,4-11 τῶν δ' ἄλλων ... εἰρήσεται] At the beginning, fevers are qualified as perceivable (litotes: οὐδείς ἀναίσθητος), in opposition to the *hektikós*. The opposition painful/painless in *dyskrasia* was presented when referring to *hektikós* fever in Section 10 and R8-R'8. It is painless, being the expression of homogeneous *dyskrasia*, where change does not happen.

We learn that *rhîgos* is provoked by anomalous *dyskrasia*, as are most fevers. The author refers us to his De symptom. caus., for a thorough presentation of *rhîgos*. In fact, he defines it in De sympt. caus. I 8: VII 145, 10 -12 K.: "I give now that name not to the perception of strong cooling, but to the anomalous agitation (σεισμόν) and trembling (κλόνον)". There is a thorough presentation of *rhîgos* in De sympt. causis II 5: VII 175, 12-196,7 K. See Commentary to S. 14-16, below.

In present-day English, "rigor" is defined as "a sudden feeling of cold shivering accompanied by a rise in temperature, preceding a fever" (OD). As the Galenic *rhîgos* does not precisely agree with "rigor", I just transcribe the Greek word.

P. 162,6 ἔνιοι ... ἐπάγουσιν] As for ἐπάγουσιν (Uz), ἐπιφέρουσι (*cett.*) could have been changed into ἐπάγουσι in the series

ΡΙΓΟCEΠΙΦΕΡΟΥCΙ → ΡΙΓΟCEΠΑΓΟΥCΙ,

but ἐπάγουσι is *difficilior* (in Galen) and shorter than the other.

P. 162,6-7 γίγνεται ... δυσκρασίας] γὰρ οὖν δὴ καὶ appears some ten times in Galen. γὰρ οὖν δὴ is Platonic: see Denniston 447. Most probably ΚΑΙΑΛΛΑΤΙΝΑ (in L) was changed into ΚΑΙΑΛΛΑΠΙΟΛΛΑ (πολλὰ *cett.*, cf. "many" *Hun*): TI was read Π, NA was read ΛΛΑ, and not the other way round.

P. 162,8 ἐν τῷ ... λόγῳ] This reference to a present treatise appears ca. 14 times in Galen:¹⁴⁸ cf. among them, De tumor. praet. nat. 1: VII 706, 8-9 K.: πρόκειται δὲ ἡμῖν ἐν τῷ νῦν ἐνεστῶτι λόγῳ σκέψασθαι περὶ τῶν παρὰ φύσιν ὄγκων. The insertion of νῦν in Δ is right, and was lost in Λ because of saut du même au même: ENTΩNYNENECTΩTI.

¹⁴⁸ De plac. Hipp. et Plat. 3.7.20.2; De sanit. tuen. III 13: VI 228,17 K. = CMG V 4,2; 101,6-7 Koch; De sanit. tuen. IV 1: VI 234,10 K. = CMG V 4,2; 103,18 Koch; De tumor. praet. nat. 1: VII 706,8 K.; De loc. aff. I 1: VIII 316,18 K.; De simpl. medicament. temp. ac fac. IV 7: XI 645,1-2 K.; De comp. medicament. sec. loc. I 8: XII 483,6 K.; In Hipp. de victu acut. comment. IV 21: XV 770,9 K. = CMG V 9,1; 290,7 Helmreich; In Hipp. Epidem. III comment. III 76: XVIIa,766,3; In Hipp. Epidem. VI comment. I,29: XVIIa, 890, 14 K. = CMG X 2,2; 57,10 Wenkebach.

P. 162,9-10 πρὶν ... πέφυκεν] Galen states the same task in Nat.Fac. I 2: II 6,14-16 K.= SM III, 105, 7-13 Helmreich: "We will do the next reasoning by searching all the subjects that we have presented at the beginning: how many and which are the faculties of nature, and what is the task endeared to each of them". The subject will be explained throughout the treatise.

When referring to quantity and quality in hypotactic interrogative sentences, Galen uses either:

1. the direct and simple interrogative pronouns, as in Nat.Fac. above: I 2: II 6, 16 -19 K. = SM III, 105, 11-13 Helmreich: πόσαι τε καὶ τίνες εἰσὶν αἱ τῆς φύσεως δυνάμεις καὶ τί ποιεῖν ἔργον ἐκάστη πέφυκεν

2. or the indirect and composed interrogative pronouns, as in De temper. I 1: I 509, 8 -510,2 K. = 1, 7-11 Helmreich: νυνὶ δ', ὅπερ ἐστὶν ἐφεξῆς ἐκείνῳ, ἀπάσας ἐξευρεῖν τῶν κράσεων τὰς διαφοράς, ὅποσαι τ' εἰσὶ καὶ ὅποῃαι κατ' εἶδη τε καὶ γένη διαιρουμένοις, ἐν τῷδε τῷ γράμματι δίδειμι τὴν ἀρχὴν ἀπὸ τῆς τῶν ὀνομάτων ἐξηγήσεως ποιησάμενος.

Galen uses simple relative pronouns freely as interrogative (specially ὅσοι), but just one at a time. He does not mix composed and simple pronouns. I have therefore corrected ὅσαι into ὅποσαι.

P. 162,11-14 ἐπάνειμι ... λέλεκται.] From those remarks about fevers, the author comes back to AD. He reminds the reader of inflammation as the (main) cause of fever, and states that all inflammations and all fevers are expressions of AD, *hektikós* fever excepted. In this way, he draws a bridge between the beginning of the treatise, Frame 1, and the ongoing Section, as he will do at the end of the book, Frame 1'. Moreover, Section 6 and 9, "Inflammation to fever, 1 and 2" are brought forth as well:

S. 1, F. 1	S. 6	S. 9	S. 12	S. 18, F. 1'
⊥	⊥	⊥	⊥	⊥

So that he refers to the treatise's beginning and end (Frame 1-1': systemic AD = fevers, *hektikós* fever excepted), and to Sections 6 and 9: local AD to systemic AD = inflammation to fever, 1 and 2. That way, he keeps the reasoning in order.

RING 7', OUTER. SEPSIS TO FEVER

P. 162,15-18 γένοιτο ... ἐτέρωθι] Cf. Commentary to R 7, in 156,11-13. In 162,15 γένοιτο ... πυρετός, both γίγνεται and καὶ in Λ, are *lectiones faciliores*, the former arising from the preceding λέλεκται, and ΔΕΚΑΙ from ΔΑΝ. On the other hand, iotacism made μόνη to disappear in Λ.

Λ has divided γε σφηνούμενά into γ' ἐσφ-, producing a Perfect tense. The participle is coordinated with a second one in Present tense, both referring to a timeless and durative condition, so that the Perfect tense is not adequate. σφηνούμενά is *difficilior* as well. An alike expression in De diff. febr. II 17: VII 399, 6-7 K. (σφηνούμενον ἀδιάπνευστον).

P. 162,18 εἰρήσεται ... ἐτέρωθι] He could be referring to De diff. febr., where putrefaction is often commented (see loc. sim. to R 7, in 156,11-13). Nevertheless, most probably he points to Med. Meth.¹⁴⁹ See, *inter alia*, VIII 7: X 583,3 - 586, 11 K.

SECTION 13. HOT AD: OTHER CAUSES OF FEVER

P. 162,19 - 164,17. Galen puts together several features of fever:

1. He enumerates four causes of (ephemeral) fever: 162,19 - 164,3
2. Its intensity depends on the importance of the cause, and the *diathesis* of the body: 164,3-6
3. Fever affects just pneuma, or humours as well: 164,6-8
4. Process giving way to fever (AD): a flux, or an alteration of quality. The immediate cause could be external or internal: 164,8-17

This Section is delimited at the beginning by R-7' that is closed by a mention of a Galenic writing (εἰρήσεται δὲ καὶ περὶ τῆς τούτων ἐπιτηδειότητος ἐτέρωθι), and, in a similar way, we find a second mention at Section end: εἰρήσεται δὴ καὶ περὶ τούτων ἐπὶ πλέον αὐθις, ἐν ταῖς τῶν νοσημάτων αἰτίαις.

While the first point is presented in four Absolute Genitives, the three remaining appear as anteposed Hypotactic sentences (and some postposed), having at their centre the Main sentences (MS). We could call it a *ὥς*-style. The Hypotactic sentences (HS) are introduced this way:

antep. HS ὅτι, ὥσπερ, + MS (εὐδηλον εἶναι νομίζω).//
 antep. HS καὶ ὥς + MS (πρόδηλον καὶ τοῦτο οὐδὲν ἦττον) + καὶ ὥς // MS (καὶ πῶς ὁ λόγος ἤδη δείκνυσιν) + ὥς + ὥσπερ + καὶ ὥς // ὅταν +MS// ὅταν +MS

Point 1. Other causes of fever. 162,19 - 164,3. See the easy way to grasp presentation by means of Absolute Genitives:

ποτέ μὲν λιγνυώδους διαπνοῆς ἐπισχεθείσης·
 ποτέ δ' ἐκ γυμνασίων πλειόνων ἢ πόνων αὐξηθέντος τοῦ θερμοῦ.
 ποτέ δ' ἐπὶ θυμῷ ζέσαντος ἀμετρότερον τοῦ αἵματος
 ἢ δι' ἑκκαυσίν τινα ἔξωθεν ἐκθερμανθέντος.

¹⁴⁹ Ps.I. mentions Med. Meth.

Other body's *dyskrasias* (systemic) are presented here: fevers not produced by inflammation or sepsis.¹⁵⁰ The related fevers are of the ephemeral kind, where just the pneuma is affected and heated.

Galen enumerates such causes as the retention of a fuliginous perspiration, a heat-stroke, gymnastic exercises or body exertion, and an immoderate boiling of the blood because of anger.

In De diff. febr. I 7: VII 295,11 -297, 12 K., Galen, referring to the ephemeral fevers, distinguishes them from the fever that follows sepsis, and enumerates such causes for them as heat-stroke, violent anger, exercises in excess, or fuliginous matter being held. He also remarks that, in the ephemeral fevers caused by *boubones*,¹⁵¹ the heat reaches the heart, but in those caused by the putrid sooty (σηπεδονώδης λιγνύς) does not, while in the ephemeral fevers upon putrefaction in a viscera or in the large vessels, the putrid matter οἶον καπνός (as smoke) reaches the heart. Nevertheless the humours in the *boubones* become putrid.

P. 162,20 ποτὲ ... ἐπισχεθείσης] In his Commentary to Plato's Timaeus 17,24-26 Schröder, Galen defines διαπνοή as opposed to ἀναπνοή. The latter name is given to the combination of breathing in and out, when they are produced through the mouth, while the former is produced in the whole body.¹⁵² A real transpiration of pneuma was already present in Empedocles, and is found in Plato and Theophrastus (Cf. De Lacy, De elementis, CMG V 1, 2; 194-195).¹⁵³

The fuliginous waste products are eliminated through transpiration: τὴν διαπνοὴν τῶν λιγνυδῶν περιττωμάτων (De usu part. IX 17: III 750,13-14 K.); λιγνυδῶς (fuliginous) is usually coupled by περίττωμα, "waste" (τὸ λιγνυδῶδες περίττωμα). When the fuliginous matter is held, a fever breaks. Cf. A. Debru, Le corps ..., 190-193.

P. 162,20 - 164,1 ποτὲ δ' ... θερμοῦ] Fever could be provoked by strenuous gymnastic exercises or body exertion, as we know. We may remember the temperature's increase after running a marathon. In De caus. morb. 2: VII 4-13 K., Galen explains that in hard gymnastic exercises an *ametron* heat reaches the articulations and the muscles. If it lasts and reaches the whole body, a fever rises.

γυμνασίων πλειόνων ἢ πόνων takes back S. 1; 142,11 γυμνασασμένων ἐπὶ πλέον, mentioning causes of quality' s AD . For γυμνασίων and πόνων, cf.

¹⁵⁰ ἔσται was changed into ἔστι in the model of Nic. (est), because of haplography in ΕCΤΑΙΔΥCΚΡΑCΙΑ.

¹⁵¹ Or swollen glands.

¹⁵² In Platonis Timaeum 17, 24-26 Schröder: καλοῦμεν γὰρ οὕτως ἡμεῖς τὸ μὲν ἀναπνοήν, ὡς εἴρηται, τὸ συγκείμενον ἐκ τῆς εἰσπνοῆς τε καὶ τῆς ἐκπνοῆς, ὅταν διὰ τοῦ στόματος ἄμφω γίγνηται ταῦτα, τὸ δὲ διαπνοήν, ὅταν καθ' ὅλον τὸ σῶμα.

¹⁵³ In De Lacy see as well the related passages in Galen. For transpiration, cf. A. Debru, Le corps ..., specially pp. 178-201.

De sanit. tuend. II 2: VI 86, 11-14 K. = CMG V 4,2; 40,11-12 Koch. On the other hand, *Hun.* omits πόνων, while PU omit πλειόνων, their exemplars having lost the former or the latter because of homoeoteleuton.¹⁵⁴

As the Λ family and the Aldine omit τοῦ θερμοῦ, and consequently read ἀύξηθέντων (with γυμνασίων ...), instead of ἀύξηθέντος with τοῦ θερμοῦ, Charterius added the unnecessary τὴν θερμασίαν ἐπιτεινόντων (post ἀύξηθέντων), and Kühn *post* him.

P. 164,1-3 ποτὲ ... ἐκθερμανθέντος] In De caus. morb. 2: VII 4, 13-15 K., we are told that anger, which is a boiling of the heat of the heart, sometimes provokes fever. Anger is located in the heart by Galen, following Plato. Cf. De Lacy, De placitis, CMG V 4,1,2; 360, 4 - 366,30. For ἔγκαυσις and ἔκκαυσις, cf. P. 164,16 and 18, below. Galen also explains the fever produced by exposition to sun in De caus. morb. 2: VII 5, 3 -17.

Point 2. P. 164,3-6 Intensity of fever according with the importance of the cause and the diathesis of the body.

ὅτι ... νομίζω] ὥσπερ gave way to ὥς (in P) or got lost (*Hun.*), in ΠΥΡΕΤΟΙΚΩΠΕΡ. In Hunayn, ἔμπροσθεν ἐλέγετο disappeared due to the phonetic series [phlegmonisemprosthenelegeto]: many an [e], the uncial series of round ΕΘΟC, the alike clusters ΕΤΕ ΕΓΕ, and a sort of homoeoteleuton NH THN.

As for καὶ τοῖς ἐπὶ of TMz ("that in all these fevers, as in those (fevers) upon the inflammation it was told before"), it would be more logical than just καὶ πὶ ("as upon the inflammation"), but it is unnecessary, for the context makes the meaning clear, by repeating "fever" and "inflammation" from the previous lines. πυρέξουσιν (164,5) in U is *difficilior* than πυρέττουσιν (*cett.*), and Galen uses it somewhere else. See Med. Meth. X 4: X 683, 8 K., and X 10: X 715, 3 K.

Point 3. P. 164,6-9 Fever affects just pneuma, or humours as well. καὶ μὲν ... ἀκολουθήσει] As fever upon putrefaction affects the humours, i.e., they get putrid, the ephemeral fevers just affects the pneuma.¹⁵⁵ We were told in Section 10 that the *hektikós* fever affects the solid parts as well, that is, homoeomers and organs. For a division of fevers into ephemeral, septic and *hektikós*, see De propriis, V. Nutton, CMG V 3,2; 60, 19 - 62,2, and Commentary 146-147.

As it seems, lasting fevers give way to the *hektikós*, in as much as they become continuous, the whole body being subject to a high and unalterable diathesis of fever everywhere. The organs are then affected, not just pneuma and humours.

¹⁵⁴ Galen (or the mss) uses both πλειο- and πλεο- .

¹⁵⁵ *Supra* ἄπτεται καὶ τῶν χυμῶν, scrip. P^{s.1} ὥς ἐπὶ τῶν ἐπὶ σήψει.

Point 4. P. 164,8-17. AD and fever. καὶ ὥς ... αἰτίας] Galen resorts to AD, relating the former remarks to it. We are reminded of the two kinds of AD, the one with flux, the other without it, just the humours altered in their quality. Outer or inner causes provoke the AD in question. We were told this doctrine at the beginning of the treatise (Section 1, Presentation). The synthesis presented here is preparing the exposition of fevers accompanied by cold, specially the *êpialos* coupled by *rhîgos*. This doctrine will be treated in the remaining sections, reaching the end of the book.

P. 164,10 δείκνυσιν] Although διδάξει (of P) is *difficilior*, the Future tense is not adequate to the context.

P. 164,17 ἐν ... αἰτίας] Above we have quoted several passages of De caus. morb. that comment on causes of fever. Indeed, that book is the one mentioned here by the author.

INTRODUCTION TO SECTIONS 14-17

1. *Êpialos* fever. The rather clever empirical explanation of exterior cold and heat affecting the patient at the same time, helps the theoretical question. From the matter of pain being perceived by people who, having their hands rather cold as of a very low temperature, tried to warm them by approaching a fire, Galen goes forth to the question of chills and fever. There are two causes at work inside the body, a cold and a hot humour, as there were two causes outside. The rather cold vitreous phlegm, and the hot yellow bile, both being in excess at the same time, as cold and hot are perceived. The simile of watering somebody with cold water after having him exposed to the hot sun is very clear: it is only necessary to substitute inside for outside, and small for large parts, and we have the *êpialos* fever, provided heat and cold are so widespread that no part of the body would perceive the former without perceiving the latter.

2. However in the paroxysm of some fevers ... *lipyria* and a kind of *kausos*, chills and fever are felt in different parts of the body: heat inside the viscera and cold outside. It is *dyskrasia*.

3. Chills also happen unaccompanied by fever. The cause is the vitreous humour as well, produced throughout a rather inactive life or by the ingestion of a lot of certain kinds of meals over a long period of time. In ancient times, it seems, nobody lived such a life, i.e., there were no references to it, but Galen and his coetaneous physicians have often found such a condition. It is a *dyskrasia*.

"Vitreous" (ύαλοειδής, ύαλώδης) is twice mentioned in the Hippocratic Corpus, in the Coan Prognoses 146 and 352 (V 614,10-15 L. y 658,14-18 L.), referring to urine in the crisis of acute diseases.¹⁵⁶ Other entities are also designated "hyaloid" in Greek medicine. Referring to the ocular membranes, the crystalline,¹⁵⁷ and the hyaline or vitreous, Galen in De placitis VII 5,23,1 -24,5 Lacy (CMG V 4,1,2), states that their names are coined by their similarity with those materials.¹⁵⁸ We deal here with a humour designated "vitreous" by Praxagoras.

Praxagoras, magister of Herophilus, a humoralist of the dogmatic school who was born on the island of Cos ca. 340 B.C., held that the humours' system was responsible for disease and health (Prax. fr. 46 Steckerl = Pseudo-Galen, Introductio sive med. 9; XIV 698, 18- 699,3 K., and Steckerl, p. 10). On the other hand, food produced blood and the other humours, by means of the innate heat: if this heat is well balanced, blood is produced; if unbalanced, the other humours appear (Prax. fr. 18 Steckerl = Galen, de nat. fac. II 8; II 117,8 – 16 K. = 182, 13-21 Brock = 186,10 -18 SM III Helmreich).

Galen asserts that Praxagoras, not including blood, preconised a system of ten humours, having divided the "Hippocratic" humours (*cf.* Prax. fr. 21 Steckerl = Galen de nat. facult II 9; II 140,15 – 141,14 K. = 216,15- 218,5 Brock = 208,5 -22 SM III Helmreich): taking blood into account, there were 11 humours in all. Rufus of Ephesus (Prax. fr. 22 Steckerl = Rufus, De corp. humani 226,1 – 227,2 Daremberg), in the late I c. A.D., referred to him the division of phlegm (κατὰ τὴν ἰδέαν τοῦ φλέγματος) into "sweet, equally mixed and vitreous" humours (γλυκὺν καὶ ἰσόκρατον καὶ ύαλοειδῆ). The vitreous humour is said to be the coldest, and difficult to digest.

Galen explains in De differ. febr. (II 6: VII 347,4 - 348,1 K.), *êpialos* and *rhîgos*, and he states that the name "*êpialos*" is given to a fever accompanied all the time through by *rhîgos*, both of them being perceived in every body's part at the same time. It seems that some Attic doctors applied the name *êpialos* to the *rhîgos* that precedes fever. To the humour that produces *rhîgos*, Praxagoras applied the name of vitreous, while the so-called young doctors, Philippus among them, call it just "raw". It belongs to the phlegmatic kind, being as it is cold and viscous. Of course, being phlegmatic, it is humid and cold.

There are four kinds of phlegm. The vitreous is rather cold and produces hard pains of the so-called colic type. A second is sweet, as perceived when some patients cough up, while others have sputum of the acid kind (being the

156 The adjective appears as well in Theophrastus, De Lapidibus 30,2-4 Eichholz: ποιεῖται καὶ ἄλλαι πλείους εἰσὶν, οἷον ἢ θ' ύαλοειδής, ἢ καὶ ἔμφασιν ποιεῖ καὶ διάφασιν.

157 Nowadays, the so-called crystalline is the lens of the eye, while the hyaloid membrane envelopes the vitreous or hyaloid humour, a viscous fluid that fills the space between the lens and the retina.

158 κρύσταλλος is the Greek name for ice.

third, ὀξύ): this one is colder than the sweet, but not as cold as the vitreous. There is a fourth phlegm, the salty (ἄλμυρόν), upon which the patients do not have *rhîgos*, but just *phrikê* (minor chills), in the paroxysm (De differ. febr. II 6: VII 349,1-6 K., οἱ πυρέττοντες οὐ ῥιγοῦσιν, ἀλλὰ φρίττουσι μόνον).

Let us review the genesis of *rhîgos* as explained by Galen. In Hipp. Epid. VI comment. I 9: XVIIa,847,18 – 848,6 K. = CMG V 10,2,2; 31,19-25 Wenkebach, he states that both the vitreous humour and black bile may provoke *rhîgos*. The former provokes the *rhîgos* δυσεκθέρμαντον (*rhîgos* that cannot be heated), while the latter provokes either that one or the σφοδρόν, which presents the most violent chills. The paroxysm of the black bile's *rhîgos*, happens on the fourth day, that of the vitreous', is quotidian.

In Diff febr. II 6: VII 349, 6 – 350, 10 K., he writes:
when the acid humour, and the vitreous, get in motion through the perceptive parts,¹⁵⁹ they make appear the *rhîgos* without fever.

IF a moderate putrefaction occurs, it produces the *êpialos* fever.

IF the putrefaction were more severe, *rhîgos* firstly appears, and fever follows, as being overcome the cold by the heat, so that the *rhîgos* does not happen either in the febrile peak or in the paroxysm.

IF putrefaction does not occur, no *rhîgos* at all.

... In the tertian fevers, the yellow bile provokes *rhîgos* and fever.

SECTION 14. AD: HEAT + COLD = FEVER + RHÎGOS

164,18 – 166,7. There are four points in the reasoning.

1st. (Section 14) From the simile of external heat and cold perceived at the same time in the same body's part, the nails in this case, and provoking pain (i.e. AD), Galen deduces that internal pain is provoked by AD. He mentions consequently such internal pain as could be felt in the colon, the testicles, or anywhere else.

2nd. (Section 14-15) The nails suffer an excess of cold and an excess of heat at the same time, that is, a cold *dyskrasia* and a hot *dyskrasia*. If that happens in an external part of the body, why would it not happen in an internal part? This way he introduces the effects of two humours moving at the same time through the body: one of them is cold, the vitreous, and the other is hot, the yellow bile. The patient perceives both the cold and the heat at the same time in the same part (two *dyskrasia*, cold and hot).

3d. (Section 15) A man heated by the sun, and then being doused in the front with cold water, should perceive the heat everywhere, but the cold just in the front, that is, he should not perceive the excess of heat and the excess of

¹⁵⁹ I.e. the homoeomers.

cold in the same parts of the body. Likewise, Galen shows that, internally, immoderate heat and cold could be perceived in different parts at the same time.

4th. (Section 15) The medical view:

A. Inside, the patient perceives both the excess of cold and heat at the same time in the same parts. Such is the *êpialos*. Besides, in the *êpialos*, *rhîgos* and fever happen together all the time.

B. Inside, the patient perceives the excess of cold and heat at the same time, but in different (big) parts. So too, *lipyria* and some *kausos*, and some fevers in the paroxysm.

P. 164,18-20 ὥσπερ ... ἀπέθανον] For the *difficilior* form ἐψύγησαν (z), cf. κατεψυγμένοι (Δ) immediately after. On the other hand, τὸ σύμπαν σῶμα means "the whole body" and is rather frequent in Galen. The other mss. present σύμπαν τὸ σῶμα, where σύμπαν is in predicative position and should mean "all the body". See Smyth, pp. 295-296.

P. 164,20-21 καὶ μὲν ... ἄδηλον] At the beginning of a block, Galen fancies anteposed hypotactic sentences, verbs in the first position, and οὗτοι and/or πάντες with anaphoric function (see Introduction, B 3. Composition). So that οὗτοι (Δ; Hun, "these") is better than οὕτω ("that way", Λ). The Λ-family reads ΤΟΠΠ as ΤΩΠΠ.

P. 164,21 - 166,3 ἀλγοῦσι ... ὀνύχων] As external immoderate heat or cold produces *dyskrasia* and pain in a body, internal pain is a symptom of *dyskrasia* as well. In *De locis aff.* II 5: VIII 81,5-11 K., and *De meth. med.* XII 7: X 853, 12-14 K., there are similar passages.

In Hipp. *VetMed* 16 (I 606, 17- 612,6 L. = I 18,8 – 20,6 Kühlewein = Hippocrate II, 1; 139,4 -141,11 Jouanna), the author considers the effects of being exposed to external heat, and then to cold, or the other way round, being either healthy or sick. Specially in *De meth. med.*, Galen poses and answers the question of pain without an exterior cause. For the pain produced by intense heat or cold, cf. *De meth. med.* XII 7: X 853, 14 -856, 10 K.

The text of the Scholium to our treatise (see App. Crit.), "because an AD gets the nerves' ends", explains the nails' pain using the unusual noun ἀποτελευτήσεις (the verb is common): pain is felt (transmitted) by the nerves' end. In relation to nails, I have just found it in Meletius, *De natura hominis* 123, 3-4 Cramer: Αἱ δὲ ἀποτελευτήσεις τῶν ἐν τοῖς δακτύλοις νεύρων οἱ ὄνυχές εἰσιν, εὐπρεπείας χάριν γεγονότες.

P. 166,6-7 ἡ τὸ ... μορίων] Etymologically, the Greek name for the colon is κόλον,¹⁶⁰ but it is frequently written κῶλον. I corrected it. As for the second part, τοὺς ὄρχεις, the mss. A and P of *Hun.* read "testicles", while the Greek mss. present "teeth" (ὀδόντας). Were it not an easy error in the Greek codd., I should not have corrected it. However, the previous ΟΔΥΝΩΝΤΑΙ could have easily turned OPXEIC into ΟΔΟΝΤΑΙ, maybe at the end of a line (27 letters):

ΟΔΥΝΩΝΤΑΙ
ΠΟΛΛΑΚΙΧΤΟΚΟΛΟΝΗΤΟΥCOPXEIC
ΟΔΟΝΤΑΙ

In De diff. sympt. 3,5: CMG V 5,3; 220,14-17 Gundert = VII 57,17-58,1 K., Galen mentions eyes, colon and teeth as organs suffering pain related to the sense of touch.¹⁶¹ Gundert does not mention lectiones variantes. She quotes De plenit. 8,8,¹⁶² where just pain in the colon is mentioned.

As the error that turns OPXEIC into ΟΔΟΝΤΑΙ is rather plausible, *Hun.*'s reading "testicles" might be right. If this is the case, "teeth" in De diff. sympt. 3,5 could be wrong: somebody may have "corrected" the passage upon the text of De inaequali. In Introduction, A 3. Relationships between the Greek manuscripts. The Greek manuscripts and Hunayn, I hinted at the possibility of the right text in an exemplar independent from the archetype, because the error is common to all the mss.

For the diagnosis of enteric pain, cf. De loc. aff. I 2: VIII 20,3 - 30,6 K. and VI 2: VIII 381, 3 - 389, 18 K.¹⁶³ For the diagnosis of the diseases of male genitals, cf. De loc. aff. VI 6: VIII 437, 16 - 452, 12 K. The name ὄρχεις could refer as well to the female's ovaries. Cf. D. Nickel, Galeni De uteri dissectione, Berlin 1971 (CMG V 2,1), p. 76 (Commentary to 4,6: p. 42,6).

The syntagm τὶ τῶν ἄλλων μορίων appears some 90 times in Galen. The remarkable word order in τῶν ἄλλων τι μορίων (the reading of Λ), is attested in Galen, as in De usu part. XI 19: III 931, 9-10 K. = 176,27 Helmreich,¹⁶⁴ or De praesag. ex puls. II 4: IX 287, 6-7 K.¹⁶⁵ As this one is *difficilior*, it is not necessary to credit *Hun.*'s "in any other organ" with the correct text. Nevertheless its rendering in Greek, ὅτιοῦν, would have easily lost ΟΥΝ by quasi-homoeoteleuton in ΟΤΙΟΥΝΤΩΝΑΛΛΩΝΜΟΡΙΩΝ, and ἡ ὅτιοῦν τῶν ἄλλων μορίων is found at the end of a series in De constit. art. med. 12: I 267, 5-7 K. = CMG V I,3; 12, 7-12: 92, 20-21 Fortuna.

¹⁶⁰ Cf. the description of the intestine in De usu part. IV 18: III 333, 3-12 K. = 244,20 - 245,8 Helmreich.

¹⁶¹ See tr. and note in Johnston 189.

¹⁶² 52,28-30 Otte = VII 550,4 K:

¹⁶³ In Anonymus Parisinus XV 1-2 Garofalo, colic affections are described (and therapy in XV 3-16 Garofalo: pp. 102,1 - 106,13).

¹⁶⁴ εἰ καὶ τῶν ἄλλων τι μερῶν ἔπαθε τῆς ἄνω γένουος.

¹⁶⁵ συμμεταβάλλεται δ' εὐθὺς αὐτῷ καὶ τῶν ἄλλων τι γενῶν εἰς ἀνωμαλίαν τρεπόμενον.

SECTION 15AD: COLD+HEAT=RHÎGOS+ÊPIALOS FEVER

P. 166,7–168,10. In 166,7-8, οὔτε... νοσοῦντων, Gal. favours οὐδὲν θαυμαστόν, as in line 11 below, followed or not by ἐστίν.¹⁶⁶ On the other hand, in "for neither any of such conditions is amazing", "conditions" is feminine (διάθεσις), and "(not) any" is neutral (οὐδέν). Galen often uses neutral pronouns "agreeing" so to say with animate nouns, or being anaphoric of them. The insertion of διαθέσεων in Δ, is correct, and may have disappeared because of homoeoteleuton with the preceding τῶν τοιούτων. The series οὔτε-οὐδέν-οὐδέ¹⁶⁷ emphasises the negative idea conveyed in the point "both to have chills and fever at the same time is not surprising at all". Family Δ reads the weaker οὔτε after θαυμαστόν.

For the irregular ῥιγῶσι, cf. Chantraine, *Morphologie*, p. 242, note 2, and Smyth, pp. 127, 190. The same form in p. 8, 16 (Indicative), and 22 (Participle), below.

P. 166,8-12 καὶ γὰρ ... ἄρρωστον] The so-called vitreous humour is the protagonist of the Section. See Introduction to Sections 14-17. In Loc aff. II 5: VIII 81,11 –82,10 K., Galen tells a tale of his own experience with the vitreous. He suffered a rather intense pain in the low abdomen, and diagnosed a stone in the ureter. In the end the agent was the vitreous humour, which was not in the kidneys/ureters, but in the intestine, maybe in the thick one. The expulsion was painful and long, but at the end the vitreous appeared, so like glass! It is the coldest of humours, he could tell.

P. 166,8-9 καὶ γὰρ ... προσαγορεύει] καὶ γὰρ εἰ is *difficilior*, and adequate to open blocks. For the syntagm ψυχρὸς ὢν in the description of this same humour, cf. De placitis Hipp. et Plat. 8.6.42.3 – 42.6, ἐπὶ μὲν τῶν ἀφημερινῶν ὁ φλεγματώδης πλεονάζων χυμός, ὑγρὸς καὶ ψυχρὸς ὢν. This way, Galen remarks the opposition between this vitreous humour, cold, and the bilious humour that is hot, beginning with the uncommon one.

P. 166,10-11 καὶ ὁ ... σωμάτων] As for πικρόχολος, cf. Schöner, Vierer, p. 88: in Galen, the yellow bile is bitter, blood is sweet, phlegm is salty, while black bile is sour. In πλεονάζοιεν ἐν αὐτοῖς καὶ κινεῖντο, the two verbs present variant readings. πλεονάζοιεν of Pz seems to be the right text, but it is necessary to add the preposition ἐν after it, because Galen constructs πλεονάζω

¹⁶⁶ In De sympt. caus. II 5: VII 194, 10-11 K. it has no verb, but in 194, 16 it does.

¹⁶⁷ Cf. Denniston, p. 193. For the series οὐδὲν θαυμαστόν οὐδέ, cf. De sympt. caus. II 5: VII 189, 7 –8 οὐδὲν οὖν θαυμαστόν οὐδέ τὸ μηδέποτε θεάσασθαι ῥίγη.

with ἐν.¹⁶⁸ Maybe the preposition has complicated the transmission. As for the second verb, κινεῖντο is sound, both Optative and plural. Optative is difficult for scribes, and, in the treatise, variant readings appear everywhere because of its misunderstanding.

αὐτοῖς (P) is referred to patients (τῶν νοσοῦντων), of the preceding line. In the next line 12, ἄρρωστον is *difficilior* vs. κάμνοντα (in P), specially when coupled by the article.

P. 166,11 διὰ ... σωμάτων] The sensitive parts are the homoeomers, which would be called tissues nowadays. Remember that the organs are composed of them.

P. 166,11-12 οὐδὲν ... ἄρρωστον] As we will learn below,¹⁶⁹ two *dyskrasia* are produced, the one cold, and the other hot. Both are perceived,¹⁷⁰ either in different parts, as in *lipyria* & *kausos*, tertian & quartan, or in the same ones, as in the *êpialos*.

P. 166,12-14 οὐδὲ ... ψύξεως] While Δ has two Optative (στήσαις, προσραίνεις) coupled by καί in the protasis, Δ presents the participle στήσας and makes it appositive of προσραίνεις (it has no καί). The former construction is simple and obvious, while the latter focuses on the action of watering, and is 100% Greek. προσραίνεις was phonetically altered in the Δ-family, and disappeared in the other group, giving way to the gloss προσβρέχεις or -οις.

In ἀδύνατον αὐτῷ τὸ μὴ οὐχ' ἅμα, the article τό was lost by haplography of αὐτόν vel αὐτῷ, and only appears in U. Similar construction of ἀδύνατον in De diebus decr. I 11: IX 822, 6- 7.

Some mss. read οὐχ' in 166,13 and all of them in 168,1. In both cases rough breathing follows, making οὐχ' = οὐχί suspicious, instead of the simple οὐ (οὐχ).

P. 166,13-14 τῆς ... ψύξεως] The reading θερμῆς (in z) is *difficilior* than θερμότητος. Although I have accepted it, θερμῆς may have been originated from ἡλίῳ θερμῷ in the preceding line.

P. 166,14-17 ἀλλ' ... δοκεῖ] Both κατὰ τὰ μεγάλα and κατὰ τὰ μικρά, present an article, the reference being determinate, as body's parts (big as opposed to small). Although the syntagm usually appears indeterminate in Galen, even referring to the body's parts, it presents the article at least four times. And the

168 Cf. πλεονάζειν ἐν αὐτοῖς in De sanita. tuend. V 5: VI ,337, 7 K.= CMG V 4,2; 145,26 Koch (ἐν in Koch, not in Kühn).

169 For οὐδὲν θαυμαστὸν see above, at the beginning of the Section.

170 The words ἀμφοτέρων ὁμοίως appear in this order in three other Galenic passages.

ability of the syntagm to lose the article is clear, being an easy haplography of [KATATA].

P. 166,16 κατὰ ... πυρετούς] The *êpialos*¹⁷¹ is already found in Theognis I,174. Grmek identifies it with a bout of malaria (Diseases, 277-283). It is not a single disease, but a group of diseases produced by Plasmodia. "There can be no doubt as to the presence, at the time of Hippocrates, of vivax, quartan, and falciparum malaria (the bilious remittent fever as well as the invasive, pernicious form)". See as well J. Jouanna, Hippocrate II, 2, *Airs*, pp. 260-261, and note 2.

As Galen here describes *êpialos* as a fever accompanied all the time by chills, tertian and quartan malaria have to be discarded, because he says that in tertian and quartan, chills come first, and fever only after (i.e., when fever rises, chills disappear). The name "ague" is defined this way (OD): "A malarial fever, marked by successive fits or paroxysms, consisting of a cold, hot, and sweating stage. The name ague was apparently at first given to the burning or feverish stage, but afterwards more usually to the cold or shivering stage, as being the most striking external character of the disease". Observe that the *êpialos* cannot be a typical malaria that is characterised by cycles of chills, fever and sweating. See above, Grmek, for the severe type.

P. 166,16 ἔνδοθέν ... σμικρά] The addition of *Hun.* (see Critical App.) seems to be a development of the next sentence τῷ γὰρ ... οὐχ' ὑπάρχει.

P. 166,17-168,1 τῷ γὰρ ... ὑπάρχει] The two humours are so widespread in the body that even the smallest part has both. The consequence is that the patient perceives the two of them in the same places, although the fact is that the two humours (or whatever else), cannot be in the same place at the same time.

P. 166,17-18 τῷ ... παρεσπάρθαι] While Δ reads δι' ἐλαχίστου, Λ has δὴ ἐλαχίστῳ. Once δὴ was wrongly read, the adjective is accommodated to the preceding article τῷ. In fact, the article introduces a Dative of cause. The uncommon δι' ἐλαχίστου is used for time, coupled by χρόνου or by itself,¹⁷² and it appears in late authors, except for Thucydides. He applies it to time in two bright expressions: Hist II 42.4.11 δι' ἐλαχίστου καιροῦ, and Hist IV 39.4.2 δι' ἐλαχίστου ἀπροσδόκητος. The meaning in our passage is local: the adjective being frequent, it does not seem necessary to add a substantive.

171 In the glossary to Hippocrates by Erotianus, ἡπιαλώδεις πυρετοί is explained: οἱ μετὰ φρίκης καὶ ῥίγους γινόμενοι. "êpialic fevers: those occurring with shivers and *rhîgos*" (Vocum Hipp. coll. 74, 11-12 Nachmanson).

172 See Cf. Cassius Dio, *Historiae Romanae* I, versio prima 307,20 -22 Boissevain: ὅτι Καρχηδόνιοι πολεμούμενοι παρὰ Ῥωμαίων ὅπλα τε καὶ τριήρεις δι' ἐλαχίστου ἐποίησαντο..

P. 166,18 τό ... θερμαῖνον] This is the reading of PU, which *Hun.* rightly translates "that what cools and that what heats up", i.e. the two humours produce everywhere cold and heat. The other mss. just have "the cold and the hot", or the other way round. The order cold-hot is unusual, but Galen here follows the sequence chills-fever that he is stressing.

P. 166,1-168,1 οὐδέν ... ὑπάρχει] The Λ-family reads αὐτοῦ (αὐτῆς in the *recc.*), while Δ transformed ΑΥ into ΟΥ through the influence of the former οὐδέν, and of the word αὐτοῦ itself forwards (ΟΥΔΕΝΕΚΤΙΝΑΥΤΟΥΛΑΒΕΙΝ), or else jumped to ΤΟΥ because of *saut du même au même*, and afterwards the word was completed.

P. 168,1-10 κατὰ μέντοι ... συμπέπτωκεν] When the two humours are perceived at the same time in different (big) places, there is cold outside and heat inside, as the patients themselves describe. That does not happen in the *êpialos*, but in the *lipyria* and a mortal kind of *kausos*, and in the paroxysms of some other fevers.

P. 168,1-4 κατὰ ... τόπον] The focus is the pair *rhîgos*-fever, καὶ ὀιγῶσι καὶ πυρέττουσιν, as it was at the beginning of the Section. The Λ-family (with P^{il}), two mss. of *Hun.*, S (*i.m.*) and L, and Nic. (*sitiunt*), have διψῶσι, "(they) are thirsty", instead of πυρέττουσιν, "(they) have fever". Maybe the sequence πυρεττόντων - πυρέττουσιν was misunderstood as a tautology. It is just a way of stressing the fact of chills beside fever.

To be thirsty is often added as a symptom, in fevers and *rhîgos*, in Galen. See, among others, *De sympt. caus.* II 5: VII 194, 15 -195, 3 K. The Pseudo-Aristot. *Problem. libr I quae. 27*, (II) 947b.15 -22 Bekker, contains the question of *rhîgos* coupled with thirst.

The *locus similis* to καὶ ὀιγῶσι ... τόπον, in *De diff. febr.* II 6: VII 347, 5-9, and its copy in Aetius V 87, 5, are referred to the *êpialos*: they add that the perception of both fever and chills happens in the same places.

ἄμα ἀμφοτέρων (168,3): the mss. other than U have lost ἄμα before ἀμφοτέρων by haplography in AMAAM. It is a remarkable way of stressing the fact of the double perception of cold/hot. The same repetition is present in Galen ca. four times, and the group ἄμα ἄμφω appears four times as well.

P. 168,3-4 ψύξεως ... τόπον] The Λ-family has lost ὁμοῦ by homoeoteleuton in ΑΜΕΤΡΟΥ ... ΟΜΟΥΑΛΛΟΥ.

P. 168,4-5 ἔχουσι ... διορίσαι] U keeps οὔτοι, while the others have lost it in the row ΟΥCΙΟΥΤΟΙ, and phonetic [ousi] [outi]. The reading of P διορίσασθαι, is a dittography of the right διορίσαι (CΙΔΙΟΠΙCΑΙ → CΙΔΙΟΠΙCΑCΘΑΙ).

P. 168,6 τῆς θερμασίας αἰσθάνονται] Uz preserve αἰσθάνονται (cf. perceive Hun.), lost in the others in -μασίας αἰσθάνονται.

P. 168,19-20 εἴσι ... καύσων] Ms. P rightly reads (γένος) ὀλέθριον instead of ὀλεθρίων (καύσων). Phonetical homoeoteleuton could have acted backwards and produced ὀλεθρίων. In fact, Galen puts "*kausos*" and "mortal" together several times. He quotes references to *kausos* by Hipp., in his Commentary to Prorrh. I,¹⁷³ and to Epidemics I.¹⁷⁴ In the former, Galen asserts that, in the mortal *kausos*, there is extreme heat inside, and no heat at all outside. Strong cold in the extremities coupled with perspiration leads to fatal *kausos* (Epid. I.) He quotes Hipp. Aphor. IV 48, 1-2 L. = Hipp. IV 148,3-5 Jones: Ἐν τοῖσι μὴ διαλείπουσι πυρετοῖσιν, ἣν τὰ μὲν ἔξω ψυχρὰ ἦ, τὰ δὲ ἔνδον καίηται, καὶ δίψαν ἔχη, θανάσιμον. "When in a non-intermittent fever, the patient is cold outside, burns inside, and is thirsty: mortal." It is a composed fever, cold *dyskrasia* plus hot *dyskrasia*.

Oribasius, in Coll. med. XLV 30,¹⁷⁵ defines two kinds of *kausos*, the one as the most lethal, which burns inside and produces terrible thirst that cannot be quenched, black urine, with many other signs such as black and rough tongue, insomnia: cold outside, mainly arms and legs. The other *kausos* is milder, and resolves the bad kind if it occurs.

Kausos does not correspond to a present-day disease; in fact, it is not a disease *sui generis*, but a non-specific syndrome. In the HC, "it is a clinical entity defined by a kernel of obligatory symptoms and a surrounding haze of optional ones. Its fundamental elements are acute fever that appears abruptly, intense thirst, coated tongue, insomnia, transient states of confusion, abdominal distress, and «bilious» excrements. Fever is continuous or remittent" (Grmek, Diseases, p. 290). Grmek brings forward the case of Philiscus¹⁷⁶ in Epid. I 13: II, 682,5 - 684,9 L.=Kühlewein I 202,12—203,10 (Grmek, Diseases, pp. 284-304), whose history suggests *kausos*. See as well De iudicat. 8-9: IX 278,14-19 L. = 3,12-19 Preiser, and 11: IX 280, 2-9 L. = 11a, b, c: 4,9 -21 Preiser.

The references to the *lipyria* are scarce.¹⁷⁷ Its name indicates a remittent (fever), and in the texts is written leip- or lip- as in λείπω/ἐλιπον. It is men-

173 In Hipp. prorrh. I comment. I (7): XVI 530, 4-9 K.=CMG V 9,2; 23,4-5 Diels.

174 In Hipp. Epid. I comment. II (75): XVIIa 178, 12- 181, 14 (to Hipp. Epid. I 9 L. II 650, 12-654,2 L. = Epid. I 18 Kühlewein; I 194,13-195,7 Köhl.) = CMG V 10,1; 88,21-89,9 Wenkebach.

175 Cf. Coll. med. CMG VI 2,1; XLV 30, 22,1 -27,1 Raeder.

176 For the name of the patient, see Deichgräber, Die Epidemien und das Corpus Hippocraticum. Voruntersuchungen zu einer Geschichte der kaischen Ärzteschule. Berlin 1933, repr. Berlin 1971, p. 16.

177 Cf. as well Pseudo-Galen, Def. med. 90: XIX 399, 13-16 K.; Alexander Tr., De febris I 437,25 -439,1 Puschmann; Leo med., Conspectus 1,14, 7-8 Ermerins; Aetius V 90,1 -20 Olivieri.

tioned in the Hippocratic Corpus: Coan Prognoses 117,¹⁷⁸ Morb II 16,¹⁷⁹ De judicat. 11,¹⁸⁰ and Ep. 21.¹⁸¹ In Ep. 21, Smith (ibid.) translates "(chronic) malignant intermittent fevers" (ἐν λιπυριώδει πυρετῶ).

In De differ. febr. I 9: VII 309, 12-17, Galen mentions the *lipyria* along with the *êpialos* and some others, as fevers raised by putrid humours, as he does in In Hipp. Aph. comment. VII [42]: XVIIIa 145, 17 – 146, 6 K. He explains the diagnosis of putrid fevers in De differ. febr. I 9 (VII 304,3 – 313, 10 K.) In De simpl. med. temp. ac fac. III 16: XI 586, 5-9 K., he adds that in both *lipyria* and *êpialos*, the body suffers being heated and cooled, a condition born in the body itself, as he explains in our treatise.

SECTION 16. COLD AD/NO HEAT = RHÎGOS/NO FEVER

P. 168,10 - 170,4. The composition of the Section stresses the occurrence of *rhîgos* unaccompanied by fever (the symbols Γ $\perp$ enlighten the correspondence in the Rings, while $\overline{\Gamma\Gamma}$ $\perp$ mark opposition):

Γ τοῖς ῥιγῶσι μέν, οὐκ ἐπιπυρέττουσι δέ.
 Γ πάντως ἀργὸν προηγῆσασθαι βίον ... πλῆθος ἐδεσμάτων
 χυμὸς ἀργὸς ψυχρὸς ὥμὸς φλεγματώδης ... τὸν ὑαλώδη.
 $\perp$ μηδεὶς τοσοῦτον ἀργῶς καὶ πλησμοναδῶς διητᾶτο,
 $\overline{\Gamma\Gamma}$ παρὰ τοῖς παλαιοῖς ἰατροῖς
 ἐξ ἀνάγκης ἔπεσθαι ῥίγει πυρετόν.
 $\perp$ ἡμῖν αὐτοῖς καὶ ἄλλοις πολλοῖς τῶν νεωτέρων ἰατρῶν
 $\perp$ ῥίγος ὧ πυρετὸς οὐκ ἐπηκολούθησεν.

First, a double ring:

Γ *rhîgos*, no fever
 Γ idle life, plenty of meals
 the vitreous humour
 $\perp$ idle life, plenty of meals
 $\perp$ *rhîgos*, no fever

Second, an opposition:

$\overline{\Gamma\Gamma}$ the old doctors	fever follows <i>rhîgos</i>
$\perp$ the new doctors	<i>rhîgos</i> , no fever

¹⁷⁸ V 608, 2-3 L.

¹⁷⁹ VII 30,6-8 L.= Hippocrate X 2: 151,2-4 Jouanna) and II 51 (VII 78,22-23 L.= Hippocrate X 2: 188,17-18 Jouanna.

¹⁸⁰ IX 280, 9-16 L. = 11d: 5,1-7 Preiser.

¹⁸¹ IX 390, 20 – 392,2 L.=Smith 100,7-10.

At times, *rhîgos* occurs by itself, independent of fever. Galen has mentioned in the previous section that chills are consequent to the cold vitreous humour. We now learn that the vitreous is provoked both by inactivity and excess of meals of the kind that makes it appear. In other passages, he adds the excess of bathing as well. And it occurs in women, more prone to inactivity and baths!¹⁸² Remarkably, such *rhîgos* was not described by previous fellow doctors. Living in the centre of the Roman Empire, and having stayed in Alexandria, Galen supposes that such a kind of idle (and wealthy) life had not been possible in ancient times. But in his own days, he and other colleagues have found these special kinds of violent chills.

Nowadays, chills are described without fever as well. The symptom could be related to scores of diseases/syndromes: infection, hypoglycaemia, anaemia, thyroid disorder and anorexia, among them.

P. 168,10-11 ἀνώμαλος ... πυρετῶν] The text is corrupt. PU include σύνθετον, and P reads εἰς τοῦτον σύνθετον πυρετόν. The context does not supply a disease or symptom that could end in fevers, where εἰς τοῦτον ... would be correct. We just have some details concerning anomalous *dyskrasia* and fevers, in that order. Galen explains below (p. 170,5-6) that the *êpialos* is composed (σύνθετος) of two *dyskrasia*, that of *rhîgos* and that of fever. And he remarks that other fevers present *rhîgos* as well, but not throughout the process.

As far as fever and *dyskrasia* are concerned, the word "composed" is applied by Galen to:

1- a *dyskrasia* composed of two qualities at the same time, as hot and dry, hot and humid, cold and dry ... These present two compatible qualities, and were presented at the beginning of the treatise, Section 1, and elsewhere (specially in *De temperam.* and *De elementis*).

2- a fever composed of two *dyskrasia*, such as a hot *dyskrasia* and a cold one, as in *êpialos*, *kausos*, *lipyria* and many others. Observe that a *dyskrasia* "hot and cold" cannot exist, being two opposed qualities. In fact, sometimes shivering and even chills disappear when the hot *dyskrasia* raises a high fever that eliminates the cold, as when chills and fever occur one after the other (tertian and quartan, see below, section 17). However, in the *êpialos* the two *dyskrasia* occur at the same time, but it is not a composed *dyskrasia*: there are two *dyskrasia*. Galen specially insists on the special features of the *êpialos*.

3- a fever composed of two fevers, as a remittent tertian and a continuous *amphêmerinos*, that is, the *êmitritaion*;¹⁸³ cf. *Differ. febr.* II 8: VII 363, 3-17 K., and many examples in *Diff febr.* and *De crisibus*.

¹⁸² Cf. Gal. *De tremore* 7: VII, 636,18 -637,8 K.

¹⁸³ It happens as a half tertian.

P. 168,11-12 ἀνώμαλος ... ὀνομαζομένων] The sentence is omitted by Hunayn. Hun^P has a non-syntactical clause that includes "continuous". The syntagm πλὴν τῶν ἐκτικῶν ὀνομαζομένων appears 6 times in the treatise, in an effort to remind the reader of the homogeneous *dyskrasia* so as to better understand the anomalous, which is the opposite.

P. 168,12-13 ἀνώμαλος ... σύμπτωμα] Instead of "but they do not have fever afterwards" (οὐκ ἐπιπυρέττουσι δέ), ms. P reads "but they do not have yet fever" (οὐκέτι δὲ πυρέττουσι), as the *locus similis* in Leo the Physician¹⁸⁴ (Conspectus 1,15,1 -4 Ermerins): "when they just have *rhîgos*, but do not have yet fever" (ὅταν μόνον ῥιγῶσιν, οὐκ ἔτι [lege οὐκέτι] δὲ πυρέττουσιν). In this context οὐκέτι is wrong, as far as the point is the *rhîgos* just by itself in the absence of fever. The palaeographic error is obvious in P. Interestingly, the syntagm οὐκέτι (δὲ) πυρέττουσιν is only found in P and Leo, as far as I know.

In p. 170,4 below, "*rhîgos* which fever did not follow" is explicitly invoked. It is only afterwards (p. 170,5 ff.) that Galen will relate *rhîgos* and fever. He explains this kind of *rhîgos* in De trem. 7: VII 636,18 -637,8 K., and calls it τὸ καλούμενον ἀνεκθέρμαντον ῥίγος: "the so-called *rhîgos* that «cannot be warmed»", and includes the reference to the "scarce symptom."¹⁸⁵

P. 168,13-14 σπάνιον ... ἐνίοτε] The use of μέν ... μὴν is attested in Plato,¹⁸⁶ the later being adversative. In our text, the meaning is adversative as well. The group μὴν ὅμως is found once in John Philoponus, APo 13,3: 187,31 Wallies:¹⁸⁷ καὶ μὴν ὅμως; it is not placed after a noun but after καί. However, in Aristophanes grammaticus, it is placed after the initial verb: δέδοικέ γε μὴν ὅμως, and is adversative.¹⁸⁸ On the other hand, ὅμως was changed into ὅλως by Ald., and remained so: Kühn has it. A group μὴν ὅλως is attested in Aristides,¹⁸⁹ Libanius¹⁹⁰ and Eustratius phil.,¹⁹¹ but the introduction of the sentence as opposed to the preceding is rather emphatic, and not adversative at all. And a

184 See A. M. Ieracci Bio, pp. 787-799 of: Leone medico, in: Medici Bizantini, A. Garzya et alii, edd., pp. 785-859.

185 Cf. Leo med., Conspectus 1,15,1 -4 Ermerins: Ἀνεκθέρμαντον ῥίγος ἐστὶν ὡς εἴρηται ἐν τῷ πέμπτῳ τῶν περὶ αἰτίας, ὅταν μόνον ῥιγῶσιν, οὐκ ἔτι δὲ πυρέττουσιν. σπάνιον δὲ τὸ πάθος, ὅθεν Ἱπποκράτης οὐδὲ ἰστορήσεν.

186 Denniston 335.

187 Ioannis Philoponi in Aristot. analyt. poster. comment., Wallies.

188 Aristophanis historiae animalium epitome, Epit. 2,405,1 -2 Lambros (Commentaria in Aristotelem Graeca, suppl. 1.1).

189 Aelius Aristides, πρὸς Πλάτωνα ὑπὲρ τῶν τεττάρων, II 182,19 Dindorf.

190 Or. 5,32,1 -2 τοῦ γε μὴν ὅλως αὐτῇ μέλειν ἀνθρώπων καὶ τότε μέγα τεκμήριον (Foerster).

191 In Aristot. analyt. post. lib. sec. comment., 113.29-30 and 180.33 Hayduck: it happens twice, preceded by μήτε.

form μηδὲν, which Galen does use, is out of account, its meaning being an absolute negative, sort of "not at all".

I have included in the text "according with the condition" that *Hun.* has. The phonetical error that made it disappear, is simple: [kata*indiathesin*] is even followed by several others [ti] and [si].

As for the reference to women and men, *Hun.* writes "some women and some men". The indefinite Pronoun is unanimously transmitted before ἀνδράσιν, while P is the only ms. to read ταῖς γυναιξί. The loss of ταῖς would be easily explained in καὶ ταῖς γυναιξί καί, so that one may credit P with the right text. In fact, in the passage dedicated to *rhîgos* in De tremor. 7: VII 635,5-7 K. he mentions explicitly that the women suffer from it much more than men (see above, introduction to this Section).

P. 168,14-16 χορὴ ... ἀνθρωπον] The first infinitive, προηγῆσθαι (of ms. P) in Aorist, indicates a punctual action: "an idle life preceded", while the second, προσενηνέχθαι, is a Perfect, indicating the result of the ingestion. In fact, προηγῆσθαι (cett.) is a *facilior*. For the meaning of this Aorist, cf. the usual example ἐβασίλευσε τριάκοντα ἔτεα. For the second verb, cf. De plenit. 2: VII 518,2 -3 K.=28,24-25 Otte: ἀλλὰ μηδὲ σιτίου ποτὲ προσενηνέχθαι πλείω τοῦ δέοντος [προσενηνέχθαι AM, Otte: προσενεχθῆναι E]¹⁹². The verb is related with meal in the Hippocratic Corpus, cf. Vet. Med. 8: I 586,13 – 588,2 L. = I 8,19 - 9,3 Kühlewein = Hippocrate II, 1; 127,6-12 Jouanna, among others.

P. 168,16-17 ἐξ οὗ ... γεννᾶται] The adjective ἀργός ("inactive") among the qualities of phlegm, is mentioned in De differ. febr. II 8: VII 366, 5 -8 K., where the cold phlegma is opposed to the hot yellow bile, both moving at the same time through the body, as is the case in the commented passage. When one or the other prevails, heat or cold overcome the person.

In fact, "inactive" is often applied to the way of life that produces this kind of phlegm, the agent of *rhîgos*. The inactivity coupled with the unruly ingestion of food and an excess of baths, is found in Galen some twenty times. Cf. De sympt. caus. I 5: VII 109, 4-7 K.; De differ. febr. I 6: VII 291, 8-9 K.; De loc. aff. I 1: VIII 9-11 K.; De tremore VII, 636,18 -637,8 K., and ps-Gal. Quom. morb. sim. sint depreh. I 1: XIX 5, 6-8 K. Hunayn omits the adjective, but there is an illegible word in Hun^P. Uncommon as it is to apply this feature to the cold humour, the parallel to the kind of life that favours its presence, may have influenced the writer to call it "inactive" (it is called as well slow-moving, βραδύπορος).

¹⁹² A=Ambrosianus gr. 659. M=Marcianus App. cl. V 5. E=Mutinensis gr. 213. Cf. Otte, Galen. De plenitudine, Wiesbaden 2001.

P. 168, 17-18 ὁποῖόν ... ὑαλώδη] εἰσηγήσατο is a γράφεται (Ps.l.) It is told of Hippocrates in De meth. med. I 2: X 16, 2-3 K., and De element. ex Hipp. I 1: I 415, 12-14 K. = CMG V 1,2; 58, 12-14 Lacy. The preverb was lost in LM P^{i.l} by phonetic haplography [-sisigi-].

For the vitreous humour and Praxagoras, cf. Commentary to Section 15, and Introduction to Sections 14-17.

P. 168,18 - 170,1 πάλαι ... διητᾶτο] Galen changes the second would-be-οὐδεὶς into μηδεὶς: in order to avoid hiatus? In any case, μή keeps overcoming οὐ, century after century.

The rather awkward πλησμονωδῶς lies below πλησμωνωδῶς of P. It is just attested in ps-Galen, Quomodo morb. sim. sint depr. I 1: XIX 5, 6-8, where it is coupled by ἀργῶς in a *locus similis*. The adjective is present in Hipp. De vict. acut. 15 L.; II 346,7-8 = 56: I 137,21 – 138,3 Kühlewein (πλησμονῶδες), and quoted in the Commentary of Galen.¹⁹³ πλησμίως, of TU, is rare as well: it is attested in late authors.

Σ quotes De differ. febr. II 5: VII 346, 11-12 K. (see Loci Similes).

P. 170,1-3 καὶ διὰ ... ἐπηκολούθησεν] Galen often uses τοῖς παλαιοῖς ἰατροῖς as such (Dative); at times the sentence also includes philosophers, as in De usu part. I 8: III 17, 6 K. = 12,14-15 Helmreich: παρὰ τοῖς παλαιοῖς ἰατροῖς τε καὶ φιλοσόφοις. *Hun.* has "the wise men". On the other hand, ἐξ ἀνάγκης disappeared in Λ when the scribe wrote the next word beginning with Ε (ἐπεσθαι).

The opposition old-time doctors / present-day doctors, is often found. The order of the sentences:

old doctors:	fever follows <i>rhîgos</i>
new doctors:	<i>rhîgos</i> not followed by fever

enlightens the point of the recently diagnosed symptom, as the composition of the Section does (see above), placing the vitreous (the agent) in the centre, encircled by the idle kind of life, and framed by the leitmotiv: RHÎGOS/NOT FEVER.

On the other hand, a second opposition, between "written" and "seen",¹⁹⁴ emphasises the observed symptom: γέγραπται παρὰ τοῖς παλαιοῖς ἰατροῖς / ἡμῖν αὐτοῖς καὶ ἄλλοις πολλοῖς τῶν νεωτέρων ἰατρῶν ὥπται.

¹⁹³ Gal. In Hipp. vict. acut. comment. III 22: XV 674, 6 K. = CMG V 9,1; 242,4 Helmreich.

¹⁹⁴ For ὥπται, cf. Chantraine, Morphologie, p. 153-154.

SECTION 17.A.D:HEAT+COLD=ÊPIALOSFEVER+RHÎGOS

P. 170,5 – 170,10. Galen closes the fever-*rhîgos* subject, enlightening the special feature of the *êpialos*: fever and *rhîgos* occur at the same time, being composed of two *dyskrasia*. The Section is framed by an exterior ring: "the *êpialos* is composed by two *dyskrasia*" (beginning σύνθετος, and ὥστ' ἐκ δύο...), while an inner ring presents an opposition in chiasmic order (X):

└ the *êpialos*, composed by *rhîgos* = cold *dyskrasia*, and fever = hot *dyskrasia*

└ └ I call *êpialos* to the fever which presents *rhîgos* all the time

X

└ └ to that in which *rhîgos* is first and fever second, I do not call *êpialos*

└ so that the *êpialos* is composed by two *dyskrasia*

.....
└ σύνθετος δ' οὖν ἐστὶν ἐκ ταύτης τῆς δυσκρασίας,

καὶ προσέτι τῆς τῶν πυρετόντων,

└ ὁ ἡπιάλος. οὕτω δ' ὀνομάζω τὸν πυρετὸν ἐκεῖνον,

ᾧ διὰ παντὸς ἄμφω συμβέβηκεν.

X ᾧ δ' ἡγεῖται μὲν <τὸ> ῥίγος, ἔπεται δ' ὁ πυρετός,

└ οὐ καλῶ τοῦτον ἡπιάλον·

└ ὥστ' ἐκ δύο τῶν ἀνωμάτων δυσκρασιῶν ὁ ἡπιάλος συμπλέκεται

The author revisits the beginning of the treatise: "Anomalous *dyskrasia* happens sometimes ... as in the fevers named *êpialoi*, and in nearly all of them, except for the fevers called *hektikoi*." We have certainly learned that all the fevers are provoked by *dyskrasia*, anomalous for most of them: the only fever caused by an homogeneous *dyskrasia* is the *hektikos*. It is Frame 1.

P. 170,5-6 σύνθετος ... ἡπιάλος] The group δ' οὖν (apud οὖν P, and δὲ cett) is rather frequent in Galen. Probably οὖν disappeared in:

CYNΘETOCAOYNECTINEK

in the two families, being saved in the specific branch of P.

P. 170,7-8 ᾧ ... ἡπιάλον] As AP have an article before πυρετός, it is necessary to write τὸ before ῥίγος as well, both of them bringing emphasis to the somehow opposite notions. In the parallel clause in Aetius V 87 there are no articles.¹⁹⁵ In De diff. febr. II 2: VII 336, 8-12 K., we read: "The intermittent fevers are of three types: quotidian, tertian and quartan. The quotidian is produced by putrefied phlegm, the tertian and the quartan by bile: the former by the yellow and the latter by the black".

¹⁹⁵ Cf. Aet. Amid. V 87,7, CMG VIII 2 Olivieri: προηγείται μὲν ῥίγος, ἔπεται δὲ πυρετός.

P. 170,9 ὥστ' ... συμπέπλεκται] In verbs beginning συν-, the components are usually introduced by ἐκ.¹⁹⁶ The reading διὰ in ΔP is an error of iotacism from δύο, having disappeared beforehand ἐκ after ὥστε (ΩCΤΕΚ). With plurals the form δυοῖν is unusual, and Galen uses δύο more often than not.¹⁹⁷ The series -ων -ων makes δυοῖν improbable: I accept ἐκ δύο from z.

In the beginning of the treatise, Galen enumerated four composed *dyskrasia*, those produced by the unbalance of a pair of qualities (the compatible ones). Here we have two *dyskrasia* conforming the *êpialos* fever, that of the *rhîgos* and that of the fever, that is, a cold and a hot. As the possibility of *rhîgos* is present in the course of other fevers as well, they would also be composed by two *dyskrasia*. A different concept is a composed fever, such as when a continuous and an intermittent (tertian) fever, produce the *êmitritaios*.¹⁹⁸ The composition backs the meaning of the sentences. Cf. Commentary to 168,10-11, above.

P. 170,9-10 καὶ οἱ ... ἅπαντες] καὶ is the right connective, for the sentence continues to include a second subject to the verb συμπέπλεκται. ἄλλοι (Δ) is a *facilior* in uncial letters: ΤΑΙΚΑΙΟΙΛΟΙΠΟΙ → ΤΑΙΚΑΙΟΙΑΛΛΟΙΔΕ. For the sentence with λοιποί, cf. De ven. art. dissect. 3: II 789, 7-9 K. The same sentence with ἄλλοι is present in seven passages, as in the beginning of our treatise (in Dative: p. 142,4).

SECTION 18. LOCAL AD, AND TRANSFORMATION-4

P. 170,11 - 172,9. The section closes Frame 2: Local AD, Frame 3: Transformation, and the treatise.

Having closed the theme of the body's *dyskrasia* (Frame 1, Sections 1 and 17) in the preceding section, the book looks back to the local one (Frame 2, Sections 1 and 17). The list of AD with flux is slightly longer here. This final ring is rather clear and expressive, the diseases being introduced by juxtaposed nouns. The intensity of the first three participles in Section 1, p. 142,6, οἰδισκόμενον ἢ φλεγμαῖνον ἢ γαγγραινούμενον, "getting swollen, inflamed or gangrened", underlined with vividness the body's part that suffered. Once the genesis and kinds of AD are explained, it is just necessary to pick up the *disiecta membra* as a series in Nominative, the Ruhelage of an enumeration: καρκίνος, ἐρυσίπελας, ἄνθραξ, ἔρπηξ, οἰδημα, φαγέδαινα, γάγγραινα

196 Cf. Galen De nat. fac. I 6: II 13, 13-14 K. = 110, 16 Helmreich (ἐκ δυοῖν σύγκειται χιτῶνων), and III 11: II 181, 2-3 K. = 232, 7 Helmreich (ἐκ δυοῖν χιτῶνων συνεστηκόσιν).

197 But cf. the passages in the preceding note.

198 As the *tritaios* or tertian happens every third day, the *êmitritaios* or semi-tertian occurs every day-and-a-half. See De differ. febr. II 9: VII 367, 5 – 371, 9 K.

(φλεγμονή is mentioned before). One name is new: ἄνθραξ,¹⁹⁹ another is not repeated here: ἐλέφας.

Let us look at the scheme of the Section:

1. all local affections with tumour belong to AD
 have in common: + flux (as in inflammation)
 differ: by the kind of flux
 it will be explained somewhere else

2. by now it is enough to know:
 the homoeomers, each one by the humours, each one,
 will be altered [ongoing alteration] by being heated, cooled ...
 when alteration complete: painless, but condition not the best

3. by now it is enough: you are on the way to the Simples, and then to Meth. Med.

P. 170,11-14 ὡσαύτως ... γάγγραινα] As Galen has thoroughly explained the genesis of inflammation (Section 3), he draws a bridge from the beginning of the treatise (local *dyskrasia*, in Section 1) to the end (Section 18), and grabs on the way the section dedicated to inflammation (Section 3). Similar processes by each one of the humours and their varieties are implicated in the genesis of *cancer*, *erysipelas*, *anthrax*, *herpes*, swelling, *phagedaina*, *gangraina*. Find Commentary to the local *dyskrasia* in Section 1, pp. 142,5-8.

In ὅσα ... ὅγκου, Galen emphasizes "of a single part" when dealing with the local *dyskrasia*, the group τινὸς ἐνός (PU) being unusual. Hunayn has it: "of a single part".

P. 170,14-18 κοινὸν ... γίνεσθαι] Composition and style stress the contents. See English scheme above, point 2. Let us look at it in Greek:

κοινὸν μὲν γὰρ αὐτοῖς ἅπασιν τὸ ἐξ ἐπιρροῆς ὑγρῶν γεγονέναι
 διαφέρει δέ, τῷ (γίνεσθαι)

τὰ μὲν,	ὑπὸ φλεγματικοῦ χυμοῦ,
τὰ δέ,	ὑπὸ χολώδους, ἢ μελαγχολικοῦ χυμοῦ,
τὰ δέ,	ὑφ' αἵματος
	ἥτοι θερμοῦ καὶ λεπτοῦ καὶ ζέοντος,
	ἢ ψυχροῦ καὶ παχέως,
	ἢ πῶς ἄλλως διακειμένου.

199 First attestation in the HC; cf. S. Byl, *Néologismes*, pp. 86-87.

Galen uses syntagms of identical structure to underline the similarities: we have seen this device many times throughout the book. Once the exposition has been written this way, the author reassures himself of the reader's understanding.

As flux is common (κοινὸν μὲν) to every local *dyskrasia*, the humours and their capabilities mark the differences to them (διαφέρει δέ). But it is not just the humour itself: a cold humour may be bilious or phlegmatic, raw or concocted, vitreous or deep dark; blood can appear bilious, thin or thick, cold, hot or boiling, pneumatic, red, dark, and so forth, and so on.²⁰⁰

As Galen has explained the features of the humours throughout the book —the four qualities as well as other characteristics—, he makes a summary at the end, insisting on blood,²⁰¹ which is the most important of them as far as disease is concerned. He emphasises its alterability.

P. 170,18-20 δηλωθήσεται ... μόνον] As often happens, the mention of a Galenic work (with title or untitled) closes a block. The reference is always coupled with a *verbum finitum*. The books in question could be De morb. diff. 12: VI 874,10 – 876, 4 K., De morb. caus. 6: VII 21, 15 - 23, 6 K., De tumor. praeter nat. (*passim*), and De meth. med.: in IX 17 (X 660,6-11K.) Galen himself states that in book VII he explained the dyskrasias of the parts when only quality is altered, while in books VIII-IX he dealt with the body's dyskrasias, beginning with fevers.²⁰²

The opposition: "In fact it will be shown precisely about the differences in them ... somewhere else" >< "For the present study, it is enough just to be told that ... ", is very Galenic, and as clear as he wants it to be. Two points are introduced (as two coordinated declarative sentences):

that (ὥς) each one of the affections will be produced by a flux, as by the sanguineous and hot, the inflammation (170,20 - 172,1)

and that (καὶ ὥς) each one of the homoeomers, affected by the flux, will reach anomalous *dyskrasia* (172,1-3).

As for εἰρησθαι μόνον, ὥς ὅποῖον, *Hun.* omits μόνον ὥς because of homoeoteleuton in μόνον ὥς ὅποῖον, so that he could not grasp the meaning of the next passage.

170,20 - 172,1 ὥς ... φλεγμονήν] As in the description of inflammation (Section 3), the so-called *rheuma* or flux is the agent of the affections. The writer draws

200 For the unusual ἦτοι ... ἦ (l. 13), common in Plato and Aristotle, cf. Denniston, 553.

201 The form παχέος for the Genitive is the usual (some 300 times in the TLG) against 13 times of παχέως.

202 διελθόντες οὖν ἐν τῷ τῆσδε τῆς πραγματείας ἑβδόμῳ γράμματι τὰς περὶ τὰ μόρια συνισταμένας δυσκрасίας ἀλλοιούμενων μόνων τῶν ποιότητων, ἐξῆς ἐν δυοῖν τούτοις ἐπὶ τὰς εἰς ὅλον ἐκτεταμένας τὸ ζῶον ἀφικόμενοι περὶ πρώτων ἔγνωμεν διαλεχθῆναι τῶν πυρετῶν.

a precise cycle. The logical order would be this one (τὸ ῥεῦμα is the syntactical subject):

τὸ ῥεῦμα (sc. ὃν τοιοῦτον)
 ὁποῖον ἂν ᾗ
 ἐργάζεται ἕκαστον τῶν εἰρημένων παθῶν κατὰ τὸν αὐτὸν λόγον,
 καθ' οἷον ἔμπροσθεν ἐδείκνυτο γίνεσθαι φλεγμονὴν ὑπὸ τοῦ
 θερμοῦ καὶ αἱματώδους (sc. ῥεύματος).

In l. 21 ἐργάζεται of Λ is *difficilior* than ἐργάζεται in Δ, and the Future tense is adequate to the next ἀφίξεται (172,3). The Present Infinitive γίνεσθαι agrees with the Imperfect ἐδείκνυτο (durative aspect), and is adequate to the genesis of the inflammation as durative.

P. 172,1-3 καὶ ... δυσκρασίαν] The subject changes to the homoeomers (they are the syntactical subject as well). He is reminding his readers of the first and simple parts, presented in Section 2, and often mentioned. They are somewhat similar to the present-day tissues. The organs are composed by them. They are the sensitive parts, and the *dyskrasia* happens to them, and produces pain.

πρώτων is granted by *Hun.* "primary", and it was easily lost in Λ (homoeoteleuton).

P. 172,3-5 ἔξωθεν ... ὁμοίως] The local anomalous *dyskrasia* will be of the same quality as the displaced humour ("such as the flux be"). The body's part will receive from ἔξωθεν, outside (of it), the flux. It is a last hint at the qualitative *dyskrasia*. The explanation of the local AD is rather synthetic and clear.

P. 172,6-7 εἰ ... κατασταίη] Nevertheless, it was still missing at the end of the treatise, a theme that received a minute treatment throughout the book: transformation. Galen often remarked on the importance of the ongoing alteration, which is painful, against the end of the process: once matter is changed, pain is no more. He started the subject (it is Frame 3) in Section 5, and came back to it in Sections 7 and 10. As he finishes the book, he returns to it, so that we do not forget that the anomalous *dyskrasia* is painful, while the process' end is painless: but the patient may have lost the capacity of the part (the limit of the alteration is the harm of its capacity; cf. Section 10, p. 156, 18-19.²⁰³

203 For the concept of *diathesis* in Galen, cf. R. M. Moreno Rodríguez, El concepto de "diáthesis parà phýsin" (estado preternatural) en la patología de Galeno, in: *Dynamis* 3, 1983, pp. 7-27

P. 172,7 εὐθύς] Probably Galen wrote εὐθύς (as in Δ); εὐθέως (Λ) is the late-Greek usual form.

P. 172,8-9 ταῦτ' ... μεθόδου] Galen points at the reading of De simpl. med. temp. ac fac. (XI 379-892 K.), and De meth. med. (X 1-1021 K.) afterwards. Both have been mentioned, or hinted at, in the book. See above, commentary to 170,18-19, and Introduction, B 1. Author and Date.

P. 172,10 τέλος ... δυσκρασίας] P included an *explicit*, while z repeated the *explicit* of the preceding De temper.

5. INDICES

* = exempla

A. Index nominum

(Γαληνός) pronom. 1 pers. sing. μοι: ἐν τῷδε τῷ γράμματι πρόκειται <μ.> διελθεῖν 144,9 ἤδη μ. λέλεκται 162,14 ἀρκεῖν μ. δοκεῖ 172,8 pl. ἡμῶν: ἀνώμαλοι δυσκρασίαι τοῖς σώμασιν ἢ. ... ἐγγίγνονται 142,13 τεμνέσθω ... ὑφ' ἢ. 144,13 ἡμᾶς: τὸ περιέχον ἢ. οὐκ ἀνιᾶ 160,1 ἡμῖν: ἢ. αὐτοῖς καὶ ἄλλοις πολλοῖς τῶν νεωτέρων ἰατρῶν 170,3 verbum sing. 1 pers.: ἐπάνειμι δὲ πάλιν ἐπὶ τὰς ... διαφοράς 162,11 εὐδηλον εἶναι νομίζω 164,6 οὕτω δ' ὀνομάζω τὸν πυρετὸν ἐκείνον 170,6 οὐ καλῶ τοῦτον ἡπίαλον 170,8 vb. pl. 1 pers.: ἀλύπως αἰσθανόμεθα 160,4

hic tractatus: ἐν τῷδε τῷ γράμματι 144,8 ἵνα δὲ σαφὴς ὁ λόγος γένηται 144,9 ... σαφηνείας ἔνεκα τῶν μελλόντων λεχθήσεσθαι 146,17 περὶ δὲ τῆς ἀνωμάλου δυσκρασίας ἥδη ῥητέον 146,18 ἔμπροσθεν εἰρηται 146,20 συνελόντι δ' εἰπεῖν 154,4 ἐνὶ δὲ λόγῳ 154,12 ... ἥδη που πρόδηλον 160,13 ἐν τῷ νῦν ἐνεστώτι λόγῳ 162,8 ἐπάνειμι δὲ πάλιν ἐπὶ ... 162,11 ἥδη μοι λέλεκται 162,14 ἔμπροσθεν ἐλέγετο 164,4 εὐδηλον εἶναι νομίζω 164,6 πρόδηλον καὶ τοῦτο ... καὶ ὥς ... ἀκολουθήσει 164,8 καὶ πῶς ὁ λόγος ἥδη δείκνυσιν ὥς ... ὥσπερ ... ἐλέγετο ... καὶ ὥς ... 164,9-12 ὥς ... οὐδὲ τοῦτ' ἄδηλον 164,20-21 πρὸς δὲ τὸν ἐνεστώτα λόγον, ἀρκεῖ καὶ τοῦτ' εἰρησθαι μόνον, ὥς ... καὶ ὥς 170,19-20 ταῦτ' ἀρκεῖν μοι δοκεῖ προεγνώσθαι 172,8

alii tractatus, cum inscriptione: καθότι κἀν τοῖς περὶ κράσεως ὑπομνήμασιν ἐδείκνυτο 144,1-2 καθότι κἀν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν ἐλέγετο 146,5 ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσιν εἰρηται 146,9-10 ἐν τοῖς περὶ κράσεως εἰρηται 146,16 ὥς ἐν ταῖς ἀνατομικαῖς ἐγχειρήσεσι γέγραπται 156,7 ἀλλ' ἐν ταῖς τῶν συμπτωμάτων αἰτίαις ὑπὲρ πάντων εἰρησεται 162,10-11 εἰρησεται ... ἐν ταῖς τῶν νοσημάτων αἰτίαις 164,16-17 τοῖς μέλλουσι τῇ τε περὶ φαρμάκων ἀκολουθήσειν πραγματείᾳ, καὶ μετ' αὐτὴν τῇ τῆς θεραπευτικῆς μεθόδου 172,8-9 sine inscriptione: ἀλλὰ περὶ μὲν τούτων ἕτερος ἂν εἴη λόγος 162,2 εἰρησεται ... ἐτέρωθι 162,18 δηλωθήσεται ... ἐτέρωθι 170,18-19

Ἱπποκράτης ὁ θαυμασίος Ἰ. ἔλεγεν· «τοῖσι ... γίνονται» (Hipp. De loc. hom. 42; VI 334, 7-8 L. = Hipp. XIII: 71,21-72,1 Joly = 42,1; 78,18-19 Craik) 152,3-4 Ἰ. φησὶν ὁ φάσκων· «ἔλκεα πάντα εἶναι τὰ νοσήματα» (Hipp. De fract. 31: III 526, 9-10 L. = II 94,10-11 Kühlewein) 160,5-6

(οἱ) νεώτεροι ἰατροί ἀλλὰ καὶ ἡμῖν αὐτοῖς καὶ ἄλλοις πολλοῖς τῶν ν. ἰ., ὥπται πολλάκις ῥίγος ᾧ πυρετὸς οὐκ ἐπηκολούθησεν 170,3-4

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(οἱ) φυσικοὶ ἄνδρες καὶ δὴ καὶ ὠμολόγηται ταῦτα τοῖς φ. ἀ. ἐν τοῖς περὶ τῶν αἰσθήσεων λογισμοῖς 158,8-9

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ἐγγίγνεσθαι 142,13

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ἐγείρεσθαι ἐγείρεται πυρετός 164,15

ἐγκέφαλος (ἀπόστασις) κατὰ τὸν ἐ. 150,15

ἐγχείρησις omn. ἐν ταῖς ἀνατομικαῖς ἐ. 146,5 146,10 156,7

ἐγχωρεῖν c. οὐ et inf.: 146,3 et 164,8

ἐγὼ dat.: <μ.> add. 144,9 ἤδη μ. λέλεκται 162,14 ἀρκεῖν μ. δοκεῖ 172,8 cf. ἡμεῖς

ἔδεσμα pl. τι πλήθος ἐ. 168,15

ἐθέλειν aor. c. inf. 156,6

ἐθελῆσαι cf. ἐθέλειν

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εἶδος τέμνειν εἰς ἕτερον ε. 146,3 κατ' ε. (διαφορά) 170,18

εἶναι* copula 146,3 146,18 150,8 162,9 ... exist. οὐκ ἔ. ὅστις 144,12 146,19; c. inf. ἔ. αὐτοῦ λαβεῖν 166,18; fut. (ἔσται) 150,6; add. 162,2; 162,19; inf. 152,18 (Hipp.), 160,6 164,6; subiunc. 154,5. 7. 20 170,20 172,5; opt. (εἴη) 154,3. 14. 16 162,2; partic. 160,3 166,9

εἰπεῖν cf. λέγειν

εἰρησθαι cf. λέγειν

εἷς fem. μία (κρᾶσις) 146,19 et 158,13; masc. ἐνὶ δὲ λόγῳ 154,12; neut. 142,5

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εἰσβολὴ τῶν παροξυσμῶν 168,2

εἰσηγεῖσθαι aor. c. dupl. acc. (χυμὸν) εἰσηγήσατο τὸν ὑαλώδη 162,18

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εἶτα 166,3

ἐκ* causa ἐξ ἀνάγκης 150,8 170,2; ἐκ γυμνασίων; partit. ἐξ αὐτῶν 144,13 164,20; orig./proced. 146,4 160,14 ἐξ αὐτοῦ τοῦ σώματος 164,14 et 15; ἐξ οὗ 168,16; κακ 142,12 148,13

ἕκαστος neut. (μόριον) 152,5 et 172,2; (πάθος) 168,20

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ἐκθερμῆναι cf. ἐκθερμαίνεσθαι, in fine

ἐκκάεσθαι v.l. ἐγκ- aor. pass. (μορίων) ψυγόντων ἢ ἐ. 142,10

ἐκκαυθῆναι cf. ἐκκάεσθαι

ἐκκαυσις v.l. ἐγκ- sing. (αἷμα) δι' ἔ. τινα 164,2; pl. ἐ. τε καὶ γυμνασίοις 164,16. 18

ἐκπεπρωσθαι cf. ἐκπυροῦσθαι

ἐκπιέζειν ἢ δ' ἄκρα ψῦξις ... τὰ μὲν ἐ. τὰ δὲ θλᾶ 160,8

ἐκπυροῦσθαι perf. (αἷμα) 156,3

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ἐκτός 154,19 τὰκτός 150,1 τοῦκτός 148,7

ἐκτραπῆναι cf. ἐκτρέπεσθαι

ἐκτρέπεσθαι aor. εἰς ἄμετρον ψῦξιν ἢ θερμασίαν ἐ. 160,2

ἐλάχιστος (ἐλαχύς) superl. local. δι' ἐ. παρεσπάρθαι 166,18 (ἐλαχύς)

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ἔλκος Hipp. ἔ. πάντα τὰ νοσήματα 160,5; συνεχείας ... λύσις τὸ ἔλκος 160,6

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- ἐμπίμπλασθαι (ἀρτηρίαί τε καὶ φλέβες) ἐ. τε καὶ διατείνονται 148,4
 ἔμπροσθεν temp. 146,20 164,4 170,21
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 ἔνιοι 162,6 164,19 166,8 168,2
 ἐνίστε 142,2 add. 142,5; 146,8 156,12 168,14 ποτὲ μὲν ... ἐ. δ' 150,11 et 164,7 ἐνίστε μὲν .. πολλάκις δ' 164,10
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 ἐπενεγκεῖν cf. ἐπιφέρειν
 ἔπεσθαι ταῖς ἔ. φύσεσιν 148,1 ἐξ ἀνάγκης ἔ. 150,8 et 170,2; ἡγεῖται μὲν <τὸ> ῥίγος, ἔ. δ' ὁ πυρετός 170,7
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- ἐργάζεσθαι ἄδελφοι ... πρὸς τὴν αἴσθησιν 146,11 ὁ τὴν φλεγμονὴν ἐ. χυμὸς 154,16; fut. 170,21
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 ἔτι c. comparat. τούτων ἔ. πλείους 146,7 154,3; temp. 156,5. 15 158,12
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 ἔχιδνα 160,18 cf. ἔχιδνα
- ζεῖν omn. c. αἷμα: 148,17 opt. 152,15; 164,2 170,11. 17
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- ἦ* ante omn. membr. (c. particip.): 144,2-4 150,6-7 152,5-6; id. c. subst. 166,6; (id. c. adv.) 154,21
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 θερμανσις v.l., cf. θερμασία 160,2
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θερμός* ῥεῦμα θ. 148,3; 148,9 152,17 154,10. 16; φύσει 154,1. 6 superl. θ. <ή> ξανθή χολή 154,9; superl. αἷμα ... θ. καὶ ὑγρὸν τὴν κρᾶσιν 154,19 opp. ψυχρός: <τῆς> ἀμετρίας <τοῦ> θ. καὶ ψυχροῦ 160,10. 14 158,16 164,1; πικρόχολος καὶ θ. 166,10; 166,12 170,16. 21
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 θλᾶν ἢ δ' ἄκρα ψῦξις ... τὰ μὲν ἐκπιέζει, τὰ δὲ θ. 160,10
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 καθιστάναι cf. καταστήσαι
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 καί* καὶ ... καὶ ... καὶ ... 142,7-8 ... καὶ ... καὶ ... καὶ ... καὶ ... καὶ ... τε καὶ ... καὶ ... τε καὶ ... καὶ ... 146,1-2 τε ... καὶ ... τε ἅμα καὶ ... τε ἅμα καὶ ... 144,3-4 ἅμα ... καὶ ... 166,10 ἅμα καὶ ... καὶ ... 166,13-14 καὶ μὲν δὴ καὶ 144,15 ... καὶ δὴ καὶ 150,4 δὴ καὶ 164,17 καὶ γὰρ 154,9 καὶ γὰρ εἰ 166,8 γὰρ οὖν δὴ καὶ 162,6 οὐ μὴν ἀλλὰ καὶ 142,12 ὁ καὶ 156,12 ὡς καὶ 150,22 ὡς πού καὶ 160,5 διότι καὶ 154,8 ὅτι καὶ 154,15 καθότι καὶ 152,3 ἤδη δὲ καὶ 150,1 τότε δὴ καὶ 154,20; (etiam): ἀλλ' ἔτι καὶ 156,15 ἀλλ' ἤδη καὶ 158,15 ἄρα καὶ 158,11; (vel) μᾶλλον τε καὶ ἥττον 156,17 ordo verb.: ἐξ ἰνῶν σύγκεινται τε καὶ ὑμένων 146,4 καίτοι c. part. 160,3
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μέλλειν c. inf. fut.: 146,16 172,8
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 μοχθηρά (ἀπόστασις) καλλίστη ... μοχθηρὰ δέ 150,14 (ἀπόστασις) ἀγαθή, μ. δέ 150,15
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 (s.c. ἀπόστασις) τῶν μὲν μ., ὑπὸ τὸ δέσμα 150,18

 νεῦρον (ὁμοιομερὸν τε καὶ πρῶτον μόριον) 146,1 id. τοῦ μυός 148,10
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 νομίζειν 158,6 164,6
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 154,11 ἀλλοιοῦται μὲν ἢ ξ. χ. ῥαδίως 154,11
 ξηραίνεσθαι part. θερμαινόμενοις, ἢ ψυχομ., ἢ ξ., ἢ ὑγραينوμ. 142,14 152,6 172,4; θερ-
 μαινομένων τε ἅμα καὶ ξ. ... ἢ ψυχομ. τε ἅμα καὶ ξ. 144,3-5; inf. διὰ τὸ ξ. τε καὶ
 ὑγραίνεσθαι 152,8
 ξηρός opp. ὑγρός: σκληρὰ καὶ ξ. μόρια 146,12 (οὐσία) 152,8

 ὁ* forma: τοῖσι (Hipp.) 152,3; positio: ὁ καλούμενος ἐλέφας 142,7 οἱ λειπυρίαί καλούμε-
 νοι πυρετοὶ 168,7 ὁ σύμπας μῦς 148,2 σύμπαν τὸ σῶμα 162,20 ἢ δ' ἄκρα ψῦξις
 160,8 ὁ τὴν φλεγμονὴν ἐργαζόμενος χυμὸς 154,15 ἀνώμαλος δυσκρασία καὶ ἢ
 τῶν συνθέτων πυρετῶν 168,10; repetito art.: ἢ τε θερμότης τοῦ αἵματος ἢ κατὰ τὸ
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 κατεληφώς 162,3; oppositio: ἢ μὲν τῆς ὑγείας φυλακὴ ... ἢ δὲ τῶν νοσημάτων
 ἀναίρεσις 162,1 ἀλλ' οἱ μὲν μᾶλλον, οἱ δ' ἦττον 162,5 substant. omissio: ἐν τοῖς περὶ
 κράσεως 146,16 μοχθηρὰ δὲ ἢ τε ὑπὸ τὰς μῆνιγγας καὶ ἢ εἰς τὴν ὀπισθεν κοιλίαν
 (ἀπόστασις) 150,16 ὁ ἡπίαλος (sc. πυρετός) 170,6 substantivatio particip.: φησὶν
 ὁ φάσκων 160,5 οἱ πυρέττοντες οὕτω 158,6 neutr.: substantivatio adi.: τῷ μετρίῳ
 158,19 substant. inf. (dat.) τῷ μὴ κατὰ πάντα τὰ μόρια τοῦ δυσκράτους διακειμένου

- σώματος ὡσαύτως ὑπάρχειν 144,6 148,14 152,2 id. (acc.) διὰ τὸ ξηραίνεσθαι τε καὶ ὑγραίνεσθαι 152,8 166,13 id. (gen.) πλησίον ἤκουσι τοῦ λύειν τὴν συνέχειαν 160,7; subs. inf. + subs. partic. τῷ γὰρ δι' ἐλαχίστου παρεσπάρθαι τό τε ψύχον καὶ τὸ θερμαῖνον 166,18 subst. partic. (dat.) τῷ μεταβάλλοντι 152,1 id. (gen.) ἐπὶ παντὸς τοῦ θερμαίνοντος 154,5 subs. praep. c. subs. τὸ παρὰ φύσιν 156,20
- ὄγκος νοσήματα μετ' ὅ. 170,11
- ὅδε 144,8 156,19 160,4 170,2
- ὁδός ὁ. εἰς τὸ παρὰ φύσιν 156,20 cf. opp. ἐπάνοδος
- ὀδυνᾶσθαι (ἀρτηρίαί καὶ φλέβες) 148,12 (τὰ σώματα) παύσεται δ' ὁ. ... ὅταν ἐξομοιωθῇ τῷ μεταβάλλοντι 152,1 τὸ κόλον, οἱ <ὄρχεις> 166,6
- ὀδύνη Hipp. τοῖσι ... διαλασσομένοισι ... αἱ ὁ. γίνονται 152,4 (τὸ θερμαινόμενον σῶμα) τῷ ποσῷ τῆς ἀλλοιώσεως ἀνάλογον ἔχει τὴν ὁ. 158,3 οὐτ' ἐν τοῖς ἤδη τελέως ἡλ-
λωμένοις ἢ ὁ. 158,10 (αἰτία) 166,4
- οἰδημα ἔρπης, οἷ., φαγέδαινα 170,13
- οἰδίσκεσθαι partic. οἱ. ἢ φλεγμαῖνον ἢ γαγγραινούμενον ἢ <τῷ> ἐρυσιπέλατι κάμνον ἢ <τῷ> καρκίνῳ (localis dyscrasia) 142,6
- οἰκειὸς ἄκρας χειρὸς οἱ. μόρια 144,15 κατὰ τὴν οἱ. ἀπαντᾷ φύσιν 154,17 (χυμοί) opp. φθαρτικοί 160,14-15; τὸ μὲν γὰρ ὁμοιον, οἱ. καὶ φίλιον· τὸ δ' ἐναντίον, ἐχθρὸν καὶ ἀνιαρὸν 160,19
- οἶον adv. comp. 156,20 160,16
- οἶος rel. κατὰ τὸν αὐτὸν λόγον ... καθ' οἶον 170,21 cf. οἶον adv.
- ὀλέθριος (τὸ σίελον) 160,16 (καῦσος) 168,8
- ὅλος formulae: καθ' ὅλον τοῦ ζῶον τὸ σῶμα 142,2 152,13; καθ' ὅλον τὸ ζῶον 152,15. 18 154,4; πᾶν ὅλον δι' ὅλου 172,6
- ὅλως adv. c. negat. μηδὲ ... ὅ. 158,7 οὐδ' ὅλως 164,6
- ὁμαλός opp. ἀνώματος δυσκρασία 144,5
- ὁμοιομερῆς adi. ὁ. τε καὶ πρῶτον (μόριον) 146,3 146,6. 9 ὁ. τε καὶ ἀπλὸν καὶ πρῶτον (σῶμα) 172,1
- ὁμοῖος τὸ μὲν γὰρ ὁ. οἰκειὸν ἐστὶ καὶ φίλιον· τὸ δ' ἐναντίον, ἐχθρὸν καὶ ἀνιαρὸν 160,19 αὖξεται γοῦν ἅπαντα καὶ τρέφεται πρὸς τῶν ὁ., ἀναιρεῖται δὲ καὶ φθίνει πρὸς τῶν ἀνομοίων 160,21 ἢ μὲν τῆς ὑγείας φυλακὴ διὰ τῶν ὁ., ἢ δὲ τῶν νοσημάτων ἀναίρεσις διὰ τῶν ἐναντίων 162,1
- ὁμοίως adv. ὁ. ... τεθερμασμένων τῶν μορίων 158,7; 158,13 166,11 172,5
- ὁμολογεῖσθαι perf. ὦ. ταῦτα τοῖς φυσικοῖς ἀνδράσιν 158,8
- ὁμόλογος (κρᾶσις) 158,14
- ὁμοῦ adv. 168,4
- ὁμῶς conj. μὴν ὅ. 168,13
- ὀνομάζειν 170,6; med.-pas.: formula c. partic.: πλὴν τῶν ἐκτικῶν ὀνομαζομένων 142,5 168,12 170,10; id. c. χωρίς 162,13
- ὄνυξ pl. (ὁμοιομερῆς τε καὶ πρῶτον μόριον) 146,2 τὰς ῥίζας τῶν ὁ. 166,3
- ὀπισθεν 150,16
- ὀποῖος int. ind.: (ῥητέον) ὅποια τέ ... καὶ <ὀπ>όσοι 146,18 (ἀποδείξει) <ὀπ>όσαι τ' ... καὶ ὅποια 162,9; rel.: (χυμός) 168,17 ὅποιον ἂν ἦ 170,20 et 172,5
- ὀπόσος int. ind. pl.: (ῥητέον) scripsi, ὅσαι codd. 146,19 (ἀποδείξει) scripsi, ὅσαι codd. 162,9
- ὅποτε conj. temp. 156,8
- ὅπως conj. int. ind. ὅπως ... ὅτι τε 162,12
- ὀρᾶν ἐναργῶς 166,4 perf. pass. ὥπται 170,4
- ὀργανικός adi. (μόριον) pl.: opp. ὁμοιομερῆ: ὁ. τε καὶ σύνθετα 146,8
- ὀρμαῖσθαι 164,14 aor. 156,13
- ὄρος ὁ. ... τῆς ἀλλοιώσεως 156,18 ὁ. ... ἀμετρίας 160,10 et 12
- ὄρχις ὀδυνῶνται πολλάκις ... τοὺς <ὁ.> 166,6
- ὅς rel. postpos. 144,11 148,5 αἱ δὴ 148,11 150,2. 13 156,5. 12 166,9 168,1. 16 170,4. 6; antepos.: 170,7; cf. et ὅσπερ
- ὅσος rel. magnitud. (antepos.) 154,5 et 7; rel. general. pl.: antepos. 146,12 170,11; ὅσαι codd. 146,19 et 162,9, ὅπόσαι scripsi; postpos. 164,21
- ὅσπερ rel.: postp. 150,10 antep. 168,9

ὅστις rel.: οὐκ ἔστιν ὁ. 144,12; int. ind.: 144,7 146,15 ἀποδείξει ... ὅποσαι τ' εἰσὶ καὶ ὅποῖαι καὶ ὅ τι δρᾶν ... 162,10; cf. ὅστισοῦν
 ὅστισοῦν indef. ἐν ὅτιοῦν (μόριον) 142,5 144,13 et 146,8
 ὅστοῦν (ὁμοιομερές μόριον) 144,16 146,9; τὰ διαλείμματα, καθάπερ ἐν ὁ. τὰς σήραγγας 146,13; ὑγρὸν ... παχὺ καὶ λευκὸν εἰς θρέψιν τοῖς ὁ. παρεσκευασμένον 146,15; σὰρξ μὲν γὰρ θερμόν ... ὁ. δὲ ψυχρόν 158,18
 ὅταν coni. temp. 148,6 τότε πρῶτον ὁ. 152,1; ὁ. ... τότε δὴ καὶ μάλιστα 154,19; 158,3; ὁ. μὲν ... ὁ. δ' 164,15-16
 ὅτι coni. decl. antep.: 144,5 146,19 162,12 164,3; caus. post.: 154,1. 15 168,18
 οὐ* οὐ μὴν ἀλλὰ κακ 142,12 οὐκ ἔστιν ὅστις 144,12 οὐ γὰρ 152,1 οὐ γὰρ ἔτι (cf. οὐκέτι) 158,12 οὐ γὰρ δὴ 162,15 οὐ πάνυ τι 152,14 οὐχ ἥκιστα δέ 154,16 οὐ μὴν οὐδ' 156,13 οὐ μὴν ... οὐδ' ... οὐδ' 160,18 οὐ μόνον οὐκ οἰκείους 160,15 τὸ μὴ οὐχ ἅμα 166,13
 οὐδέ οὐκουν ... οὐδ' ὅποτε 156,8 οὐ μὴν ... οὐδ' ... οὐδ' 156,13 οὐδ' ὅλως 164,6; 164,21 οὐτε γὰρ τῶν τοιούτων ... οὐδὲν θαυμαστὸν οὐδέ 166,7 οὐδέ γὰρ εἰ 166,11
 οὐδεῖς 162,5 οὐ. ... ἔπασχεν ὅτι μηδεῖς ... 168,18 neut.: 164,8 οὐτε ... οὐ. θαυμαστὸν οὐδέ 166,7; 166,9. 18
 οὐκέτι 146,2
 οὐκουν 156,8
 οὖν μὲν οὖν 146,10 et 152,12; δ' οὖν 150,6 et 170,5; γὰρ οὖν δὴ 162,6 ὅπερ οὖν 168,9; cf. γοῦν
 οὐσία ξηρά ... ὑγρά 152,10 τῆς οὐ. τὸ συνεχές 160,8 πνευματώδης οὐ. 164,7 οὐ. θερμὴ ἢ ψυχρὰ 164,10
 οὔτε οὐ. γὰρ ... οὐ. 158,9-10 οὐ. ... οὐδέ 166,7
 οὔτος* ἀπλαῖ μὲν γὰρ αὐταὶ 142,14 αὐταὶ τε πρὸ τούτων 148,10-11 c. πάντες πᾶσαι πάντα: ταῦτα μὲν ἅπαντα 142,8 περὶ τούτων ἀπάντων 146,9 ... ; κὰν τούτῳ 148,8 διὰ τοῦτο 160,14; positio: τὴν ἀνώμαλον ταύτην δυσκρασίαν 164,11

παθεῖν cf. πάσχειν
 πάθος (τὸ ῥεύμα) ἕκαστον τῶν εἰρημένων ἐργάζεται π. 170,21
 πάλαι 168,18
 παλαιός pl. ἱατροί 170,2
 πάλιν 144,12 δ' αὖ π. 144,16; 162,11
 πάμπολυς pl. 160,3 162,17
 παντάπασιν adv. 156,17
 πανταχόθεν adv. 148,9
 πάντως add. 142,11; 168,15
 πάνυ 146,12 οὐ πάνυ τι 152,14
 παρὰ omn. c. acc. 154,17 π. φύσιν 156,9. 12. 18. 20; κατὰ φύσιν/π. φύσιν 158,1; 164,4 et 5 170,2
 παραβάλλεσθαι 156,1
 παρακεῖσθαι part. τῶν π. κοιλιῶν 150,10 τι τῶν π. σωμάτων 156,14
 παραπλησίως 170,12
 παρασκευάζεσθαι perf. παρεσκευάσθαι 146,15
 παρασπείρεσθαι perf. παρеспάρθαι subi. ἡπίαλος 166,18
 παραχρῆμα 152,16
 παροξυσμός εισβολὴ τῶν π. 168,2
 πᾶς* sing. s. art. π. ἀμετρία 160,13 φλεγμονὴ π. καὶ πυρετὸς ἅπας 162,13 c. art. antepos. (attribut.) τὸ πᾶν αἷμα 154,21 c. art. postp. (praedicat.): ἐπὶ π. τοῦ θερμαίνοντος 154,5 π. τὰ μόρια 144,6 ; cf. et ἅπας, σύμπας
 πάσχειν opt. 156,10; τὸ μὲν ποιεῖ, τὸ δὲ π. 158,13; 168,18; aor. παθεῖν: 142,12 perf. πεπονθέναι (σῶμα): 148,1 152,15
 παύεσθαι fut. π. ὀδυνώμενα 150,22
 παχυμερὴς τὸ μὲν λεπτομερές ἅπαν, εὐαλλοιώτον· τὸ δὲ π., δυσαλλοιώτον 154,13
 παχύς (ὑγρός) 146,14 (αἷμα) 170,17
 πεινῆν π. ἢ διψῆν 152,9
 πεπονθέναι cf. πάσχειν
 περὶ* omn. c. gen.: in hoc vel alio tractatu: κὰν τοῖς π. κράσεως ὑπομνήμασιν 144,1 146,16

- 158,9 172,8; 146,9 162,18 δυσκρασία π. σύμπαν τὸ σῶμα 162,19; ἀπιστεῖ π. τῶν ἐντὸς ἀλγημάτων 166,5
- περιέχειν partic. (τῶν σπλάγχνων) ὑπὸ τὸν ὑμένα τὸν π. 150,9 τὸ περιέχον ἡμᾶς 160,1; med-pass. (ἐκτικὸς πυρετός) <τοῖς στερεοῖς> ἔξιν ἔχουσι σώμασι περιεχόμενος 158,6 τὸ περιεχόμενον αἷμα 160,1
- περικλύζεσθαι θερμαίνεσθαι καὶ π. πανταχόθεν ὑπὸ τῆς ὑγρότητος 148,9
- περιτόναιον (ἀπόστασις) μοχθηρὰ δὲ ἢ ὑπὸ τὸ π. 150,14
- περιχεῖσθαι perf. 150,2
- πέττεσθαι part. aor. ἢ διαφορηθέντος ... τοῦ κατασκήψαντος ὑγροῦ, ἢ πεφθέντος 150,7
- πεφθῆναι cf. πέττεσθαι
- πεφυκέναι cf. φύειν
- πέψις τῇ π. ... ἔπεται πύου τε γένεσις καὶ ἀπόστασις 150,8
- πήχυς εἰς βραχίονά τε καὶ π. καὶ ἄκραν χεῖρα 144,15
- πικρόχολος τὸ πᾶν αἷμα π. ἢ μελαγχολικὸν ἢ φλεγματώδες ἢ πνευματώδες 154,22 (sc. χυμός) ὁ πικρόχολος καὶ θερμός 166,10
- πιλεῖν ἢ δ' ἄκρα ψῦξις, τῷ π. τε καὶ συνωθεῖν εἴσω 160,8
- πιμελή (ὁμοιομερὴς μόριον) 146,2
- πίμπλασθαι 148,8
- πλάτος 156,19
- πλείων (comp. πολὺς) adi. ἐν χρόνῳ πλείονι 156,16 168,16; 164,1; adv.: πλέον 142,11 164,17 πλείον 142,13
- πλεονάζειν 166,10
- πλευρὰ αἰ κατὰ τὰς π. ἀποστάσεις 150,16
- πληθος 168,15
- πλήν 142,4 146,4 168,12 170,10
- πλησιάζειν part. τὸ π. (μόριον) 158,16
- πλησίον adv. c. gen. 160,7
- πλησμονωδῶς correxi apud *πλησμωνδῶς: ἀργῶς καὶ π. διητᾶτο 170,1
- πνεῦμα εὐαλλοιωτότατον ... καὶ λεπτομερέστατον 154,8; 158,5
- πνευματώδης (οὐσία) 164,7; (αἷμα): (τὸ πᾶν αἷ.) 154,22 comp. τὸ κατὰ τὰς ἀρτηρίας 154,2 superl. (τῆς καρδίας) κατὰ τὴν ἀριστερὰν κοιλίαν 156,10 ποιεῖν τὸ μὲν π., τὸ δὲ πάσχει 158,13
- ποικίλως adv. π. ὁδυνῶνται 148,12
- ποιότης ταῖς π. ... ἀλλοιούμενων τῶν μορίων 142,9 τῆς κράσεως ἀλλοιωθείσης κατὰ π. 164,13 (τὸ θερμαίνεσθαι ἢ ψύχεσθαι) δραστηκώταται π. 152,8
- πολλάκις ἐνίοτε μὲν ... π. δ' 164,12; 164,19 166,6 170,4
- πολύαιμος pl. (σπλάγχνα) 154,3 et 21
- πολυειδής pl. (ἀλλοιώσεις) 154,14 et 23
- πολὺς pl. c. alt. adi./pron. πολλάι τινες 146,6 ἄλλοις πολλοῖς 170,3 (cf. ἀμπόλλα 162,17); c. gen. πολλοί γε αὐτῶν 166,2; c. art. ἢ ... πολλὴ θερμασία 160,8; τὰ πολλά 150,14; adv. πολὺ δὲ μάλλον 152,16; cf. πλείων
- πονεῖν ἐν τῷ μεταβάλλεσθαι π. τὰ μόρια 152,3
- πόνος (πυρετός) ἐκ γυμνασίων πλειόνων ἢ π. 164,1
- πόρος (ἐν τῷ δέσματι) 146,15
- πόρρω (πρόσω) ἢ ἐγγὺς ἢ π. 154,21
- ποσόν subst. (e ποσός) τῷ ποσῷ τῆς ἀλλοιώσεως 158,2
- ποτέ π. μὲν ... ἐνίοτε δ' 150,9 et 164,6; 156,17 160,2 π. μὲν ... π. δ' ... π. δ' 162,20-164,1
- που ὥς π. 160,5; ἤδη π. 160,13
- πούς χεῖρες καὶ π. 144,10 σκέλος, εἰς μηρόν <τε> καὶ κνήμην καὶ π. 144,14
- πραγματεία ἢ περὶ φαρμάκων π. 172,9
- πρίν negat. et inf. 160,1 162,9
- πρό 148,11
- προγινώσκειν pass. perf. προεγνῶσθαι 172,8
- πρόδηλος neut.: 160,13 c. ὥς 164,8
- προεγνῶσθαι cf. προγινώσκειν
- προηγῆσθαι aor. ἀργὸν π. βίον 168,15

- προθυμείσθαι aor. pass. 166,1
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- ῥαδίως 152,14 154,11
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- τεθερμάνθαι cf. θερμαίνεσθαι
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- φάρμακον ἢ περὶ φ. ... πραγματεία 172,8
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 ψυχρός opp. θερμόν: ὅσον <ἄν> εὐαλλοιώτον ἢ, ἢ φύσει ψ., ἐκείνο πρῶτον καταψύχεται
 154,7 σάρξ ... θερμόν ... ὅστουν δὲ ψ. 158,18 ἄμετρία <τοῦ> θερμοῦ καὶ ψ. 160,11. 14

164,10 166,13; compar.: 158,15 bis; superl.: θερμότης δὲ φύσει <ή> ξανθὴ χολή, ψ. τὸ φλέγμα 154,9. 11; (ὁ ὑαλώδης χυμός) 166,9 et 168,16; ὑφ' αἵματος ... ψ. καὶ παχέος 170,17

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ὥσαύτως adv. 144,7 160,13 170,11

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